

# **The Determinants of Corporate Ownership Structure: Australian Evidence**

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## **The Determinants of Corporate Ownership Structure: Australian Evidence**

### **ABSTRACT**

There is growing interest in trying to explain differing corporate ownership structures in different countries. La Porta, Lopez-de-Silanes, Shleifer and Vishny (1998) find that the quality of legal protection of shareholders helps determine ownership concentration: in countries with relatively poor legal protection of investors, publicly listed companies are likely to have large blockholders. In contrast, Roe (2000) seeks to explain ownership differences in terms of politics and finds that publicly listed companies in social democracies are more likely to have concentrated ownership than their counterparts in the (non-socially democratic) United States. Bebchuk (1999a, 1999b) develops a model which predicts that the proportion of a country's publicly listed firms having a controlling shareholder depends on the size of private benefits of control in the corporate sector. Bebchuk extends his model to explain differences in ownership structure among companies *in the same country*. The model indicates that a company is more likely to have a large blockholder when the private benefits of control potentially available to a blockholder at that company are comparatively large. This paper examines the factors associated with ownership structure among publicly listed Australian companies. The results indicate that private benefits of control help explain the differences in ownership structure among Australian companies.

## I. Introduction

There is a growing level of interest in trying to explain differing corporate ownership structures in different countries. For example, La Porta, Lopez-de-Silanes, Shleifer and Vishny (1998) find that the quality of legal protection of shareholders helps determine ownership concentration: in countries with relatively poor legal protection of investors, publicly listed companies are likely to have large blockholders. In contrast, Roe (2000) seeks to explain ownership differences in terms of politics. In particular, that publicly listed companies in social democracies are more likely to have concentrated ownership than their counterparts in the (non-socially democratic) United States. Bebchuk (1999a, 1999b) develops a model which predicts that the proportion of a country's publicly listed firms having a controlling shareholder depends on the size of private benefits of control in the corporate sector. In particular, Bebchuk demonstrates that, when private benefits of control are large, a founder is very unlikely to relinquish control after the IPO. Therefore, in those countries where private benefits of control are comparatively large, large blockholdings should be relatively prevalent in publicly listed companies. Of relevance to the present paper, Bebchuk extends his model to explain differences in ownership structure among companies *in the same country*. The model indicates that a company is more likely to have a large blockholder when the private benefits of control potentially available to a blockholder at that company are comparatively large.

This paper is inspired by the "same country" part of Bebchuk's model, although it does not test it directly. We investigate the determinants of ownership structure in publicly listed Australian companies. The publicly listed corporate sector in Australia provides a useful testing ground because there is a good mixture of companies with, and companies without, a large blockholder. Also, Australia's accounting standards require detailed disclosure of "related party transactions" – so there is publicly accessible information which can be used to estimate the size of private benefits

of control. The study's results indicate that private benefits of control do, indeed, help explain the differences in ownership structure among the listed companies within a particular country.

The structure of the paper is as follows. Section II reviews the theories that have been developed to explain differences in ownership structures – both between different countries and between different publicly listed firms within the one country. It also summarises the findings of empirical studies undertaken to test some of these theories. Section III outlines the structure of the Australian corporate sector. Our data and methodology are described in Section IV, followed by the results in Section V, and the conclusion in Section VI.

## **II. Theory and prior evidence on determinants of corporate ownership structure**

### *A. Explaining differences in ownership structure between different countries*

Something that has interested corporate finance and corporate law scholars for some time now is the striking difference in corporate ownership structures in different countries. For example, widely owned companies are prevalent in the United States and the United Kingdom, but a majority of publicly listed companies in France, Germany and Italy have a controlling shareholder (Franks and Mayer, 1995).

La Porta, Lopez-de-Silanes, Shleifer and Vishny (1998) and La Porta, Lopez-de-Silanes and Shleifer (1999) argue that legal differences are a major determinant of the differing corporate ownership structures among publicly listed firms in different countries. La Porta *et al* (1998) regress ownership concentration on the type of legal system (broadly speaking, common law or civil law) and the strength of legal protection for investors, in a broad range of countries. They find that the quality of legal protection of shareholders helps determine ownership concentration: in countries with relatively poor legal protection of investors, publicly listed companies are likely to have large blockholders. Other academic commentators have also argued that a key precondition to

US-style securities markets, and dispersed ownership in publicly listed firms, is high-quality legal protection for investors.<sup>1</sup>

A difficulty with this “law matters” thesis is that dispersed ownership arose in the United States and the United Kingdom in the absence of good legal protection for investors (Coffee 2001a, Cheffins 2000, 2001a). In the case of the US, this occurred during the late 19<sup>th</sup> and early 20<sup>th</sup> centuries, when minority legal protections “were notoriously lacking”: Coffee (2001a). In a related paper, Coffee (2001b) ponders whether La Porta *et al*’s empirical finding of a link between legal protection of investors and ownership structure may actually reflect the reverse causal relationship: that strong markets came first and created a demand for stronger laws to protect the constituency of investors who had entered those markets.

In contrast to La Porta *et al*, Roe (1994, 2000) seeks to explain ownership differences in terms of politics. Roe (2000) argues that publicly listed companies in social democracies are more likely than their counterparts in the (non-socially democratic) United States to have concentrated ownership. The theory is that governments in social democracies press managers to stabilise employment, forgo some profit-maximising risks, and use up capital rather than downsize when markets no longer are aligned with the firm’s production capabilities. In essence, social democratic pressures induce managers to stray further than otherwise from their shareholders’ preference for profit maximisation. Therefore, publicly listed companies in social democracies will, all else equal, have higher managerial agency costs. And large-block shareholdings serve as a mechanism to minimise these agency costs.

Bebchuk (1999a, 1999b) develops a model in which the extent of ownership concentration in publicly listed firms depends on the size of private benefits of control. In particular, Bebchuk

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<sup>1</sup> See, for example, Black (2000, 2001), Coffee (1999) and Modigliani and Perotti (1997).

demonstrates that, when private benefits of control are large, a founder is very unlikely to relinquish control after the IPO. Therefore, in those countries where private benefits of control are comparatively large, large blockholdings should be relatively prevalent in publicly listed companies. Bebchuk argues that if, at the IPO stage, private benefits of control are large, fear of a control grab will often lead the pre-IPO controlling shareholder to maintain a lock on control by retaining a large block shareholding. This may occur even where a widely held ownership structure would be more efficient. This is because, while being more efficient is a necessary condition for a widely held structure to be chosen, it is not a sufficient condition. The reason for this, in turn, is that setting a widely held structure does not ensure that the company remains in a widely held structure. A rival might seek to wrest control by acquiring a controlling block through market purchases or a takeover bid. As Bebchuk points out, when a widely held structure can be expected to unravel in this way, it would not rationally be chosen in the first place.<sup>2</sup>

Bebchuk is not the first scholar to suggest that private benefits of control provide an explanation for ownership differences between different countries. Mayer (1999) and Franks and Mayer (2000) argue that the different structure of corporate ownership in Germany and several other continental European countries on the one hand, and in the United Kingdom and the United States on the other hand, is a factor of the comparatively high level of private benefits of control available to controllers of large firms in those continental European countries.

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<sup>2</sup> Bebchuk's (1999a, 1999b) private benefits theory and La Porta *et al*'s (1998, 1999) "law matters" theory can be viewed as consistent with one another in explaining differences in corporate ownership structure across different countries. That is, poor legal protection for investors leads to a comparatively high level of private benefits of control, which in turn leads to many companies having a controlling shareholder structure. Nenova (2000) examines 661 dual-class firms in 18 countries in an effort to determine the drivers of private benefits. She finds that legal environment variables explain 75% of the cross-country variation in the value of private benefits.

*B. Explaining differences in ownership structure within one country*

Bebchuk (1999a, 1999b) extends his model to explain differences in ownership structure among companies *in the same country*. The model indicates that a company is more likely to have a large blockholder when the private benefits of control are large. Blockholders are predicted to be more common in industries or circumstances in which private benefits are relatively large.

Bebchuk (1999a) acknowledges that, in order to test this theory empirically, one must be able to measure – or at least estimate – private benefits of control. He considers possible proxies for the presence of comparatively high private benefits. First, it is plausible that there are certain industries in which private benefits are likely to be particularly large, and thus which are likely – according to this model – to contain a high proportion of companies with a controlling shareholder structure. For example:

- Where the nature of a business presents relatively more opportunities for engaging in self-dealing transactions and in the taking of corporate business opportunities. A possibility may be the mining industry. In a leading Canadian case on the directors' duty to avoid taking personal advantage of corporate opportunities, the mining company in question was receiving two to three offers per week to buy claims from prospectors. The case concerned the purchase by the company's CEO of one such claim.<sup>3</sup>
- Companies which own sports teams – as control of such firms appears to provide the controller with prestige and glamour (see also Demsetz and Lehn, 1985).

Bebchuk suggests that comparatively large private benefits of control are likely to exist not only in certain industries, but also in companies with certain features – irrespective of industry. For

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<sup>3</sup> *Peso Silver Mines Ltd v Cropper* (1966) 58 DLR (2d) 1. See also *Queensland Mines Ltd v Hudson* (1978) 18 ALR

example, companies whose controller founded the firm, or whose family has controlled the firm for many years. Here, there may be some non-pecuniary benefits from controlling the firm.

Demsetz and Lehn (1985) examine determinants of ownership concentration in 511 publicly listed US companies (using three alternative measures of concentration: percentage of shares held by the 5 largest shareholders; percentage of shares held by the 20 largest shareholders; and an approximation of a Herfindahl measure of ownership concentration). They find that: (i) ownership concentration is inversely related to company size; (ii) ownership concentration is positively related to instability in the firm's operating environment (that is, to the riskiness of the firm); (iii) ownership concentration is significantly lower, on average, in regulated firms than other firms; and (iv) ownership concentration is significantly higher, on average, in media firms than in other firms.<sup>4</sup> Crespí Cladera (1998) makes similar observations to Demsetz and Lehn's first two findings in a study of Spanish companies, but finds no significant link between regulated firms and ownership concentration.

In relation to causation, it is plausible that any relationship between a controlling shareholder structure and a high level of private benefits reflects ownership structure driving private benefits, rather than the other way around. The theory would be that there should be a statistical

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<sup>4</sup> Demsetz and Lehn's use of a dummy variable for media firms is comparable to our use of related party transactions as a measure of private benefits of control. They hypothesise that the potential for consumption of firm-specific perks should be higher in firms that own professional sports teams and in mass media firms: "Winning the World Series or believing that one is systematically influencing public opinion plausibly provides utility to some owners even if profit is reduced from levels otherwise achievable. These consumption goals arise from the particular tastes of owners, so their achievement requires owners to be in a position to influence managerial decisions. Hence, ownership should be more concentrated in firms for which this type of amenity potential is greater." In essence, their hypothesis is that high private benefits of control is a driver of concentrated ownership.

link between these two variables because, having acquired its controlling shareholding for some reason unrelated to private benefits, the new controlling shareholder realises that its large equity holding gives it the ability to extract private benefits – and so it proceeds to do so. Barclay and Holderness (1989) study the determinants of premiums paid in transfers of 5% and larger shareholdings in US companies. They find that the fraction of the firm’s common stock in the block trade is positively and significantly related to the value of private benefits. Barclay and Holderness interpret this as ownership being a driver of private benefits rather than the reverse. We test for causation using simultaneous equations [in progress; results to come].

### **III. The structure of the Australian corporate sector**

La Porta *et al*’s (1998, 1999) “law matters” theory predicts that countries with strong investor protection regulations will have well-developed stock markets dominated by widely held corporations. Australia has a common law system, with a level of legal protection for shareholders and creditors that is strong compared to many other countries.<sup>5</sup> However, publicly listed companies

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<sup>5</sup> Australia’s legal regime is even more protective of minority shareholders than indicated in La Porta *et al* (1998). For instance, Australia is recorded in La Porta *et al* (1998) as not mandating one share / one vote. In fact, there is a rule requiring one share / one vote for Australian publicly listed companies. The requirement is contained in Rule 6.9 of the Australian Stock Exchange Listing Rules. An acknowledged limitation of the La Porta *et al* (1998) study is that they confine their source of shareholder protective rules to statutes. Stock exchange listing rules and securities regulators’ rules are not taken into account. In addition, in relation to creditor protection, Australia is recorded as (i) having an “automatic stay on assets” mechanism in corporate reorganisations, barring secured creditors from enforcing their security; and (ii) allowing management to stay in place during a corporate reorganisation. Neither of these is correct. In relation to (i), although there are some restrictions, a typical large secured creditor of a company that has gone into voluntary administration can enforce its security: Corporations Act, sections 441A – 441K, 444D. In relation to (ii), management will stay in place during a voluntary administration

make up a significantly smaller proportion of the 500 largest business enterprises in Australia compared to the United States and the United Kingdom. The contrast between the UK and Australia is illustrated in Table 1, which shows that local publicly listed firms accounted for only 35% of the Top 500 business enterprises in Australia in 1994 compared to 63% in the UK. In addition, among publicly listed Australian companies, controlling blockholdings are quite common. As Table 2 shows, 45% of our sample Australian companies had a blockholder controlling 25% or more of the firm's equity. In contrast, in the UK – which also has a strong investor protection regime – only 16% of large publicly listed firms have a blockholder controlling at least 25% of the equity (Franks and Mayer, 1995).

(Insert Table 1 around here)

#### **IV. Data and Methodology**

##### *A. Sample*

Our sample incorporates 240 companies listed on the Australian Stock Exchange (ASX) at the end of 1998. There were approximately 1,200 companies listed on the ASX at that time. Our sample includes equal numbers of large companies (those ranked 1-100 by market capitalisation), medium-sized companies (those ranked 101-500 by market capitalisation), and small companies (those ranked 501-1,200 by market capitalisation). The medium-sized and small companies were selected randomly – using a stratified sampling technique. The large companies were selected by

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only if the company's creditors vote in favour of that. Therefore, the level of shareholder and creditor protection in Australia is considerably greater than indicated in La Porta *et al* (1998).

taking the Top 100 listed entities, and then excluding non-companies and overseas-based companies.<sup>6</sup>

*B. Dependent and Independent Variables*

We predict that companies having relatively valuable related party transactions are likely to have a controlling blockholder. Where related party transactions are not particularly valuable, we predict that the company is likely to have a widely held shareholder base.

Ownership structure is the dependent variable. In the regressions described later in the paper, we use a dummy variable for ownership structure. The two main control thresholds examined are 10% and 20%. We define a dummy variable corresponding to a control threshold of 10% (20%) which equals 1 if the company has a 10% (20%) or larger blockholder, and 0 if the company lacks such a blockholder. In order to verify whether our results are sensitive to the definition of the control thresholds used we also examine control thresholds of 15% and 25%.

The main control thresholds (10% and 20%) adopted for the dependent variable reflect the thresholds used by La Porta, Lopez-de-Silanes and Shleifer (1999), Faccio, Lang and Young (2001), and Roe (2000). Twenty per cent is also, in effect, the control threshold adopted in Australia's takeover regulations.<sup>7</sup> It might be argued that these thresholds are too low to establish

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<sup>6</sup> The non-companies are publicly listed property trusts. The overseas-based companies are mainly New Zealand companies. It is necessary to exclude the foreign companies because their disclosure regime for related party transactions does not mirror Australia's disclosure regime.

<sup>7</sup> Chapter 6 of the Australian Corporations Act contains a general prohibition on acquiring more than 20% of the voting rights in a publicly listed company, or an unlisted company with more than 50 shareholders. There are several exemptions, including an acquisition under a formal takeover bid. Australia's accounting standards also contain a definition of "control", for use in producing consolidated financial statements: "the capacity of an entity to dominate decision-making, directly or indirectly, in relation to the financial and operating policies of another entity so as to enable that other entity to operate with it in pursuing the objectives of the controlling entity".

practical control. However, the evidence on proxy voting by institutional and individual shareholders in Australian companies suggests otherwise. The most recent study found that, in companies lacking a blockholder, only 37% of the share capital was voted on director-election resolutions. The average figure for resolutions deemed controversial was only 35%: Stapledon, Easterbrook, Bennett and Ramsay (2000). Where institutional and individual shareholders fail to exercise their voting rights to this extent, a blockholder does not need a particularly large holding in order to maintain practical control – at least in the absence of a crisis in the company’s governance or performance.<sup>8</sup>

It is important to note that although we have data on the exact size of all 5% or larger blockholdings,<sup>9</sup> we deliberately use a dummy variable in each regression. The reason stems from the theory we are testing – that a company is more likely to have a controlling blockholder when the private benefits of control are large (Bebchuk 1999a). The theory predicts that, if there is a comparatively high level of private benefits of control to be enjoyed, the company’s largest shareholder should have a controlling stake. To be more precise, either:

- a controlling shareholder should have existed at the time of the company’s IPO, and should either remain or have transferred the controlling block to another shareholder; or
- a controlling shareholder should have emerged some time after the IPO, after a period of instability in the company’s ownership structure.

The theory does *not* predict that the largest shareholder’s percentage stake will be greater the higher the level of private benefits. If that were the prediction, then the dependent variable would have

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<sup>8</sup> Institutional investors have acted collectively to intervene in crisis situations at Australian companies – with a view to bringing about board changes: Stapledon (1996).

<sup>9</sup> Five per cent is the disclosure threshold under Part 6C.1 of Australia’s Corporations Act.

been measured as the precise shareholding of the largest shareholder, rather than using a dummy variable.

We also differentiate the controlling blockholders by type. We group the blockholders into four different categories:

- *Family*. For example, the founder of the company, an individual or private company related to one of the company's directors, or a family trust linked to one of the company's directors.
- *Corporate*. Here, the blockholder is a widely held corporation. That is, a publicly listed corporation which itself lacks a 10% or larger blockholder.
- *Government*. The blockholder is either the Commonwealth of Australia, a State of Australia or an overseas government.
- *Miscellaneous*. Examples here include a venture capitalist and a joint-venture vehicle.

The reason we differentiate the blockholders by type is that different types of private benefits of control may lead to different categories of controlling shareholder. For example, an individual (family) shareholder may value the opportunity to consume perquisites more highly than would a corporate blockholder (Demsetz and Lehn, 1985). On the other hand, a corporate blockholder may have been motivated to acquire its large shareholding in order to gain the benefits of synergy through integrating more closely its production processes with those of the firm in which it has the large shareholding (Barclay and Holderness, 1989).

When grouping the blockholders into the four categories, we traced ownership back through layers where necessary. For example, if the blockholder of Company A is itself a publicly listed company (Company B), we would look at the ownership structure of Company B before categorising it. If Company B is widely held, it would be categorised as a "Corporate" blockholder. But if Company B itself has a 10% or larger "Family" blockholder, it would be categorised as a "Family" blockholder. This focus on the *ultimate* controller follows La Porta *et al* (1999).

Large shareholdings of institutional investors (fund management firms, insurance companies, etc) are not counted as blockholdings where – as is normally the case – the shareholding is a portfolio investment managed by the institutional investor on behalf of its clients, policyholders, etc. The reason for not counting institutional shareholdings that are portfolio investments is that institutional investors in Australia almost invariably take an arm’s length approach to the companies whose shares they hold in their equity portfolios (Stapledon, 1996). They are not represented by nominee directors, and their face-to-face contact with senior management generally occurs only once or twice per year. On the other hand, the small number of “corporate” holdings held by institutional investors *are* included. For example, at the time of the study the French insurer AXA had a 50.8% holding in National Mutual Holdings Limited, an Australian insurance group.<sup>10</sup> This is a corporate holding rather than a portfolio investment, and so is counted as a blockholding.

The independent variables we use, and their definitions, are as follows.

*Related Party Transactions:* This is our measure of the level of private benefits of control. The variable is computed as the natural logarithm of one plus the dollar value of related party transactions disclosed for 1998. As indicated earlier, the prediction is that, the larger the level of private benefits, the more likely the company is to have a controlling shareholder. For a sample company that has a controlling shareholder, we treat the related party transactions with that blockholder as the measure of private benefits of control at that company. In contrast, we hypothesise that the board and senior managers enjoy “routine states” control of *widely held* companies in Australia (Berle and Means 1932, Jensen and Meckling 1976). Under this hypothesis, any private benefits from control of a widely held company will accrue to directors and senior

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<sup>10</sup> AXA retains a majority stake in the Australian company, which has been renamed AXA Asia Pacific Holdings

managers. Therefore, we include related party transactions with directors as the measure of private benefits of control at a widely held company. The most common categories of related party transactions are outlined in Section IV.C. We acknowledge several limitations with related party transactions as an estimate of private benefits of control in Section IV.C below.

*Firm Size:* Firm size is measured as the natural logarithm of the total market value of the firm's equity in 1998. It might be expected that larger companies would be less likely to have a controlling shareholder. This would reflect the fact that purchasing a controlling stake in a large company is more expensive than purchasing a controlling stake in a medium-sized or small listed company. Large companies could also be expected to have issued more shares than smaller companies. The empirical studies by Demsetz and Lehn (1985) – using US data – and Crespi Cladera (1998) – using Spanish data – find that firm size is inversely related to ownership concentration.<sup>11</sup>

*Mining Sector Dummy:* This is a dummy variable that equals 1 for a mining sector company and 0 otherwise. As discussed in Section II.B, it may be that certain industries (possibly including mining) lend themselves to a controlling shareholder structure.

*Banking Sector Dummy:* This is a dummy variable that equals 1 for a financial services sector company and 0 otherwise. As Australian banks and insurance companies are subject to relatively close regulation, this variable is analogous to Demsetz and Lehn's (1985) regulated firms dummy variable.

*Firm Age:* This variable is the number of years a company's shares have been traded on the ASX as of 1998. It might be expected that, the longer the period of time that has elapsed since a company

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Limited.

<sup>11</sup> We also use the natural logarithm of the firm's total assets in 1998 as an alternative measure of firm size. The results obtained are similar to those reported here.

first listed on the stock exchange, the more likely the company is to have a widely held share ownership structure. Several studies have shown that, in a range of countries, there is a considerable sell-down by the pre-IPO shareholders in the years following a company's IPO (Brennan and Franks 1997, Goergen 1998). On the other hand, a strong link between the age of public companies and their ownership structures would run counter to the main prediction being tested in this paper: that the size of private benefits of control is an important driver of ownership structure. Under this theory, if a mature listed company has a widely held ownership structure but high private benefits of control would be available to a controlling shareholder, the current ownership structure is not a stable equilibrium. The widely held ownership structure is likely to unravel following the acquisition of a control block either by an outsider or, defensively, by incumbent management (Bebchuk 1999a, 1999b).<sup>12</sup>

*Market-to-Book Ratio:* The ratio of the market-to-book value of equity is used to proxy for a company's growth prospects. It is predicted that the greater a company's growth prospects, the more likely it is that the company will have a widely held ownership structure. Kahn and Winton (1998) predict that the percentage holding of pre-IPO shareholders will diminish at a faster rate in fast-growing firms due to these firms' need for more external finance. Goergen's (1998) study of shareholding changes in the six years following German and UK IPOs confirms that prediction.

*Standard Deviation of Returns:* The standard deviation of the firm's average monthly stock returns over 1994-97 is used as a measure of risk and uncertainty. It may be expected that, in the case of high-risk companies, the trade-off for a potential blockholder between the potential benefits of being a blockholder (e.g. from close monitoring of management) and the potential costs would often

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<sup>12</sup> We repeated our analysis using the natural logarithm of the number of years the company's shares have been traded on the ASX. This is used as an alternative measure of firm age given that some companies in our sample have been listed for many years. The results obtained are similar to those reported here.

see them opting not to purchase (or retain) the blockholding; but instead to diversify (Kahn and Winton 1998, Bolton and von Thadden 1998). Goergen's (1998) study of shareholding changes in the six years following German and UK IPOs shows that initial owners of high-risk firms retain less ownership than those of low-risk firms. On the other hand, Demsetz and Lehn (1985) predict that the more unstable a firm's operating environment (e.g. in terms of unstable prices, technology and market shares) the greater the payoff to owners in maintaining tighter control. The reason being that tighter ownership control will result in greater rewards from managerial monitoring compared to in firms where (due to their stable operating environment) management's performance is more obvious to the market. Hence, Demsetz and Lehn predict that unstable environments should give rise to more concentrated ownership structures. Using risk variables (including the standard deviation of monthly stock returns) as a proxy for an unstable operating environment, Demsetz and Lehn find that instability is significantly and positively related to ownership concentration.

### *C. Data sources*

Data on ownership is from "substantial holding" (5%+) disclosures in company annual reports, which are obtained either in hard copy form or on-line from the Connect4 database.<sup>13</sup> Importantly, "substantial holding" is defined extremely broadly in the Australian Corporations Act. The breadth of the definition means that, for example, shares held by a relative or associate of the person in question must be taken into account in calculating that person's voting power. The requirement to include associates' votes catches the situation where two or more large holders are acting in concert, or have some form of formal or informal voting agreement. Therefore, there was no need for us to consider whether in a particular case it might be necessary to aggregate the

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<sup>13</sup> The Connect4 database is similar in its scope and content to Compustat and contains detailed financial statements for firms listed on the ASX. Where data were not available in this database we relied on hard copies of the annual reports.

holdings of, say, the top two substantial shareholders on the basis that they may be acting in concert. If they were acting in this way, the legislation would have required the two holdings to be aggregated for disclosure purposes.

We use related party transactions, as disclosed in company annual reports, as the measure of private benefits of control.<sup>14</sup> Other studies have used alternative proxies for private benefits. For example, there is a body of literature which examines differential pricing of dual-class stock (e.g. Bergström and Rydqvist 1990). Another group of studies use premiums paid for large blocks (e.g. Barclay and Holderness 1989), while Zingales (1995) uses abnormally high pay for a large shareholder represented on the company's management team as a proxy for private benefits. We are unable to use differential pricing of dual-class stock as a private-benefits proxy because the ordinary shares (common stock) of companies listed on the Australian Stock Exchange almost universally carry one vote per share. Premiums paid for large blocks is also problematic. If we were to use premiums paid for large blocks as our private-benefits proxy, we would be able to estimate private benefits only for those firms that have a controlling shareholder. However, we are endeavouring to compare the size of private benefits of control in firms that have a controlling shareholder, with those in firms that are widely held.<sup>15</sup>

We acknowledge that disclosed related party transactions are an imperfect measure of private benefits of control (as are the other proxies used in other studies). This is partly because some private benefits of control are intangible (e.g. prestige), and are therefore not picked up in disclosures of related party dealings. So in some respects our proxy will underestimate the actual level of private benefits. But in other respects our proxy is likely to overestimate the true level of

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<sup>14</sup> The disclosures are mandated under Australian Accounting Standard AASB 1017: *Related Party Disclosures*.

<sup>15</sup> In the latter case, any private benefits are enjoyed by the directors and senior management, as discussed in Section IV.B above.

private benefits. This is because some dealings between a publicly listed company and a blockholder (the related party) will not confer any private benefits on the blockholder – possibly because the dealings are on arm’s length terms – but provided the dealings are disclosed in the financial statements they will be recorded in our study. In our view this is unlikely, though, to lead to a significant overestimation of the actual level of private benefits of control. This is because we believe “private benefits of control” is appropriately defined to include not only those related party transactions where a blockholder is effectively “ripping off” minority shareholders, but also the situation where a blockholder wins a contract with the company and the contract is on arm’s length terms – that is, minority shareholders are *not* being ripped off – but the blockholder wins the contract either solely or partly *because of its controlling shareholding*. That is, where it would not have secured the business contract in the absence of its controlling shareholding.

Another limitation is that the private benefit component of a particular related party transaction will be some amount less than the total value of the transaction. For example, a public company might pay \$50 million to a related party for goods supplied, where those goods would have cost the company only \$35 million if purchased from an arm’s length supplier. Here, the private benefit is \$15 million, not \$50 million. The difficulty for the researcher is that there is publicly available information on the total value of related party transactions, but no publicly available information on the private benefit component (if any) included in each transaction. In essence, therefore, our use of this variable assumes that, across the many related party transactions entered into by the sample companies, the private benefit component of the transaction is *proportionately* the same size.

Our hypothesis is that private benefits of control are a key driver of ownership structure. Specifically, that if private benefits of control are comparatively high at a particular company, that company is likely to have a controlling shareholder. Given this hypothesis, it is clearly important to

include disclosures concerning transactions between the listed company and any controlling shareholder it may have. But not all the sample companies have a controlling shareholder. So, as discussed in Section IV.B, we also record all related party transactions involving directors. This reflects our hypothesis that the board and senior managers enjoy “routine states” control of widely held companies in Australia. Under this hypothesis, any private benefits from control of a widely held company will accrue to directors and senior managers.<sup>16</sup>

The most common categories of related party transactions disclosed are:

- the related party supplying goods or services to the publicly listed company;
- the publicly listed company supplying goods or services to the related party;
- the related party leasing property from the publicly listed company;
- the publicly listed company leasing property from the related party;
- the publicly listed company paying licensing fees to the related party; and
- financing transactions between the related party and the publicly listed company.

Data for all other variables other than company age comes from company annual reports. Data on company age is from Australian Stock Exchange (1996) and various company histories. Where a company is the product of a merger, we take the age of the dominant merger partner as the

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<sup>16</sup> The reason why, for controlled companies, we include related party transactions with directors as well as transactions with the controlling shareholder is that, even where a controlled company has dealings with its controlling shareholder, the transaction is very often recorded under the subheading of “Transactions with Directors”. This is because (i) AASB 1017 requires directors’ disclosures to include transactions involving any of the directors’ *associates* (which includes any person or entity for whom the director is a nominee on the board); and (ii) a large proportion of companies appear to have adopted the practice of including transactions with the controlling shareholder under the “Transactions with Directors” subheading, rather than under the controlling shareholder subheading – presumably due to “boilerplate” Big 5 accounting firm templates.

company's age. Where it was a "merger of equals", we take the age of the older merger partner as the company's age.

## **V. Results**

### *A. Summary statistics*

Although we use 10%, 15%, 20% and 25% thresholds for "control", the disclosure threshold for "substantial holdings" in Australia is 5%. Of the 240 sample companies, 235 have at least one substantial holder. In 185 of these cases, the largest or only substantial holder is a non-institutional investor (that is, a "Family", "Corporate", "Government" or "Miscellaneous" holder). In the remaining 50 cases, the largest or only substantial holder is an institutional investor holding the shares as a portfolio investment for clients.

Table 2 provides a summary of the blockholdings of non-institutional investors that we use as our dependent variable. As Panel A shows, 72% of the sample companies have a 10% or larger blockholder and 52% have a 20% or larger blockholder. As shown in Panel B, 16% have an absolute controlling shareholder (that is, a 50%+ blockholder). In terms of blockholder categories, "Family" blockholders are by far the most prevalent, accounting for 70% of the 10%+ blockholders, followed by "Corporate" blockholders which account for a further 24% of the 10%+ blockholders (Panel C).

(Insert Table 2 around here)

Panel D of the table reveals a considerable difference between the large sample companies on the one hand, and the medium-sized and small sample companies on the other hand, in terms of the number having a blockholder and also the type of blockholder. Whereas 37 (i.e. 46% of) large sample companies have a 10%+ blockholder, 69 (i.e. 86% of) medium-sized sample companies, and 67 (i.e. 84% of) small sample companies have such a blockholder. The most common type of 10%+ blockholder for large companies is a "Corporate" holder – accounting for 49% of all

blockholders in those companies, with “Family” blockholders accounting for a further 41%. “Family” blockholders dominate in the medium-sized and small companies – accounting for 70% of all blockholders in medium-sized companies and 87% in small companies.

Table 3 provides some summary statistics for the independent variables analysed. Based on these summary statistics we identify one company that is a possible outlier with a negative book value of equity resulting in a market-to-book ratio of -104.1. Although this company is included in the analysis its presence does not influence our results.

(Insert Table 3 around here)

#### B. *Binomial logit model results*

To analyse the relationship between the presence of a blockholder and the level of related party transactions we estimate the following binomial logit model:

$$P(\text{Blockholder} = 1|X) = \frac{\exp(X\beta)}{1 + \exp(X\beta)}, \quad (1)$$

where  $P(\text{Blockholder} = 1|X)$  is the probability that a blockholder is present conditioned on the realization of  $X$ , where  $X$  represents the vector of explanatory variables used in the model and  $\beta$  is the corresponding coefficient vector.

We estimate four separate binomial logit models corresponding to the four different thresholds used to proxy for ownership structure. The results appear in Table 4. Panel B of the table shows the correlations among the independent variables. As expected, the natural logarithms of firm size and total assets are highly correlated, as are firm age and its natural logarithm. As mentioned above, when we include the natural logarithm of total assets and the natural logarithm of firm age as alternative proxies of firm size and age our results are virtually unchanged.

(Insert Table 4 around here)

The main focus of our analysis is with the 10% and 20% blockholding thresholds. Our main findings are as follows. First, regardless of how we define the control threshold we find a highly statistically significant relationship between ownership structure and the level of related party transactions. The sign of the estimated coefficient is consistent with our expectation that the larger the level of private benefits, the more likely the company is to have a controlling shareholder. Second, firm size appears to be an important explanatory variable across all four models and its sign is consistent with our expectation that larger companies are less likely to have a controlling shareholder. Third, among the other variables included in the four models we do not observe a consistently significant relationship between ownership structure and either the banking sector dummy, firm age, the market-to-book ratio, or standard deviation of returns (our measure of risk).<sup>17</sup> Lastly, we find some differences in the ownership structure for mining sector companies since the mining dummy variable is significant and negative across three of the four models. This finding implies that mining sector companies are less likely to have a controlling blockholder than are other types of companies.

### C. *Multinomial logit model results*

To analyse the relationship between the type of blockholder and the level of related party transactions we estimate the following multinomial logit model:

$$P(\text{Blockholder} = j|X) = \frac{\exp(X\beta_j)}{\sum_{j=1}^4 \exp(X\beta_j)}, \quad j = 1, 2, 3, 4 \text{ and } \beta_4 = 0, \quad (2)$$

where  $j$  takes the values 1, 2, 3, and 4 depending on whether the blockholder is classified as being a widely held company, family entity, a government entity, or where there is no blockholder, respectively. For this analysis, we remove five companies which do not fall into any of these

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<sup>17</sup> Risk is significant only for the 25% blockholder model.

categories and one company for which the type of blockholder could not be identified.  $P(\text{Blockholder} = j|X)$  is the probability of a blockholder being of type  $j$  conditioned on the realization of  $X$ , where  $X$  represents the same vector of explanatory variables used in the binomial logit analysis and  $\beta_j$  is the corresponding coefficient vector. The restriction on  $\beta_i$  is required for the unequivocal parameterisation of the multinomial logit model.

Table 5 summarizes the results from the multinomial logit model. Since the focus of our analysis is on the 10% and 20% blockholding thresholds, we only report the results for these two thresholds. For the 10% blockholding threshold, we find that there is a positive and highly statistically significant relationship between the level of related party transactions and whether the blockholder is a widely held corporate entity or a family entity (Panel A). Interestingly, there is no relationship between the level of related party transactions and the likelihood of the blockholder being a government entity, that is, either the Commonwealth of Australia, a State of Australia or an overseas government. Thus, higher levels of private benefits are directly related to the likelihood that the controlling blockholder will either be a corporate entity or a family entity, but not a government entity.<sup>18</sup> Considering the control variables, we are able to trace the source of the negative relationship between the presence of a controlling blockholder and firm size and the mining sector dummy observed in Table 4. We find that this negative relationship exists only where the blockholder is a family entity. Thus, smaller firms are more likely to be controlled by a family blockholder, while mining sector firms are less likely to be family controlled.

(Insert Table 5 around here)

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<sup>18</sup> The multinomial logit model also allows us to examine whether there are systematic differences in the level of related party transactions and family versus corporate, family versus government, or corporate versus government

The results for the 20% blockholding threshold are very similar to the results for the 10% blockholding threshold implying that the relationship between the type of blockholder and the level of related party transactions is robust to our definition of what constitutes a substantial blockholding.<sup>19</sup>

## VI. Conclusions

There are several theories as to the drivers of different corporate ownership structures. One strand of thought is that private benefits of control is an important determinant of ownership structure. This paper tests that theory and finds that, among publicly listed Australian firms, the level of private benefits of control does indeed appear to be an important driver of ownership structure. In particular, where private benefits are comparatively high, the company is more likely to have a blockholder with a controlling stake.

The paper's findings appear to cast some doubt on the "law matters" theory. The "law matters" theory predicts that, in countries with a high level of investor protection: (a) publicly listed firms should account for a significant proportion of economic activity; and (b) ownership of those publicly listed firms should be widely dispersed. Australia seems to have a good investor protection regime. However, this paper reveals that:

- publicly listed firms account for a significantly smaller proportion of the Top 500 business enterprises in Australia compared to the US and the UK; and
- a considerable proportion of the publicly listed firms in Australia have a controlling shareholder.

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blockholder groupings. Our results (not shown) indicate that there are no significant differences across these three alternate groupings. All unreported results are available from the authors upon request.

<sup>19</sup> The only difference is that in the case of the 20% blockholding threshold the market-to-book ratio becomes moderately significant when the controlling blockholder is a family entity.

Going back a step, strong investor protection regulations seem to restrict the overall prevalence and size of private benefits of control in a country's corporate sector, compared to a country with a lax regime (Nenova 2000, Hogfeldt and Holmen 2000). But this study shows that:

- private benefits of control can still vary considerably in a tightly regulated environment; and
- private benefits of control help explain ownership differences in Australia.

It is worth reflecting for a moment on the investor protection regime in Australia. As mentioned, Australia has corporate laws which appear strictly to limit the capacity of blockholders to misappropriate assets at the expense of minority shareholders. These include Chapter 2E of the Corporations Act – which imposes a prima facie ban on public companies conferring “financial benefits” on related parties, unless either (i) prior consent is obtained from disinterested shareholders; or (ii) an exemption applies (e.g. the transaction is on arm's length terms). There are also common law and statutory duties requiring directors and senior executives to avoid contracting with the company unless shareholder or disinterested director approval is given; and not to take corporate business opportunities. The relevance of directors' duties is that they also impact blockholders, given that a blockholder will invariably have nominee directors on the company's board. Minority shareholders also enjoy the protection of an oppression remedy. Although used mainly by shareholders in closely held private companies, it can be – and has been – used by shareholders in publicly listed companies where a blockholder has been misappropriating corporate assets (Stapledon, 1993). In addition, there are the stringent rules requiring disclosure of related party transactions, which form the basis of the disclosures used in this study.

Given that Australia has these laws which apparently place tight restrictions on blockholders misappropriating assets at the expense of minority shareholders, why is it that – as our study shows – considerable private benefits of control are available in many publicly listed Australian companies? There are at least two possible explanations. First, it may be that the tough Australian

laws are not being enforced. This is open to doubt, however, because Australia rates very well when its system of legal enforcement, generally, is compared to those other countries: La Porta *et al* (1998).

Second, not all private benefits involve the blockholder misappropriating assets at the expense of minority shareholders. For example, some private benefits are matters of taste, preferences for power, family recognition in a family-controlled firm, etc (Roe 2001). Also, we would argue that “private benefits of control” includes not only those related party transactions where a blockholder is in essence ripping off minority shareholders. It also includes, we contend, the situation where a blockholder wins a contract with the company and the contract is on arm’s length terms *but* where the blockholder wins the contract either solely or partly because of its controlling shareholding.

As a final comment, this study has not considered corporate performance. That is, whether controlled companies perform better or worse than widely held companies. The possibility of blockholder-controlled Australian companies performing better than widely held Australian companies cannot be ruled out.<sup>20</sup> The extraction of private benefits (a negative for minority shareholders) may be offset by better operating and financial performance (a positive for minority shareholders).<sup>21</sup> It is the net outcome that matters.

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<sup>20</sup> For US studies of the relationship between ownership structure and corporate performance, see Demsetz and Lehn (1985), and the studies summarised in Black (1992).

<sup>21</sup> Superior performance may stem from several factors: e.g. better monitoring of management; better information flow from inside the firm to capital owners; the ability to form value-enhancing implicit contracts with employees, suppliers and other non-shareholder stakeholders; and, in the case of corporate blockholders, production complementarities.

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**TABLE 1**                      **Structure of Australian and UK corporate sectors:  
Top 500 non-financial enterprises, 1994**

Type of Enterprise	Enterprises		Turnover	
	<i>(number)</i>	<i>(% of total)</i>	<i>(A\$m / £m)</i>	<i>(% of total)</i>
<b>Australia</b>				
Listed domestic company	176	35.2	227,514	51.3
Unlisted domestic company	130	26.0	56,211	12.7
Foreign company	137	27.4	97,141	21.9
State-owned enterprise	57	11.4	63,015	14.2
<b>Total</b>	<b>500</b>	<b>100.0</b>	<b>443,881</b>	<b>100.0</b>
<b>United Kingdom</b>				
Listed domestic company	314	62.8	581,714	77.6
Unlisted domestic company	51	10.2	34,071	4.5
Foreign company	125	25.0	115,268	15.4
State-owned enterprise	10	2.0	18,294	2.4
<b>Total</b>	<b>500</b>	<b>100.0</b>	<b>749,347</b>	<b>100.0</b>

*Sources:* Own analysis of information in ABM (1994) and Extel Financial (1994).

**TABLE 2 Summary information of the blockholdings of non-institutional investors***Panel A Incidence of companies with a controlling shareholder*

<b>Control Threshold</b>	<b>No. of Companies</b>	<b>% of Total</b>
10% or Larger Blockholder	173	72.1
15% or Larger Blockholder	153	63.8
20% or Larger Blockholder	125	52.1
25% or Larger Blockholder	108	45.0

*Panel B Breakdown of blockholdings*

<b>Range of Blockholdings</b>	<b>No. of Companies</b>	<b>% of Total</b>
0 – 4.9%	55	22.9
5 – 9.9%	12	5.0
10 – 14.9%	20	8.3
15 – 19.9%	28	11.7
20 – 24.9%	17	7.1
25 – 29.9%	21	8.8
30 – 34.9%	16	6.7
35 – 39.9%	10	4.2
40 – 44.9%	10	4.2
45 – 49.9%	12	5.0
50% +	39	16.3
<b>Total</b>	<b>240</b>	<b>100.0</b>

*Panel C Categorisation of blockholders*

<b>Type of 10%+ Blockholder</b>	<b>No. of Companies</b>	<b>% of Total*</b>
Family	121	69.9
Corporate	42	24.3
Government	4	2.3
Miscellaneous	5	2.9
Unknown	1	0.6
<b>Total</b>	<b>173</b>	<b>100.0</b>

\* The percentages in this column are of the 173 sample companies with a 10% or larger blockholder.

**TABLE 2 Summary information of the blockholdings of non-institutional investors (continued)***Panel D Categorisation of blockholders: breakdown by company size*

<b>Type of 10%+ Blockholder</b>	<b>Large Companies</b>		<b>Medium Companies</b>		<b>Small Companies</b>		<b>All Companies</b>	
	<b>No.</b>	<b>%<sup>a</sup></b>	<b>No.</b>	<b>%<sup>b</sup></b>	<b>No.</b>	<b>%<sup>c</sup></b>	<b>No.</b>	<b>%<sup>d</sup></b>
Family	15	40.5	48	69.6	58	86.6	121	69.9
Corporate	18	48.6	16	23.2	8	11.9	42	24.3
Government	2	5.4	2	2.9	0	0.0	4	2.3
Miscellaneous	2	5.4	2	2.9	1	1.5	5	2.9
Unknown	0	0.0	1	1.4	0	0.0	1	0.6
<b>Total</b>	<b>37</b>	<b>100.0</b>	<b>69</b>	<b>100.0</b>	<b>67</b>	<b>100.0</b>	<b>173</b>	<b>100.0</b>

<sup>a</sup> The percentages in this column are of the 37 large sample companies with a 10% or larger blockholder.

<sup>b</sup> The percentages in this column are of the 69 medium-sized sample companies with a 10% or larger blockholder.

<sup>c</sup> The percentages in this column are of the 67 small sample companies with a 10% or larger blockholder.

<sup>d</sup> The percentages in this column are of the 173 sample companies with a 10% or larger blockholder.

**TABLE 3** Summary statistics for the independent variables analysed<sup>a</sup>

	<b>Mean</b>	<b>Median</b>	<b>Maximum</b>	<b>Minimum</b>	<b>Std Dev</b>
<b>Related Party Transactions (\$m)</b>	14.33	0.28	1,130.00	0.00	83.51
<b>Book Value of Equity (\$m)</b>	768.87	58.50	27,211.00	-0.44	2,438.31
<b>Market Value of Equity (\$m)</b>	1,378.16	69.00	34,484.00	1.00	3,985.65
<b>Total Assets (\$m)</b>	4,712.58	117.50	251,714.00	1.00	23,048.56
<b>Mining Sector Dummy</b>	0.62	1.00	1.00	0.00	0.49
<b>Banking Sector Dummy</b>	0.13	0.00	1.00	0.00	0.34
<b>Firm Age</b>	19.66	11.00	163.00	1.00	25.48
<b>Market-to-Book Value of Equity</b>	1.43	1.33	16.67	-104.07	7.11
<b>Standard Deviation of Returns</b>	12.1%	9.3%	30.7%	3.6%	7.1%

<sup>a</sup> Related party transactions, book and market values of equity and total assets are in millions of Australian dollars based on data for 1998.

\*, \*\* and \*\*\* indicate statistical significance at the 0.10, 0.05 and 0.01 levels, respectively.

**TABLE 4** Results from the binomial logit model estimating the relationship between the existence of blockholders and the level of private benefits of control

*Panel A* Binomial logit model results <sup>a</sup>

Independent Variable	Dependent Variable							
	10% or Larger Blockholding		15% or Larger Blockholding		20% or Larger Blockholding		25% or Larger Blockholding	
	Coefficient	z-Statistic	Coefficient	z-Statistic	Coefficient	z-Statistic	Coefficient	z-Statistic
Intercept	6.712	3.123***	4.379	2.450**	2.020	1.198	1.122	0.673
Related Party Transactions	0.192	5.952***	0.178	5.694***	0.189	5.363***	0.186	5.137***
Firm Size	-0.383	-3.690***	-0.274	-3.133***	-0.182	-2.125**	-0.150	-1.763*
Mining Sector Dummy	-0.663	-1.364	-0.666	-1.651*	-0.750	-1.948*	-0.680	-1.754*
Banking Sector Dummy	-0.278	-0.502	0.187	0.365	0.140	0.281	0.470	0.958
Firm Age	-0.007	-0.844	-0.004	-0.473	-0.013	-1.515	-0.009	-1.093
Market-to-Book Ratio	-0.016	-0.375	-0.020	-0.634	0.068	0.805	0.088	1.032
Standard Deviation of Returns	-0.018	-0.488	-0.037	-1.217	-0.038	-1.313	-0.053	-1.815*
Likelihood Ratio Statistic (degree of freedom = 7)	87.956*** (0.000)		65.689*** (0.000)		63.389*** (0.000)		57.109*** (0.000)	

**TABLE 4 Results from the binomial logit model estimating the relationship between the existence of blockholders and the level of private benefits of control (continued)**

*Panel B Correlation coefficients among independent variables*

	<b>Related Party Transactions</b>	<b>Log of Firm Size</b>	<b>Log of Total Assets</b>	<b>Mining Sector Dummy</b>	<b>Banking Sector Dummy</b>	<b>Firm Age</b>	<b>Log of Firm Age</b>	<b>Market-to-Book Ratio</b>
<b>Log of Firm Size</b>	-0.137**							
<b>Log of Total Assets</b>	-0.131**	0.936***						
<b>Mining Sector Dummy</b>	0.019	-0.308***	-0.322***					
<b>Banking Sector Dummy</b>	-0.129**	0.202***	0.292***	-0.222***				
<b>Firm Age</b>	-0.186***	0.460***	0.488***	-0.101	0.094			
<b>Log of Firm Age</b>	-0.121*	0.373***	0.361***	-0.091	0.007	0.818***		
<b>Market-to-Book Ratio</b>	-0.058	0.078	0.069	-0.141**	0.084	0.025	0.015	
<b>Standard Deviation of Returns</b>	0.101	-0.616***	-0.627***	0.493***	-0.157**	-0.248***	-0.207***	-0.190***

<sup>a</sup> The first dependent variable takes a value of 1 if the company has a 10% or larger blockholder, and 0 otherwise. The second dependent variable takes a value of 1 if the company has a 15% or larger blockholder, and 0 otherwise. Similarly, the third and fourth dependent variables take values of 1 if company has a 20% and 25% or larger blockholder and 0 otherwise, respectively. *Related Party Transactions* is measured as the natural logarithm of one plus the dollar value of related party transactions disclosed for 1998 and is our proxy for the level of private benefits of control. *Firm Size* is the natural logarithm of the firm's total market value of equity (i.e. market capitalisation). The *Mining Sector Dummy* equals 1 for a mining sector company, and 0 otherwise. The *Banking Sector Dummy* equals 1 for a financial services sector company, and 0 otherwise. *Firm Age* is the number of years a company's shares have been traded on the ASX. The *Market-to-Book Ratio* is the ratio of the market value of equity to its book value and is used to proxy for a company's growth prospects. *Standard Deviation of Returns* is measured as the standard deviation of the company's average monthly stock returns over 1994-97. The likelihood ratio statistic tests the joint null hypothesis that all slope coefficients are zero, and is analogous to the F-statistic in linear regression models. The numbers in parentheses are the p-values of the likelihood ratio statistic.

\*, \*\* and \*\*\* indicate statistical significance at the 0.10, 0.05 and 0.01 levels, respectively.

**TABLE 5** Results from the multinomial logit model estimating the relationship between the type of blockholders and the level of private benefits of control <sup>a</sup>

*Panel A* Multinomial logit model results for 10% or larger blockholding

Independent Variable	Widely Held Corporate Blockholder, $j = 1$		Family Blockholder, $j = 2$		Government Blockholder, $j = 3$	
	Coefficient	t-Statistic	Coefficient	t-Statistic	Coefficient	t-Statistic
Intercept	1.670	0.628	8.788	3.772 <sup>***</sup>	3.945	0.568
Related Party Transactions	0.187	4.203 <sup>***</sup>	0.216	5.190 <sup>***</sup>	0.103	1.157
Firm Size	-0.174	-1.375	-0.541	-4.629 <sup>***</sup>	-0.269	-0.888
Mining Sector Dummy	-0.196	-0.321	-1.247	-2.247 <sup>**</sup>	1.937	1.070
Banking Sector Dummy	-0.143	-0.216	-0.641	-1.019	1.816	1.330
Firm Age	-0.015	-1.216	-0.006	-0.590	-0.056	-0.993
Market-to-Book Ratio	-0.009	-0.193	-0.016	-0.387	-0.061	-0.649
Standard Deviation of Returns	-0.030	-0.619	0.001	0.021	-0.281	-1.225

*Panel B* Multinomial logit model results for 20% or larger blockholding

Independent Variable	Widely Held Corporate Blockholder, $j = 1$		Family Blockholder, $j = 2$		Government Blockholder, $j = 3$	
	Coefficient	t-Statistic	Coefficient	t-Statistic	Coefficient	t-Statistic
Intercept	-4.093	-1.615	4.646	2.417 <sup>**</sup>	-0.085	-0.012
Related Party Transactions	0.204	3.785 <sup>***</sup>	0.198	4.429 <sup>***</sup>	0.087	0.972
Firm Size	0.075	0.612	-0.367	-3.563 <sup>***</sup>	-0.085	-0.290
Mining Sector Dummy	-0.230	-0.379	-1.071	-2.460 <sup>**</sup>	2.087	1.163
Banking Sector Dummy	0.340	0.532	-0.362	-0.611	2.077	1.528
Firm Age	-0.020	-1.583	-0.007	-0.658	-0.056	-1.011
Market-to-Book Ratio	0.013	0.266	0.168	1.741 <sup>*</sup>	-0.042	-0.474
Standard Deviation of Returns	-0.053	-1.071	-0.038	-1.244	-0.289	-1.245

**TABLE 5 Results from the multinomial logit model estimating the relationship between the type of blockholders and the level of private benefits of control (continued)**

<sup>a</sup> *Related Party Transactions* is measured as the natural logarithm of one plus the dollar value of related party transactions disclosed for 1998 and is our proxy for the level of private benefits of control. *Firm Size* is the natural logarithm of the firm's total market value of equity (i.e. market capitalisation). The *Mining Sector Dummy* equals 1 for a mining sector company, and 0 otherwise. The *Banking Sector Dummy* equals 1 for a financial services sector company, and 0 otherwise. *Firm Age* is the number of years a company's shares have been traded on the ASX. The *Market-to-Book Ratio* is the ratio of the market value of equity to its book value and is used to proxy for a company's growth prospects. *Standard Deviation of Returns* is measured as the standard deviation of the company's average monthly stock returns over 1994-97.

<sup>\*</sup>, <sup>\*\*</sup> and <sup>\*\*\*</sup> indicate statistical significance at the 0.10, 0.05 and 0.01 levels, respectively.

