To scheme or bid? Choice of takeover method and impact on premium

Abstract

In recent years there has been an increasing use of members' schemes of arrangement to bring about a change in corporate control. This increasing use of schemes has been criticised in public quarters on the basis that unlike takeovers, schemes are not subject to the Eggleston principles and have arguably led to target shareholders receiving lower offer prices. This study provides the first large sample empirical evidence on differences between schemes and takeovers. We find that the likelihood of the use of schemes significantly increases when target firm ownership concentration is higher and when the bidder has a lower toehold. Scheme usage is also more likely for larger targets and bidders with higher leverage. Consistent with public criticisms of schemes, we find that after controlling for self-selection premiums in schemes are significantly lower than those in takeovers.

1. Introduction

Changes in corporate control in Australia are regulated by the Corporations Act 2001. The main takeover provisions in the Act are contained in Chapter 6 and include safeguards for target shareholders which are known collectively as the Eggleston principles (section 602). These safeguards are intended to ensure that takeovers take place in an "efficient, competitive and informed market." In more recent years however, there has been an escalating use of the schemes of arrangement (SOA) provisions in Part 5.1 of the Corporations Act to effect a change in corporate control.[1] As such, SOA are increasingly being viewed as an alternative to takeover bids ("takeovers") prompting concerns about regulatory arbitrage.[2] One of the key differences between SOA and takeovers is that to achieve compulsory acquisition, acquirers have to win over a lower proportion (75%) of target shareholders than in a takeover (90%).[3] Additionally, unlike takeovers, SOA are not subject to the Eggleston principles.

The inequality in shareholder approval thresholds between the two acquisition methods and the non-application of the Eggleston principles to SOA has led to public criticism that target shareholders in schemes are not adequately protected. For example, the Sydney Morning Herald published an article in August 2003 headed "What's a scheme? It is a takeover bid done dirt cheap" (Askew, 2003). A similar criticism was made in a July 2003 Sydney Morning Herald article titled "Takeover schemes backlash grows" (Hughes, 2003). Both articles claim that target shareholders receive a lower offer price in schemes than in takeovers. More recent criticisms of schemes appeared in November 2008 with the Australian Financial Review publishing an article "Reining in schemes of arrangement" (Ali, 2008). That article argues that Australia currently lacks a level playing field in regards to takeover regulation and that the Eggleston principles should be applied to all corporate control contests. Similar criticisms were also made in a discussion paper published by the Financial Services Institute of Australia in 2006 (FINSIA, 2006).[4] The repeated concerns from the growing use of schemes to obtain control, led the Australian Government's Corporations and Markets Advisory Committee (CAMAC) to issue a discussion paper on schemes in June

[1] The increasing use of schemes of arrangement is evidenced in the statistics presented in Table 1 of this paper. Shikha (2013) discusses a similar trend of the increasing use of SOA to effect a change in control in the UK.
[2] Regulatory arbitrage is "capitalising on loopholes in regulatory systems in order to circumvent unfavourable regulation." (Investopedia: available at: http://www.investopedia.com/terms/r/regulatory-arbitrage.asp). In relation to corporate control, FINSIA (2006, p.18) defines it as "[choosing] between legislative approaches to the advantage of the bidder without regard to the rights and entitlements of shareholders."
[3] There are other differences between schemes and takeovers. These are outlined in Section 2 of the paper.
[4] "Takeovers package – Finsia's proposal to reform Australia's takeovers regime to improve the market for corporate control, removing existing anomalies and protect the rights of minority shareholders."

2008. The purpose of the CAMAC review was to consider whether schemes of arrangement "operate in an effective and appropriate manner, and with appropriate safeguards, to facilitate corporate restructuring" (CAMAC, 2008).[5] The final report was published in December 2009 and concludes that schemes should continue to be an alternative mechanism to allow a control change (CAMAC, 2009). This conclusion was based on legal argument however as opposed to rigorous empirical analysis.

Accordingly the purpose of this study is to empirically investigate: i) the characteristics of target and bidder firms that are associated with the choice of a scheme or takeover and ii) whether premiums offered in schemes and takeover bids differ after controlling for other factors known to affect premiums.

There are two motivations for this study. First, a number of explanations have been advanced for the increase in the popularity of SOA.[6] One explanation is that schemes provide certainty of outcome within a known period as target shareholders must either accept or reject the scheme at the requisite shareholder meeting. This "all or nothing" approach assists the bidder to obtain financing for the proposed acquisition. A second explanation is that it is easier to obtain full ownership of the target using a SOA because of the lower shareholder approval threshold. Another advantage of a SOA is that complex transactions can be more easily accommodated than through the use of a takeover. Although these are all plausible explanations, it is noteworthy that these perceived benefits have been present since the addition of scheme provisions into relevant Australian company legislation.[7] This suggests that the trend towards schemes is driven more by the intrinsic characteristics of the firms participating in the deals than by the general benefits of SOA. As such, this study provides empirical evidence on the characteristics of target and bidder firms which influence the choice between a SOA and a takeover.

Secondly, as described above, SOA have been publically criticised on the basis that they are disadvantageous to target firm shareholders. As prior research documents that target shareholders receive substantial premiums in acquisitions (Bates and Lemmon, 2003, Henry, 2005, Humphrey-Jenner and Powell, 2011, Bugeja, 2013, Aspris et al., 2014), one obvious

[5] CAMAC, (2008) 'Members' schemes of arrangement: Discussion paper,' p 1.
[6] See for example paragraph 2.3.2 of the CAMAC (2008) Discussion Paper on Members' Schemes of Arrangement.
[7] The CAMAC Discussion Paper on Members' Schemes of Arrangement (2008) (paragraph 1.3.1) indicates that scheme provisions were introduced into the various state companies' legislation commencing with NSW in 1936.

method by which target shareholders can be harmed is if SOA result in the payment of a lower premium. At present however, there is no rigorous empirical examination of whether there is any difference in premiums between SOA and takeovers. This study addresses this gap in the literature.

Our empirical examination is based on a sample of 276 SOA and 555 takeovers announced for Australian Securities Exchange (ASX) listed firms over the period 2000 to 2011. We confirm that the choice of acquisition vehicle is consequential and not inadvertent by documenting systematic differences in deal and target and bidder characteristics between SOA and takeovers. We find that there are significant differences in the target firm ownership structure between SOA and takeovers. More specifically, in SOA the acquiring firm's toehold is smaller; target firm ownership concentration is higher and the number of target firm substantial shareholders is lower. Furthermore, target firms in schemes are significantly larger than their counterparts in takeovers. We also find that bidding firms using SOA have significantly higher leverage than those using the takeover provisions. Our results also suggest that SOA are less likely to attract multiple bidders than takeovers.

To test whether target shareholders are disadvantaged in a SOA, we analyse premiums paid in SOA and takeovers to see whether they differ, after controlling for other factors which prior research has shown are associated with acquisition premiums. Additionally, to control for self-selection bias, our analysis of premiums employs a Heckman (1979) two-step approach. Our results are largely consistent with premiums paid in SOA being significantly lower than those offered in takeovers. The size of the reduction in premium in SOA ranges between 16% and 40% depending on the sample restriction we employ for our investigation. We also use a propensity score matched sample as an alternative technique to control for the self-selection of acquisition form.[8] The results of this analysis also indicate that shareholders in SOA are offered significantly lower premiums when compared with friendly takeovers.

This study makes a number of contributions. First, we believe we are the first study which provides large sample empirical evidence on the differences between SOA and takeovers in Australia. Our results show that SOA and takeovers differ across a number of dimensions including target and bidder firm financial and ownership characteristics and deal characteristics including takeover premiums. These findings are likely to be of interest to

[8] A discussion of the relative merits of controlling for self-selection using the Heckman (1979) two-step approach or propensity score matching is provided in Section 6.1.

regulators in any future review of the mechanisms which can be used to undertake the acquisition of a controlling interest in another firm. Even though our results suggest that shareholders receiver lower premiums in SOA, we caution against interpreting our findings as being indicative of undue regulatory arbitrage. Although schemes and takeovers entail different procedures the Corporations Act incorporate safeguards against self-dealing and the abuse of minority shareholders. Furthermore, due to the different transaction costs and structural features, there can be no certainty that acquisitions structured as a SOA would have been undertaken had they been required to be made as a takeover.

Our study also contributes to prior academic literature on the market for corporate control in Australia. Our results suggest that studies which pool all acquisitions irrespective of acquisition mechanism ignore important differences across the two deal types. We recommend that future research in this area recognise these differences, and incorporated them into their research design.

The remainder of this study is structured as follows. Section 2 describes the Australian regulatory environment governing changes in corporate control and Section 3 develops our hypotheses on the factors which may influence the choice between SOA and takeovers. Section 4 describes the sample and presents descriptive statistics, whilst Section 5 provides results of our analysis of the choice of deal type. In Section 6, we discuss our research design to test for a difference in premiums between SOA and takeovers and present the results of this investigation. Our conclusion and suggestions for future research are covered in the final section.

2. Regulatory differences between SOA and takeovers

Changes in corporate control in Australia are currently subject to extensive regulation. This has not always been the case however as takeover regulation spanned just three pages in the 1961 Companies Act.[9] A spate of unsolicited bids in the 1960s prompted a revision of the law. Howard (1998) reports:

> "Some bidders used aggressive tactics such as first-come, first-served offers with short durations and large premiums to those shareholders who were quick to respond. Such tactics raised concerns that some classes of shareholders were being disadvantaged. For example, with speedy secretive bids, control of a company could pass to a raider before small shareholders had an opportunity to sell their shares" (p. 1-2).

[9] Little (1997) includes a short history of takeover law in Australia.

Howard's reference to the disadvantage suffered by small shareholders in the acquired firm when control passes to a "raider" reveals the implicit premise of Australian takeover regulation: target firm shareholders need protection against depredation by acquiring firms.

The above premise is reflected in the four principles articulated in 1969 by the Company Law Advisory Committee chaired by Sir Richard Eggleston and that have since shaped Australian takeover legislation. The first three (Eggleston) principles are that directors and shareholders in the target:

(a) know the identity of the person who proposes to acquire a substantial interest,
(b) have reasonable time to consider the offer, and
(c) are given enough information to assess the strengths and weaknesses of the offer.

The fourth principle is that shareholders of the relevant class of voting shares all have a reasonable and equal opportunity to participate in any benefits accruing through the proposal (sometimes referred as the "collateral benefits" rule).

A large set of legal provisions and substantial enforcement infrastructure give effect to the Eggleston Principles. The legal provisions contained mostly in Chapter 6 of the Corporations Act are intended to ensure that acquisition of control over a public company takes place in an "efficient, competitive & informed market."[10] The principal enforcement mechanism is the Takeovers Panel, a peer review body with members drawn from Australia's takeovers and business communities which settles disputes by focusing primarily on commercial and policy issues.

Notwithstanding the extensive set of provisions in Chapter 6, a large proportion of changes of control in public companies fall outside its sway and into the domain of "members' schemes of arrangement." Schemes are a mechanism for a binding arrangement to be drawn between a company and its shareholders, including arrangements to change the corporate structure or shareholdings. They are:

> "intended to provide machinery (i) for overcoming the impossibility or impracticability of obtaining the individual consent of every member of the class

[10] The descriptive terms "efficient", "competitive" and "informed" are not defined. Given the influence of the Eggleston Principles it seems reasonable to infer that adherence to them is, in effect, deemed the minimum requirement to ensure an efficient, competitive and informed market.

> intended to be bound thereby, and (ii) for preventing, in appropriate circumstances, a minority of class members frustrating a beneficial scheme."[11]

Chapter 6 protects minority shareholders from unfair treatment by an acquirer. Schemes have the complementary objective: they prevent a minority of shareholders frustrating a beneficial binding agreement, including those that may entail a change in control. The difference in orientation is reflected, in part, in the thresholds for compulsory acquisition: acquirers may compulsorily acquire target shareholders' shares once they purchase 90% of their target's voting power but a scheme allows compulsory acquisition with the approval of a 75% majority of shares voted.[12] Although the Eggleston principles do not apply to SOA, the fairness of a SOA transaction to shareholders is arguably protected through the role of the court and the Australian Securities and Investments Commission (ASIC). The court is involved at two stages of a SOA, first to call a meeting of shareholders to consider the scheme and second to implement the scheme after approval by shareholders. The role of ASIC in a SOA is to review disclosures and other information provided in scheme documentation and where necessary to appear before the court to make submissions on relevant issues in scheme documentation or to object to the approval of the scheme.

The flexibility of schemes to implement various kinds of organisational restructuring means they provide fewer explicit safeguards against practices that violate "fair conduct" under the takeover code. For instance, in 2010, investment group CP2 asked the Takeover Panel to prevent its target, Transurban Group, from proceeding with a A$543 million equity issue on the basis that the equity issue was an unreasonable "frustrating action" against CP2's attempt to acquire control. Tellingly, CP2 invoked the Eggleston Principles in its approach to the Takeovers Panel by submitting that the effect of Transurban's equity issue was to

> "(a) interfere with the reasonable and equal opportunity of security holders to participate in, and benefit from, the change of control transaction proposed by the consortium, (b) inhibit the efficient, competitive and informed market for control of Transurban securities and (c) deny security holders a reasonable time to consider the proposed change of control transaction and prevented them from having enough information to enable them to assess the merits of the proposal."[13]

The Takeovers Panel rebuffed CP2 on the grounds that

[11] CAMAC Discussion Paper (2008) paragraph 1.3.2.

[12] Previously a scheme required the approval of both a simple majority of shareholders present under the headcount test and a 75% majority under the voted shares test. The headcount test has been amended so that the court has discretion to approve a scheme if it has been approved by a 75% majority of shares voted despite the headcount test not being met.

[13] Australian Government Takeovers Panel, Reasons for Decision Transurban Group (2010), p.3. Available at: http://www.takeovers.gov.au/content/Reasons_For_Decisions/2010/downloads/005_Transurban_Group.pdf

> "the Panel's guidance on frustrating action applies to a 'potential bid', which is defined as "*a genuine potential bid communicated to target directors publicly or privately which is not yet a formal bid under Chapter 6*". The consortium's proposals were for the acquisition of Transurban by way of scheme of arrangement. … The proposals did not constitute potential bids because they were proposed schemes and they were rejected."[14]

Underscoring the difference between bids and schemes more recently, an investor's capacity to block a scheme resulted in the scheme's proponents to make an offer to buy out the investor's minority stake in another company. Retail investor Mr Solomon Lew had South Africa's Woolworths Holdings Limited offer him a substantial premium for his minority stake in Country Road Limited conditional on his support of a scheme that passes control of retailer David Jones Limited to Woolworths. This agreement would not be allowed if Woolworths had sought to acquire David Jones via a takeover bid. As noted earlier, under the fourth Eggleston principle, all shareholders must have reasonable and equal opportunity to participate in any benefits accruing through the proposal.

In response to similar earlier cases, FINSIA's Markets Policy Group released in 2006 a proposal to reform Australia's takeover regime that included a recommendation to remove inconsistencies between the regulation of SOA and takeovers. FINSIA argued that the use of schemes to effect changes in corporate control has "resulted in shareholders being deprived of the protection which legislators intended they should have when takeover laws were formulated."[15] One plank of FINSIA's argument was a change in the nature of how schemes were used. FINSIA alleged that whilst schemes previously were used mainly for complex transactions that could not be undertaken by way of a takeover and in "agreed mergers" between companies of equal size, they were now being used to launch hostile transactions by way of "bear hugs."[16] Section 411 (17) of the Corporations Act provides that the court cannot approve a scheme if it is satisfied it has been proposed to avoid a takeover. But the courts have taken a liberal attitude and read down this requirement to the extent that CAMAC in 2009 recommended that this section be repealed and a SOA be recognised as a valid alternative to takeover bids.[17] CAMAC based its recommendation on the grounds that both bids and schemes have their procedural protections and there is demonstrated demand in the

[14] Australian Government Takeovers Panel, Reasons for Decision Transurban Group (2010), p.4.
[15] FINSIA "Takeovers Package" (2006, p. 18).
[16] FINSIA claimed that "in a 'bear hug' the bidder induces the target to agree to recommend to shareholders the company's acquisition with the sanction that if the target board does not recommend the offer, the board's refusal will be made public and its decision will be subject to the public scrutiny of shareholders and market commentators."
[17] CAMAC (2009) Report on Members' Schemes of Arrangement, paragraph 6.4.2.

market for both mechanisms to effecting changes of control. Further, CAMAC articulated a reason for distinguishing between bids and SOA. It declared the Eggleston Principles:

> "were developed in the context of Chapter 6 bids, to protect shareholders where a bidder can bypass the directors of the target company and make an offer directly to them. They are not necessarily appropriate in the context of schemes, even where control may be at stake. A scheme proposal comes from the company itself, whose directors have a duty to act in the best interests of the company in putting forward the scheme, and both the court and ASIC have a protective role. The fact that a scheme and a bid may have a similar ultimate outcome does not necessarily mean that the same form of protection is required."[18]

CAMAC's distinction between bid and scheme contexts arguably provides a basis for justifying a higher compulsory acquisition threshold for takeover bids. A target's board is usually better placed than its shareholders to assess the merits of a deal. The finding that the target firm's board recommendation is the most important influence on the outcome of a bid supports this premise (Henry, 2005). Given this, one implication is that deals initiated and recommended by the board should require a relatively low threshold for approval by shareholders to be binding on all otherwise a few shareholders may hold the others hostage. On the other hand, when bid offers are made directly to shareholders, it is reasonable that a higher shareholder approval threshold be applied before compulsory acquisition because the bids are not initiated by the targets' respective boards.

The FINSIA (2006) and CAMAC (2009) reports usefully set out two contrasting views on the merits of having changes in corporate control implemented through either takeovers or SOA. FINSIA's (2006) recommendation to remove inconsistencies between the two sets of regulatory provisions reflects its concern to minimise the possibility of target firms' being put under undue pressure to acquiesce to schemes, whilst CAMAC's (2009) endorsement of both takeover bids and schemes is based on its view that schemes provide adequate protection given that they originate from the company itself.

Strikingly, notwithstanding the two longstanding divergent views on the merits of having two regulatory vehicles to effect changes of corporate control, there has been little empirical research on the factors influencing the choice of either a takeover bid or scheme in Australia or the impact of the choice on premiums received by target shareholders. This means that policy makers and regulators have largely relied on anecdotal evidence to determine what drives the choice of a takeover bid or scheme and their outcomes. One consequence is that

[18] CAMAC (2009) Report on Members' Schemes of Arrangement, paragraph 6.4.2.

sensationalised reporting of particular cases drives regulatory reform, as Hutson (1998), among others, has noted. Accordingly, this study addresses this gap through the provision of large sample empirical evidence highlighting differences between SOA and takeovers.

3. Hypothesis development on the choice of deal type

Ownership concentration

We first examine the factors which influence the choice between SOA and takeovers. Other things being equal, acquiring firms' choice of a SOA or bid depends on which method provides the best chance of achieving control. Given that the threshold for compulsory acquisition is 75% of shares voted in schemes and 90% of all issued shares in bids, we may expect schemes to dominate bids if acquirers had unfettered choice. One reason schemes do not dominate is that target firms with concentrated owners are well placed to avoid the "hold up" element inherent in schemes. As a result, we posit the likelihood of a scheme being selected is a function of the ownership structure of the target firm; in particular, we predict acquirers of target firms with widely dispersed ownership are more likely to use a scheme as this reflects the greater bargaining power of the prospective acquirers.

The terms of schemes of arrangement, once approved by the court to be put to the target firm's shareholders, are not easily amended. This means far less opportunity for the market to be tested or further negotiations to take place. If the target's shareholders are widely dispersed with no one having sufficient investment at stake to warrant investigating the terms agreed to by the board or to canvas for a competing offer they have no effective recourse other than to accept reasonable offers. In contrast, concentrated shareholders in target firms are in a better position to insist on the acquiring firm's bid being tested under the "open auction" rules that characterise takeover bids. Further, terms of bids are more easily amended so that the best price can be extracted from acquirers. This view of the incidence of schemes and bids being reflective of the strategic choices made by the target firm is consistent with Schwert's (2000) analysis of hostility in takeovers. Schwert's empirical tests "show that most deals described as hostile in the press are not distinguishable from friendly deals in economic terms, except that hostile transactions involve publicity as part of the bargaining process" (p. 2599).

Given the above, we posit:

H1: The likelihood of the use of a SOA decreases with target firm ownership concentration.

Another explanation for why the use of SOA is expected to decrease with a higher target firm ownership concentration is that a widely dispersed target firm ownership increases the number of different shareholders who must accept the offer for the bidder to acquire 100% ownership. The increased difficulty of convincing a greater number of shareholders to accept the offer leads us to predict that bidders for target firms with widely dispersed ownership will prefer to use a SOA to raise the probability of takeover success.

We proxy target firm ownership dispersion (*CONC*) using three alternative measures: the percentage ownership of the Top 20 (*TOP20*), Top 5 *(TOP5)* and of the Top 1 (*TOP1*) shareholders disclosed for the financial year-end prior to the takeover announcement. We also consider substantial shareholdings in the target firm. As the ownership level of substantial shareholders increases, the greater is their ability to insist on a takeover bid rather than a SOA. The aggregate ownership of substantial shareholders (*SUBSHPER*) is measured at the financial year-end prior to the takeover announcement. As an alternative measure of the influence of substantial shareholders, we use the number of substantial shareholders (*SUBSSHNO*) disclosed at the financial year-end before the takeover.

Bidder toehold

The larger the prospective acquirer's toehold in the target, the lower is the attractiveness of a SOA because the acquirer is not allowed to vote their shares at the meeting seeking scheme approval and they must still receive support from 75% of remaining shareholders to acquire 100% ownership. In these circumstances, the acquirer with a large toehold faces the prospect of "hold-up" by a relatively small proportion of target firm shareholders. For instance, an acquirer with a 60% toehold requires 75% of the remaining 40% of shareholders to agree to the terms. Furthermore, presenting a credibly non-self interested recommendation to the target shareholders is difficult when the acquirer exerts substantial influence over the board. In this case, making an offer under the auspices of the takeover provisions provides the acquirer with the ability to test the market and give itself the option to vary the terms of the acquisition in case the initial offer proves unattractive. This leads to Hypothesis Two:

H2: The likelihood of the use of a SOA decreases with the bidding firm toehold in the target firm.

The bidding firm's toehold in the target firm is measured at the date of the takeover announcement (*TOEHOLD*).

Target firm size

Larger targets pose greater risks for prospective acquirers, one of the risks being the prospect of drawing down on financial capacity but only partially acquiring the target and not achieving one's economic objectives. In terms of financing deals, SOA have the attractive feature of providing a specific date when the outcome of the offer is known. Furthermore, due to the difficulty in revising terms after approval by the court, a SOA provides greater certainty about the terms of the acquisition. Since the value of these features increases with the size of the prospective financial outlay, acquirers of larger targets are expected to find the all or nothing nature of scheme financing more attractive. This leads us to Hypothesis Three:

H3: The likelihood of the use of a SOA increases with target firm size.

Target firm size is measured as the natural logarithm of target firm market capitalisation (*TLNMCAP*) at the end of the financial year before the takeover.

Leverage

Consistent with the above discussion, the CAMAC (2008) report observed that bidders prefer schemes as the greater certainty of outcome associated with the use of schemes reduces the difficulty of arranging financing of the deal. The benefit of greater financing certainty is likely to be of more importance to bidders that would otherwise have greater difficulty arranging funds to make the acquisition. As such, we predict that SOA are the preferred deal type when the bidder has higher pre-acquisition leverage. In a similar fashion, the leverage of the target firm is likely to influence the choice of deal type. If the target firm has relatively low leverage the bidder is able to benefit from this unused debt capacity post-acquisition and should have less concern with having certainty of financing. In contrast, a higher level of target firm leverage increases the importance of financing certainty. As a result we predict the use of SOA is positively associated with the leverage of the bidder and target firm.

H4: The likelihood of the use of a SOA increases with target and bidding firm leverage.

Control variables

We include the aggregate ownership of the target firm board as a control in our model of the choice of deal type. As the SOA process is managed by the target firm, schemes are by their nature friendly acquisitions. Henry (2005) examines the factors which are associated with the attitude of the target firm board and finds that board ownership is positively related to an

accept recommendation (i.e., friendly deals). As such, it would be expected that in comparison to the entire sample of takeovers (i.e., both hostile and friendly), target board ownership is expected to be higher in deals structured as a SOA. In contrast, this variable is expected to be insignificant when we compare schemes with only friendly takeovers. The percentage ownership of the target firm board (*TDIROWN*) is measured at the date of the takeover announcement.

We add to the model a number of target firm financial characteristics including: return on assets (*TROA*), market-to-book ratio (*TMB*) and free cash flow (*TFCF*). Each of these variables is measured at the end of the financial year immediately prior to the takeover announcement. Target firm free cash flow is proxied as net operating cash flows minus dividends scaled by total assets. We form no a priori expectations as to how these variables influence the choice of deal type.

In summary, we estimate the following probit regression model to examine the factors which influence the choice between schemes and takeovers.

$$SOA = \alpha_i + \beta_1 TOEHOLD + \beta_2 CONC + \beta_3 TDIROWN + \beta_4 TROA + \beta_5 TMB + \beta_6 TDE + \beta_7 TFCF + \beta_8 TLNMCAP + INDUSTRY + YEAR + \varepsilon_i \quad (1a)$$

The dependent variable is a binary variable coded as one for deals structured as a SOA. This model is estimated first for our entire sample of acquisitions and then second after restricting our sample to only SOA and friendly takeovers.[19] We undertake this secondary analysis as schemes are by their nature friendly acquisitions and as such friendly takeovers are likely to be a more appropriate comparison group.

We also estimate an extended version of regression model (1a) which adds the following bidding firm financial characteristics (which we refer to as model 1(b)): firm size (*BLNMCAP*), return on assets (*BROA*), free cash flow (*BFCF*) and the market-to-book ratio (*BMB*). These variables are defined identically to those for the target firm. These variables are measured at the end of the financial year immediately preceding the takeover.

As we can only obtain financial information for bidders if the firm is listed on the ASX, the sample size for the estimation of model (1b) is smaller than the sample used to estimate

[19] Friendly takeovers are defined as those in which the initial recommendation of the target firm board is to accept the offer.

model 1(a). In a similar fashion to that described above, we estimate model (1b) firstly for all deals involving a listed bidder and then alternatively using only SOA and friendly takeovers.

Both models (1a) and (1b) include indicator variables to highlight target firm industry (*INDUSTRY*) and the year (*YEAR*) of the announcement of the deal.[20]

4. Sample

Takeovers and SOA for ASX listed targets between 2000 and 2011 are identified using the Connect 4 Mergers and Acquisitions database.[21] Data on takeover characteristics including toehold, the percentage ownership and recommendation of the target firm board are collected from takeover and scheme documents lodged by the bidder and target firms with the ASX. All necessary financial information is hand collected from the respective financial statements of the bidder and target firm. The financial statements of target firms are also used to collect ownership concentration details. Financial statements and takeover and scheme documents are downloaded from the DatAnalysis Premium database. Observations with insufficient data to estimate the regression models are excluded from the sample resulting in the exclusion of 44 takeovers and 35 SOA. The final sample comprises 555 takeovers and 276 schemes.

Table 1 summarises the distribution of schemes and takeovers over the sample period using both deal numbers and deal value. Based on deal numbers, 33% of deals over the sample period are structured as SOA. The highest proportion of schemes occurs in 2007 with 46% of deals structured as schemes. In no year over the sample period do SOA comprise the majority of deal numbers. Subsequent to 2006 there appears to be an increase in the frequency of acquisitions structured as SOA. The second set of columns in Table 1 present the size of deals undertaken by SOA and takeovers across each year of the sample. Deal size is approximated by the target firm market capitalisation at the financial year end prior to the deal announcement. In contrast to the raw numbers, this analysis shows that 55% of total deal value between 2000 and 2011 occurred through the use of SOA. For five of the twelve year sample period the market capitalisation of deals structured as SOA exceeds that of deals arranged as takeovers.

INSERT TABLE 1 HERE

[20] Target firm industry is defined using two digit GICS codes.

[21] To ensure we are comparing equivalent deal types, schemes are only included in the sample if they involve an offer solely for a change of control. For example, SOA which involve a simultaneous change of control and the "spin-off" of a subsidiary are excluded from the sample. This restriction results in the exclusion of 52 SOA.

Table 2 shows the breakdown of the sample into SOA and takeovers using the two digit GICS code of the target firm. For most industry groups the percentage of deals structured as schemes ranges between 26 and 33%. The exceptions are the health care and financials industries for which just under half of deals are arranged as schemes.

INSERT TABLE 2 HERE

Table 3 provides descriptive statistics for the variables included in the regression model examining the choice of deal type. The target board on average owns 11% of the target firm, whilst the average bidding firm toehold is 13%. The mean Top 20 target firm shareholding is 68%, whilst the average substantial shareholder ownership in the target firm is 47%.

INSERT TABLE 3 HERE

For each variable, we also compare differences in the means between firms in the SOA and takeover groups. This comparison is presented for the entire sample and also using only those takeovers that are classified as friendly. A *t*-test/(*chi-squared* test) for continuous/(binary) variables is also conducted to test if these differences are significant. The target firm ownership variables show a number of significant differences between SOA and takeovers. In comparison to takeovers, SOA are characterised by a significantly lower: bidding firm toehold, substantial shareholder ownership and target firm board ownership (friendly group comparison only). The comparison with friendly deals also shows that target firms involved in schemes have significantly lower ownership concentration (i.e., *Top 20*, *Top 5* and *Top 1*) than target firms in takeovers. In contrast, the opposite conclusion holds, for *Top 20* and *Top 5* ownership when comparing all deals. Overall, the univariate results suggest that consistent with Hypothesis One, schemes are used more frequently when the ownership of the target firm is widely dispersed.

Some other notable differences in target and bidding firm financial characteristics between schemes and takeovers are evident from Table 3. As predicted, in SOA target and bidding firms have significantly higher leverage. Also, consistent with expectations, target firms in schemes are significantly larger than their counterparts in takeovers. The results also indicate that target firms in takeovers have significantly lower performance as measured by ROA. Apart from leverage, there is no statistical difference in the other bidding firm characteristics between schemes and takeovers.

A correlation matrix between the independent variables included in regression model (1) is provided in Table 4. Panel A presents correlations for the full sample of deals, whilst Panel B show correlations for only those deals with an ASX listed bidder.

INSERT TABLE 4 HERE

In both Panels the highest correlations are between: target and bidder firm leverage; target and bidder firm size, and free cash flow and ROA for both the bidder and target firms. There is also a high positive correlation between the bidding firm toehold and the ownership stake of the Top 20/5/1 shareholders in the target firm. Despite these high correlation results, an examination of VIF factors for our regression analysis indicates that multicollinearity is not a problem with our analysis.

5. Results for choice of deal type

Table 5 provides the results of the probit regression estimates on the choice between SOA and takeovers. In Panel A the results are presented for the entire sample of deals (Model 1(a)), whilst in Panel B the findings are given for only deals in which the bidder is listed (Model 1(b). As discussed in Section 3, model 1(b) includes a number of bidder characteristics as additional controls. For both panels the results are provided separately for all deals and then for SOA and friendly takeovers.

INSERT TABLE 5 HERE

A number of findings are consistent across both panels and are significant irrespective of whether we focus on all deals or just friendly deals. For example, consistent with Hypothesis Two the toehold stake of the bidder is significantly lower in SOA indicating that the lower compulsory acquisition threshold leads bidders to be less concerned at acquiring a pre-bid interest in the target firm. Furthermore, as predicted the likelihood that a deal uses a SOA significantly increases with the size of the target firm.

Beyond the toehold stake of the bidder in the target firm, the results on the other target firm ownership variables provide mixed findings. Inconsistent with Hypothesis One, in Panel A the ownership of the Top 1 shareholder increases the likelihood of the use of a SOA, whilst the ownership of substantial shareholders is insignificant. In contrast, when we control for bidding firm characteristics in Panel B the results support Hypothesis One with the number of substantial shareholders decreasing the frequency of use of SOA. However, the ownership of

the Top 20/5/1 shareholder(s) remains insignificant. In both panels, ownership of the target firm directors is unrelated to the choice between SOA and takeovers.

Hypothesis Four predicts higher target and bidder firm leverage increases the likelihood of the use of schemes. Consistent with this expectation the findings in Panel A show target firm leverage significantly raises the likelihood that the deal is structured as a scheme. This significant result however, is not robust to the inclusion of bidding firm financial characteristics in the regression as shown in Panel B. The results in Panel B however highlight that higher bidding firm leverage is associated with a greater use of schemes as expected.

Beyond target firm size and leverage, the other financial characteristics of the target firm do not appear to influence the decision as to whether to structure the deal as a scheme or takeover. Panel A shows that a higher market-to-book ratio lowers the use of SOA when considering the results for the entire sample. The findings in Panel B indicate however, that this variable become insignificant when bidding firm characteristics are added as additional control variables.

The findings in Panel B show that a number of other bidding firm financial variables are associated with the choice of deal structure but only when we use the entire sample of acquisitions without regard to the attitude of the target firm board. Bidding firm ROA and market-to-book ratio are associated with a reduced likelihood of the use of SOA, whilst bidder free cash raises the probability of the use of schemes. It is notable however, that these variables become insignificant when we restrict the comparison of the choice of deal structure to friendly acquisitions.

6. Influence of deal structure on premiums

6.1 Hypothesis and research design

The criticisms of SOA are suggestive of target shareholders being disadvantaged when an acquisition is structured as a scheme. As a test of this criticism we examine if there is any difference in premiums between takeovers and schemes. Under existing regulation a bidder is entitled to proceed to compulsory acquisition in a SOA if 75% of shareholders approve the deal. This compares with the 90% ownership threshold to move to compulsory acquisition under the takeover legislation. Assuming an upward sloping supply curve Stulz (1988) argues that when more shareholders need to be convinced to accept an offer the bidding firm is

required to offer a higher premium. The lower threshold in SOA lead us to predict that premiums in schemes are lower than in takeovers. This leads to Hypothesis Five:

H5: Premiums are lower in SOA than in takeovers.

To test Hypothesis Five we estimate the following OLS regression model.

$$PREM = \alpha_i + \beta_1 SOA + \beta_2 PAYT + \beta_3 MULT + \beta_4 FRIENDLY + \beta_5 TOEHOLD + \beta_6 TDIROWN + \beta_7 TROA + \beta_8 TMB + \beta_9 TDE + \beta_{10} TFCF + \beta_{11} TLNMCAP + \beta_{12} BLISTED + \beta_{13} MILLS + INDUSTRY + YEAR + \varepsilon_i \quad (2a)$$

The dependent variable is the premium measured as the initial offer price minus the target share price sixty days prior to the takeover announcement divided by the target firm price sixty days prior to the takeover announcement (*PREM60*). As alternative reference points, we also use the target share price 30 (*PREM30*) and 15 days (*PREM15*) prior to the takeover announcement to calculate the premium. The key independent test variable is the indicator variable denoting deals which are structured as a SOA (*SOA*).

A number of control variables are included in regression model (2a). We control for payment method as prior studies argue that premiums are higher when cash is offered as payment due to the increased tax liability of shareholders (Huang and Walkling, 1987; Draper and Paudyal 1999 and da Silva Rosa et al., 2000). We denote method of payment using an indicator variable coded as one if the method of payment is exclusively cash (*PAYT*). Deals with multiple bidders are highlighted using an indicator variable coded as one when there is more than one simultaneous bidder for the target firm (*MULT*). It is expected that premiums are greater in the presence of multiple bidders (Humphery-Jenner and Powell 2011). The nature of the takeover is controlled for using an indicator variable set as one if the initial recommendation of the target firm board is takeover acceptance (*FRIENDLY*). Prior research has found however that the attitude of the target firm is unrelated to premiums (Bates and Lemmon, 2003; Chapple et al., 2007; Bugeja, 2013).[22]

The impact of the target firm ownership structure on premiums is modelled in Stulz (1988). He argues that target firms will receive a greater premium when the bidder must negotiate with an increased number of outside shareholders. As a result, it is expected that premiums will be negatively associated with the bidding firm toehold and positively associated with the

[22] In contrast, Humpery-Jenner and Powell, 2011 find significant higher premiums in hostile takeovers.

ownership of the target firm board. The results in many prior studies are consistent with these expectations (Stulz et al., 1990; Bugeja and Walter, 1995; Sudarsanam et al., 1996; Bugeja and Sinelnikov, 2012).

Model 2(a) includes the same controls for target firm financial characteristics as used in model (1). Target firm leverage is expected to increase takeover premiums as higher leverage results in a more concentrated ownership structure (Israel, 1991; Israel 1992).[23] A larger target firm is expected to have higher bargaining power and as a result may be expected to receive a higher premium. Prior research however, reports inconsistent results with Anderson et al., (1994) and Bugeja (2013) finding a negative association between premiums and target firm size, whilst Betton et al., (2009) reports an insignificant result. Similar to Schwert (2000) the target firm market-to-book ratio is used as a control for target firm growth options. We also include a dummy variable highlighting deals announced by bidders not listed on the ASX (*BLISTED*). Bugeja (2011) finds that Australian target firms receive higher premiums from foreign bidders not listed on the ASX. Furthermore, Bugeja and Sinelnikov (2012) indicate that target firms earn lower abnormal returns around a takeover announcement when the bidder is an unlisted private firm.

A potential issue we face with the estimation of model (2a) is that of of self-selection. Selection bias is an issue commonly faced in accounting and finance research (Tucker, 2010; Lennox et al., 2012). Selection bias arises because decisions made by firms are often chosen from amongst one or more alternatives. The researcher is then frequently interested in studying the consequences of making one choice relative to another. However, the researcher can only observe the effect of the choice made, but not the effect of the choices not made by that firm. Furthermore, the researcher is typically unable to observe all the factors that were relevant to a firm when making their decision (Tucker, 2010). If the choice made by firms occurs non-randomly, the use of OLS regression results in biased coefficients due to an omitted correlated variables bias (Maddala, 1991).

The two main approaches to dealing with this self-selection bias are the use of propensity score matching and the Heckman (1979) two–stage approach.[24] Propensity score matching involves matching each firm that has made a choice to a control firm that has not made a

[23] In contrast, Bugeja and Sinelnikov (2012) and Bugeja (2013) find a negative association between target firm leverage and takeover premiums.

[24] A detailed discussion of the implementation of and issues associated with the Heckman (1979) approach and propensity score matching is beyond the scope of this study. Interested readers should see (Tucker, 2010 and Lennox et al., 2012).

choice. Control firms are chosen based on the closeness of their propensity (i.e., probability) to make the choice of interest to a treatment firm. The propensity of making a particular choice is typically estimated from a logit or probit regression model that explains the choice of interest using theoretically relevant predictive variables. The outcome from using a sample comprising a matching of treatment and control firms based on the estimated propensity from this first stage regression is to control for selection bias arising from observable factors included in the first stage model. Propensity score matching does not control for selection bias arising from unobservable factors from the first stage regression.

The second frequently used approach to correct for self-selection is the Heckman (1979) two-step approach. This technique involves estimating a first-stage probit model that explains the choice of interest. A bias correction term (i.e., the inverse Mills ratio) is derived from the first-stage probit model and then added to the second-stage regression that analyse the consequences of the choice. The inverse Mills ratio in the second-stage regression controls for unobservable factors associated with the choice and corrects for potential selection bias.

A number of previous takeover studies control for selection bias using the Heckman (1979) approach. For example, Akhtar (2014) compares the characteristics of Australian bidders and non-bidders and finds that bidding firms have significantly higher: cash leverage, capital expenditure and management overconfidence. Furthermore, using the Heckman (1979) approach, Bugeja et al., (2012) Bugeja and Sinelnikov (2012) and Bugeja (2013) also examine whether their results are sensitive to controlling for self-selection bias.

In the context of the current study, since bidders select the choice of deal type it is possible that the characteristics associated with this choice are also associated with the takeover premium. To address this self-selection concern we follow the approach of Heckman (1979) and include the inverse Mills ratio (*MILLS*) determined from estimating model (1a) in the regression model. We prefer the Heckman (1979) approach to propensity score matching as the results in Table 5 indicate that model (1) explaining the choice of deal type explains approximately only 20-40% of the variance in the dependent variable. As such, there are likely a number of unobservable factors which explain the choice of deal type.[25]

As discussed by Lennox et al., (2012) the implementation of the Heckman (1979) approach is most efficient when a variable included in the first-stage selection model can be validly

[25] We also present the results using propensity score matching in the additional analysis (see Section 6.4).

excluded from the second-stage model. The variable that we use in the first-stage model that we exclude from the second stage is the ownership of the Top 1 shareholder. The results in Table 5 Panel A show that the ownership of the largest shareholder is positively associated with the use of schemes. Furthermore, additional analysis (not tabulated) indicates that this variable is unrelated to takeover premiums and so can be validly excluded from the model. As a result, the inverse Mills ratio is calculated from estimating the first stage probit model using *TOP1* as the measure of ownership concentration. Model (2a) is estimated initially for all deals and then alternatively for only SOA and friendly takeovers.

To examine if the results are robust to the inclusion of bidding firm financial characteristics we amend model (2a) and estimate the regression using only ASX listed bidders. The bidding firm financial characteristics added to this regression (model 2(b)) are identical to those in model (1b). In addition, we include the ownership of the bidding firm board (*BDIROWN*) at the date of the takeover announcement as an additional control. Prior research suggests that due to bidding firm agency problems, target firm shareholders earn the highest abnormal returns when bidding firms have lower director ownership (Betton et al., 2008). Bidding firm size and the market-to-book ratio have been found in prior research to be positively associated with takeover premiums (Officer, 2003).

The findings in Panel B of Table 5 indicate that the choice of schemes for listed bidders is negatively associated with the number of target firm substantial shareholders. As a result, the first stage probit model we estimate to calculate the inverse Mills ratio included in model (2b) uses *SUBSHNO* as the measure of ownership concentration.[26]

6.2 Descriptive statistics for additional variables included in premium model

Table 6 presents descriptive statistics on those variables included in model (2) which are not included in model (1). Data on the offer price, method of payment, the percentage ownership of the bidding firm board are collected by reading through the relevant takeover and SOA documents lodged with the ASX. Similar to prior studies target shareholders receive substantial premiums, ranging between 25 and 31% depending on the reference date used to measure premiums. Overall 65% of deals are classified as friendly and solely cash payment is offered in 61% of deals.

[26] The conclusions from our findings are quantitatively similar if we continue to use *TOP1* as the measure of ownership concentration in the first-stage probit model.

INSERT TABLE 6 HERE

We also present univariate tests of differences between the scheme and takeover groups. Although there is no difference in premiums between schemes and takeovers when we compare all deals, when we restrict the sample to friendly acquisitions we find that premiums are significantly lower in SOA. We also find that schemes are less likely to have multiple bidders and have significantly lower use of exclusively cash payment. There is no difference in bidding firm listing status or bidder board ownership between schemes and takeovers.

A correlation matrix between the additional continuous regression variables in the model of takeover premiums and all other variables is presented in Table 7. Panel A shows the findings irrespective of bidding firm listing status, whilst Panel B presents the results for only deals with listed bidders.

INSERT TABLE 7 HERE

As would be expected the three takeover premium measures are highly correlated. Inconsistent with expectations, the correlation between takeover premiums and the bidding firm toehold is positive. The size of the correlations evidenced in Table 7 indicates that multicollinearity is not likely to be an issue in the estimation of the regression models.

6.3 Results of estimating the model of premiums

Table 8 presents the results of the model to test whether there is any association between deal type and takeover premiums.

INSERT TABLE 8 HERE

Similar to Table 5, Panel A of Table 8 presents the results for the full sample, whilst Panel B shows the findings for deals in which the bidder is listed on the ASX. In both panels results are shown for all deals and for only friendly deals respectively. The results are presented for each set of analyses with the takeover premium measured alternatively using the target share price 60, 30 and 15 days prior to the acquisition.

In both panels, when only friendly deals are examined, the SOA indicator variable is negative and significant, irrespective of how the takeover premium is measured. When all deals are used for the analysis, the coefficient on the SOA dummy variable continues to be negative and significant except for the *PREM15* and *PREM30* regression models in Panel B. Overall,

these results are consistent with target shareholders being paid lower premiums in SOA than takeovers. Furthermore, these results support anecdotal claims in the financial press claiming disadvantage to target shareholders from the use of schemes.

There is no consistent pattern of results for the control variables across the two Panels. For the target firm financial characteristics the results are largely consistent with higher premiums being paid for smaller target firms. There is also some evidence that target firms are offered increased premiums when they have higher free cash flow, leverage and market-to-book ratios. For the deal characteristic variables, the direction of the significant results on the indicator variables denoting cash payment and multiple bidders change sign amongst the different regression models. In contrast to prior literature the toehold interest of the bidder is unrelated to the size of the takeover premium. The findings in Panel A suggest lower premiums are paid by firms listed on the ASX in comparison to non-ASX listed bidders. The results in Panel B show that larger bidders pay higher premiums. There is also some evidence that the bidding firm market-to-book ratio is negatively associated with takeover premiums.

6.4 Additional analysis

As described above, the two main methods for dealing with self-selection bias are the use of the Heckman (1979) two-stage model and propensity score matching. The results in the previous section were presented using the Heckman (1979) approach, as we believe this method is best suited to our research question as it controls for self-section arising from unobservable factors. Despite this, to determine whether our results are sensitive to how we control for selection bias,we also use propensity score matching. We form matched pairs by selecting for each SOA a takeover bid with the closest propensity score.[27] Propensity scores are computed from the results presented in Table 5 from estimating model (1). For all bidder types (i.e., Panel A of Table 5) we calculate propensity scores using the results of the model including the *Top1* measure of ownership concentration. For listed bidders (i.e., Panel B of Table 5) we determine propensity scores based on the findings of the models using the number of substantial shareholders as the measure of ownership concentration.[28]

In Table 9 we present the means for the SOA and takeover matched pairs for each variable included in model (1). We also present a *t*-test for whether the difference in means is significant.

[27] Matched pairs are formed without replacement.

[28] The propensity score matching process is undertaken separately for friendly and all acquisitions.

INSERT TABLE 9 HERE

The findings in Table 9 indicate that when we consider all bidder types we have successfully matched across the two deal types for four of our eight covariates. They confirm the significant differences in toeholds and target firm leverage and size between the two groups. When we restrict our sample to listed bidders there is an increase in the number of covariates that exhibit no significant difference between SOA and takeovers. However, toeholds, target firm size and leverage of both the bidder and target remain significantly different between the two groups.[29]

Table 10 presents a comparison of average takeover premiums for our propensity score matched sample. These results indicate there is no significant difference in takeover premiums between SOA and takeovers when we consider the entire sample. However, when we compare SOA with only friendly takeovers we find significantly lower takeover premiums for each of our three premium measures. These univariate results for our propensity score matched sample are similar to the findings for the total sample shown in Table 6.

INSERT TABLE 10 HERE

In Table 11 we present the results of an OLS regression of takeover premiums estimated using our propensity score matched pairs. The independent variables included in the regression model are the SOA indicator variable and the explanatory variables included in model (2) which were not employed as a covariate to form the matched pairs. Panel A shows the results for all bidders irrespective of listing status, whilst Panel B provides the results for only listed bidders.

INSERT TABLE 11 HERE

Consistent with the univariate results in Table 10 we find that takeover premiums are significantly lower when we compare SOA to friendly takeovers. The results on the control variables are generally insignificant, except for the listed bidder indicator variable which is negatively associated with takeover premiums in Panel A.

7. Conclusion

[29] The significant difference in covariates for some of our variables potentially confounds our propensity score matched results. As such, we have more confidence in the results from using the Heckman (1979) procedure.

Current Australian regulation allows firms to effect a change in corporate control using either a takeover bid or a SOA. This study investigates the factors which influence the choice to structure an acquisition between these two types. Additionally, we examine if there is any difference in premiums between schemes and takeovers. This analysis is motivated by the increasing use of SOA in recent years, which has resulted in public and regulatory debate as to whether schemes disadvantage target shareholders. Surprisingly, until this study this debate has taken place without a rigorous empirical investigation of the differences between SOA and takeovers.

Our results indicate that the choice to use a SOA rather than a takeover bid, is associated with the ownership structure of the target firm. More specifically, schemes are used more frequently when the target firm has higher ownership concentration and the bidding firm has a lower toehold stake in the target. In addition, schemes are more likely to be used when the target firm is larger and the bidder has higher leverage. These findings are likely explained by the greater certainty of outcome associated with the "all or nothing" feature of SOA.

We also examine if there is any difference in premiums between takeovers and schemes. Employing both the Heckman (1979) two-step approach and propensity score matching to control for self-selection of deal type, our results are largely consistent with target shareholders receiving significantly lower premiums in SOA consistent with the public criticism of schemes. However, we caution against interpreting these results as evidence supporting regulatory change, as there is no guarantee that target shareholders involved in a SOA would otherwise have received a takeover bid if schemes were not an alternative.

Our findings are likely to be of interest to regulators in any future review of the laws governing Australian corporate control contests. For academic research examining Australian mergers and acquisitions our findings indicate that schemes and takeovers do not comprise a homogenous group and that it may be necessary to adjust the research design accordingly. Future research can further examine differences between SOA and takeovers. For instance, given our evidence of lower premiums in schemes, it may be interesting to examine if the outcome for target firm directors or acquiring firm performance differs between SOA and takeovers. Furthermore, we document that there are fewer multiple bidders in schemes than takeovers. Subsequent research can further examine how competition for target firms differs between schemes and takeovers.

References

Akhtar F (2014) The probability of a firm making a takeover bid: An empirical analysis of Australian firms. *Australian Journal of Management* forthcoming.

Ali P (2008) Reining in schemes of arrangement, Australian Financial Review, November 17: 63.

Anderson D, Haynes A and Heaney R (1994) Company takeovers and equity returns: The target size effect. *Australian Journal of Management* 19(1): 1-30.

Askew K (2003) What's a scheme? It's a takeover bid done dirt cheap, Sydney Morning Herald, August 9, available at: http://www.smh.com.au/articles/2003/08/08 /1060145865580.html

Aspris A, Foley S Frino A (2014) Does insider trading explain price run-up ahead of takeover announcements? *Accounting and Finance*, 54(1): 25-45.

Bugeja M (2013) The impact of target firm financial distress in Australian takeovers. *Accounting and Finance*, forthcoming.

Bates T and Lemmon M (2003) Breaking up is hard to do? An analysis of termination fee provisions and merger outcomes *Journal of Financial Economics* 69(3): 469-504.

Betton S, Eckbo B and Thorburn K (2009) Merger negotiations and the toehold puzzle. *Journal of Financial Economics* 91(2): 158-178.

Bugeja M (2011) Foreign takeovers of Australian listed entities. *Australian Journal of Management* 36(1): 89-107.

Bugeja M, Da Silva Rosa R, Duong L, et al. (2012) CEO compensation from M&As in Australia. *Journal of Business, Finance & Accounting* 39(9/10): 1298-1329.

Bugeja M (2013) The impact of target firm financial distress in Australian takeovers. *Accounting and Finance*, forthcoming.

Bugeja M and Sinelnikov K (2012) Public versus private takeovers of Australian stock exchange listed targets. *Australian Journal of Management* 37(3): 391-414.

Bugeja M and Walter T (1995) An empirical analysis of some determinants of the target shareholder premium in takeovers. *Accounting and Finance* 35(2): 33-60.

Chapple L, Christensen B and Clarkson P (2007) Termination fees in a 'bright line' jurisdiction. *Accounting and Finance* 47(4): 643-665.

Corporations and Markets Advisory Committee, (2008) Members' schemes of arrangement: Discussion Paper, available at: http://www.camac.gov.au/camac/camac.nsf/byHeadline/ PDFDiscussion+Papers/$file/Members_Schemes_DP_Jun08.pdf

Corporations and Markets Advisory Committee, (2009) Members' schemes of arrangement: Report, available at: http://www.camac.gov.au/camac/camac.nsf/byHeadline/PDFFinal+Reports+2009/$file/Members_Schemes_Report_Dec09.pdf

Da Silva Rosa R, Izan H, Steinback A, et al. (2000) The method of payment decision in Australian takeovers: An investigation of causes and consequences. *Australian Journal of Management* 25(1): 67-94.

Draper P and Paudyal K (1999) Corporate takeovers: Mode of payment, returns and trading activity. *Journal of Business Finance & Accounting* 26(5/6): 521-558.

FINSIA, (2006) Takeovers package – Finsia's proposal to reform Australia's takeovers regime to improve the market for corporate control, removing existing anomalies and protect the rights of minority shareholders.

Heckman J (1979) Sample selection bias as a specification error. *Econometrica* 47(1): 153-161.

Henry D (2005) Directors' recommendations in takeovers: An agency and governance analysis. *Journal of Business, Finance & Accounting* 32(1/2): 129-159.

Howard P (1998), Reform of Australia's Takeover Laws. CPA Communique, No. 84 (May) published by the Australian Society of Certified Practising Accountants.

Hutson,E. (1998), Regulation of corporate control in Australia: a historical perspective. *Canterbury Law. Review* 7(1): 102-122

Huang Y and Walkling, R (1987) Target abnormal returns associated with acquisition announcements: Payment acquisition form, and managerial resistance. *Journal of Financial Economics* 19(2): 329-349.

Hughes A (2003) Takeovers schemes backlash grows. Sydney Morning Herald, July 24, available at: http://www.smh.com.au/articles/2003/07/23/1058853141039.html

Humphrey-Jenner M and Powell R (2011) Firm size, takeover profitability, and the effectiveness of the market for corporate control: Does the absence of anti-takeover provisions make a difference. *Journal of Corporate Finance* 17(3): 418-437.

Israel R (1991) Capital structure and the market for corporate control: The defensive role of debt financing. *The Journal of Finance* 46(4): 1391-1409.

Israel R (1992) Capital and ownership structures, and the market for corporate control. *Review of Financial Studies* 5(2): 181-198.

Lennox C, Francis J and Wang Z (2012) Selection models in Accounting research. *The Accounting Review* 87(2): 589-616.

Little, P., (1997), Law of Company Takeovers LBC Information Services, North Ryde NSW

Maddala G (1991) A perspective on the use of limited-dependent and qualitative variables models in accounting research. *The Accounting Review* 66(4): 788-807.
Mantecon T (2008) An analysis of the implication of uncertainty and agency problems on the wealth effects to acquirers of private firms. *Journal of Banking and Finance* 32(5): 892-905.
Masulis R, Wang C and Xie F (2007) Corporate governance and acquirer returns. *The Journal of Finance* 62(4), 1851–1889.
Officer M (2003) Termination fees in mergers and acquisitions. *Journal of Financial Economics* 69(3): 431-467.
Schwert G (2000) Hostility in takeovers: In the eyes of the beholder? *The Journal of Finance* 55(6): 2599-2640.
Shikha N (2013) Takeover through the Scheme of Arrangement: A changing trend in UK. *The Journal for Decision Makers* 38(1): 87-102.
Stulz R (1988) Managerial control of voting rights: Financing policies and the market for corporate control. *Journal of Financial Economics* 20(1/2): 25-54.
Stulz R, Walkling R and Song M (1990) The distribution of target ownership and the division of gains in successful takeovers. *The Journal of Finance* 45(3): 817-833.
Sudarsanam S, Holl P Salami A (1996) Shareholder wealth gains in mergers: Effect of synergy and ownership structure. *Journal of Business Finance & Accounting* 23(5/6): 673-698.
Tucker J (2010) Selection bias and econometric remedies in Accounting and Finance research. *Journal of Accounting Literature* 29 (Winter): 673-698.

Table 1: Distribution of schemes and takeovers over the sample period

Year	Takeovers No.	Schemes No.	Total	% of no. schemes	Takeovers Mkt cap $'m	Schemes Mkt cap $'m	Total Mkt cap $'m	% of Mkt cap in schemes
2000	53	17	70	24%	25,874	9,192	35,067	26%
2001	44	18	62	29%	8,342	5,698	14,040	41%
2002	40	11	51	22%	5,134	2,676	7,810	34%
2003	45	17	62	27%	11,960	12,739	24,700	52%
2004	39	17	56	30%	22,990	12,226	35,215	35%
2005	34	14	48	29%	21,973	5,766	27,738	21%
2006	67	27	94	29%	27,329	20,746	48,075	43%
2007	55	46	101	46%	15,936	67,009	82,945	81%
2008	42	22	64	34%	24,425	35,541	59,966	59%
2009	55	32	87	37%	5,615	37,335	42,950	87%
2010	42	31	73	42%	7,285	13,535	20,820	65%
2011	39	24	63	38%	14,411	8,117	22,528	36%
	555	276	831	33%	191,274	230,579	421,853	55%

Table 2: Industry Distribution of the Sample

GICS Industry Sector	GICS Industry Code	Takeover	SOA	Total	SOA Percentage
Energy	10	61	28	89	31%
Materials	15	161	65	226	29%
Industrials	20	66	23	89	26%
Consumer Discretionary	25	77	35	112	31%
Consumer Staples	30	32	16	48	33%
Health Care	35	24	22	46	48%
Financials	40	74	63	137	46%
Information Technology	45	37	14	51	27%
Telecommunication Services	50	10	5	15	33%
Utilities	55	13	5	18	28%
Total		555	276	831	33%

Table 3: Descriptive statistics for the variables included in the model determining the choice of deal type

	ALL DEALS					FRIENDLY DEALS				
Variable	N	Overall Mean	Mean-SOA	Mean - Takeover	Stat Diff	N	Overall Mean	Mean - SOA	Mean-Takeover	Stat Diff
TOP20	831	0.68	0.69	0.65	3.26***	536	0.69	0.66	0.72	-4.45***
TOP5	831	0.51	0.52	0.48	2.78***	536	0.53	0.49	0.56	-3.92***
TOP1	831	0.25	0.23	0.26	-2.23**	536	0.27	0.23	0.29	-3.42***
SUBSHNO	831	2.96	2.99	2.94	0.37	536	3.03	3.07	3.01	0.39
SUBSHPER	831	0.47	0.40	0.51	-1.84*	536	0.46	0.41	0.49	-4.17***
TOEHOLD	831	0.13	0.03	0.18	-11.44***	536	0.15	0.04	0.23	-10.95***
TDIROWN	831	0.11	0.10	0.12	-1.38	536	0.12	0.10	0.14	-2.53**
TROA	831	-0.05	-0.00	-0.08	2.27**	536	-0.03	0.02	-0.06	1.83*
TMB	831	2.31	2.33	2.30	0.14	536	2.21	2.25	2.18	0.28
TDE	831	1.25	1.61	1.07	3.01***	536	1.26	1.54	1.06	2.19**
TFCF	831	-0.01	0.00	-0.02	1.38	536	-0.00	0.01	-0.01	0.89
TLNMCAP	831	18.28	18.98	17.93	7.83***	536	18.37	18.89	17.99	5.96***
BDE	476	1.62	2.58	1.14	4.44***	298	1.68	2.29	1.20	2.75***
BMB	476	3.33	3.31	3.35	-0.07	298	3.16	3.11	3.20	-0.15
BROA	476	0.02	0.01	0.02	-0.40	298	0.02	0.01	0.03	0.84
BLNMCAP	476	19.85	20.04	19.75	1.37	298	19.95	19.98	19.94	0.16
BFCF	476	0.02	0.03	0.01	0.89	298	0.02	0.02	0.02	0.69

* is significant at 10%, ** is significant at 5%, and *** is significant at 1%. Stat diff is a *t*-test for continuous and Chi^2-test for binary variables. All variables are defined in Appendix A.

Table 4 Pearson Correlation Matrix for the variables included in the model determining the choice of deal type

Panel A: All bids	*TOP20*	*TOP5*	*TOP1*	*SUBSHNO*	*SUBSHPER*	*TOEHOLD*	*TDIROWN*	*TROA*	*TMB*	*TDE*	*TFCF*	*TLNMCAP*	*BDE*	*BMB*	*BROA*	*BLNMCAP*	*BFCF*
TOP20	1																
TOP5	**0.91**	1															
TOP1	**0.66**	**0.83**	1														
SUBSHNO	**0.30**	**0.09**	**-0.20**	1													
SUBSHPER	**0.16**	**0.17**	**0.15**	**0.09**	1												
TOEHOLD	**0.35**	**0.42**	**0.47**	**-0.12**	**0.07**	1											
TDIROWN	**0.16**	**0.12**	**0.07**	**0.10**	0.05	0.03	1										
TROA	**0.09**	**0.09**	0.06	**0.10**	0.02	-0.05	-0.06	1									
TMB	**-0.08**	**-0.09**	**-0.08**	0.01	-0.03	-0.03	**-0.07**	**-0.18**	1								
TDE	**-0.10**	**-0.07**	-0.04	-0.00	-0.04	0.02	-0.04	**-0.16**	**0.28**	1							
TFCF	**0.14**	**0.14**	**0.11**	**0.09**	0.01	0.02	0.01	**0.51**	**-0.21**	**0.06**	1						
TLNMCAP	0.00	0.01	-0.02	0.04	**-0.07**	**-0.08**	**-0.30**	**0.32**	**0.16**	**0.10**	**0.27**	1					
BDE	**-0.10**	-0.08	-0.02	-0.08	-0.05	**-0.08**	-0.04	0.05	-0.04	**0.62**	**0.08**	**0.21**	1				
BMB	0.07	0.07	**0.10**	-0.06	0.06	-0.01	0.07	**-0.16**	**0.14**	**0.08**	0.03	0.01	**0.18**	1			
BROA	**0.15**	**0.14**	**0.08**	**0.14**	-0.02	0.06	0.02	**0.26**	-0.02	**0.08**	**0.30**	**0.25**	0.02	**-0.08**	1		
BLNMCAP	**0.11**	**0.12**	**0.08**	0.02	-0.04	**0.13**	**-0.15**	**0.25**	**0.09**	**0.17**	**0.27**	**0.60**	**0.27**	0.06	**0.33**	1	
BFCF	**0.14**	**0.16**	**0.14**	**0.08**	**-0.09**	**0.08**	0.04	**0.16**	-0.04	0.07	**0.26**	**0.21**	0.07	0.05	**0.61**	**0.30**	1

Correlations that are significant at 10% or lower are denoted in bold text. All variables are defined in Appendix A.

Table 4 Pearson Correlation Matrix for variables included in model determining choice of deal type - continued

Panel B: ASX bidders	*TOP20*	*TOP5*	*TOP1*	*SUBSHNO*	*SUBSHPER*	*TOEHOLD*	*TDIROWN*	*TROA*	*TMB*	*TDE*	*TFCF*	*TLNMCAP*	*BDE*	*BMB*	*BROA*	*BLNMCAP*	*BFCF*
TOP20	1																
TOP5	**0.90**	1															
TOP1	**0.66**	**0.82**	1														
SUBSHNO	**-0.23**	0.02	**-0.26**	1													
SUBSHPER	**0.79**	**0.82**	**0.66**	**0.34**	1												
TOEHOLD	**0.37**	**0.44**	**0.48**	**-0.16**	**0.38**	1											
TDIROWN	**0.16**	**0.09**	0.01	**0.11**	**0.18**	0.03	1										
TROA	0.05	0.05	0.02	**0.08**	**0.08**	**-0.13**	-0.06	**1**									
TMB	**-0.09**	**-0.09**	-0.07	-0.00	-0.06	-0.01	-0.05	**-0.19**	**1**								
TDE	**-0.15**	**-0.10**	-0.06	-0.05	**-0.08**	0.06	0.05	**-0.14**	**0.23**	1							
TFCF	**0.13**	**0.14**	**0.12**	0.04	**0.14**	-0.02	0.03	**0.49**	**-0.22**	**0.06**	**1**						
TLNMCAP	-0.02	0.01	-0.01	0.04	**-0.10**	**-0.08**	**0.30**	**0.27**	**0.15**	**0.09**	**0.23**	**1**					
BDE	**-0.13**	**-0.11**	-0.06	-0.09	**-0.15**	-0.08	0.08	0.00	-0.02	**0.58**	0.05	**0.15**	**1**				
BMB	0.05	0.05	0.09	-0.09	0.05	-0.02	0.01	**-0.28**	**0.20**	**0.08**	-0.01	-0.08	**0.14**	1			
BROA	**0.14**	**0.14**	0.08	**0.16**	**0.16**	0.08	0.01	**0.16**	0.03	**0.07**	**0.25**	**0.23**	-0.04	**-0.13**	1		
BLNMCAP	0.06	0.07	0.04	-0.03	-0.03	**0.11**	**0.12**	**0.17**	**0.11**	**0.13**	**0.22**	**0.55**	**0.24**	0.03	**0.30**	1	
BFCF	**0.17**	**0.18**	**0.14**	0.08	**0.17**	**0.11**	-0.00	0.09	-0.04	0.02	**0.24**	**0.21**	0.02	0.00	**0.68**	**0.29**	**1**

Correlations that are significant at 10% or lower are denoted in bold text. All variables are defined in Appendix A.

Table 5: Probit model of the choice of deal type

Panel A: All bidder types	ALL DEALS					FRIENDLY DEALS				
Intercept	-4.48	-4.56	-4.69	-4.40	-4.38	-3.60	-3.73	-3.84	-3.65	-3.63
	(-6.44)***	(-6.03)***	(-5.97)***	(-5.80)***	(-6.00)***	(-3.87)***	(-3.68)***	(-3.75)***	(-3.37)***	(-3.82)***
TOEHOLD	-4.87	-4.92	-4.99	-4.89	-4.90	-4.62	-4.68	-4.74	-4.70	-4.68
	(-6.94)***	(-7.04)***	(-7.41)***	(-7.41)***	(-7.29)***	(-6.73)***	(-7.00)***	(-7.32)***	(-7.11)***	(-6.58)***
TOP20	-0.04	-	-	-	-	-0.29	-	-	-	-
	(-0.11)					(-0.65)				
TOP5	-	0.24	-	-	-	-	0.03	-	-	-
		(0.79)					(0.07)			
TOP1	-	-	0.74	-	-	-	-	0.36	-	-
			(3.39)***					(2.91)***		
SUBSHNO	-	-	-	-0.03	-	-	-	-	-0.03	-
				(-0.87)					(-0.94)	
SUBSHPER	-	-	-	-	-0.06	-	-	-	-	-0.06
					(-1.14)					(-0.14)
TDIROWN	0.61	0.57	0.54	0.63	0.61	-0.10	-0.14	-0.14	-0.11	-0.13
	(1.23)	(1.14)	(1.07)	(1.28)	(1.23)	(-0.17)	(-0.25)	(-0.23)	(-0.18)	(-0.23)
TROA	-0.10	-0.10	-0.09	-0.09	-0.09	-0.20	-0.21	-0.20	-0.20	-0.20
	(-0.58)	(-0.57)	(-0.54)	(-0.54)	(-0.56)	(-0.84)	(-0.82)	(-0.77)	(-0.79)	(-0.83)
TMB	-0.04	-0.04	-0.04	-0.04	-0.04	-0.02	-0.02	-0.02	-0.02	-0.02
	(-1.70)*	(-1.68)*	(-1.70)*	(-1.68)*	(-1.72)*	(-1.27)	(-1.29)	(-1.35)	(-1.30)	(-1.31)
TDE	0.07	0.07	0.07	-0.07	0.07	0.07	0.08	0.08	0.08	0.08
	(2.96)***	(3.02)***	(2.94)***	(2.79)***	(2.80)***	(2.29)**	(2.41)**	(2.35)**	(2.28)**	(2.37)**
TFCF	-0.15	-0.18	-0.22	-0.13	-0.13	0.03	-0.00	-0.06	-0.00	0.02
	(-0.52)	(-0.60)	(-0.74)	(-0.46)	(-0.47)	(0.07)	(-0.00)	(-0.13)	(-0.01)	(0.04)
TLNMCAP	0.21	0.21	0.22	0.21	0.21	0.19	0.19	0.19	0.19	0.19
	(5.59)***	(5.37)***	(5.57)***	(5.61)***	(5.89)***	(3.60)***	(3.61)***	(3.73)***	(3.39)***	(3.68)***
N	831	831	831	831	831	536	536	536	536	536
Pseudo R^2	0.23	0.23	0.24	0.23	0.23	0.35	0.35	0.36	0.36	0.35
Year dummies	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Industry dummies	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

* is significant at 10%, ** is significant at 5%, and *** is significant at 1%. The table reports the results of a probit regression examining factors which influence the choice to structure an acquisition as a SOA. The dependent variable is a binary variable coded as one when the acquisition is a Scheme of Arrangement. Numbers in parentheses are robust *t*-statistics clustered by industry and target firm. All variables are defined in Appendix A.

Table 5: Probit model of the choice of deal type - continued

Panel B: ASX bidders	ALL DEALS					FRIENDLY DEALS				
Intercept	-5.04	-5.17	-5.22	-4.96	-4.96	-7.28	-7.60	-7.76	-7.40	-7.21
	(-6.64)***	(-6.40)***	(-6.50)***	(-6.23)***	(-6.05)***	(-9.79)***	(-8.72)***	(-8.20)***	(-7.73)***	(-8.16)***
TOEHOLD	-9.37	-9.46	-9.44	-9.45	-9.45	-8.99	-9.04	-9.07	-9.04	-9.04
	(-6.27)***	(-6.38)***	(-6.61)***	(-6.71)***	(-6.48)***	(-6.45)***	(-6.56)***	(-6.63)***	(-6.71)***	(-6.47)***
TOP20	-0.26	-	-	-	-	-0.99	-	-	-	-
	(-0.33)					(-1.26)				
TOP5	-	0.25	-	-	-	-	-0.44	-	-	-
		(0.45)					(-0.64)			
TOP1	-	-	0.45	-	-	-	-	-0.22	-	-
			(1.08)					(-0.33)		
SUBSHNO	-	-	-	-0.06	-	-	-	-	-0.10	-
				(-2.17)**					(-2.04)**	
SUBSHPER	-	-	-	-	-0.04	-	-	-	-	-0.72
					(-0.62)					(-1.40)
TDIROWN	-0.01	-0.04	-0.02	0.09	-0.04	-0.80	-0.87	-0.86	-0.67	-0.83
	(-0.03)	(-0.08)	(-0.04)	(0.17)	(-0.08)	(-1.44)	(-1.37)	(-1.32)	(-1.24)	(-1.39)
TROA	-0.06	-0.07	-0.07	-0.04	-0.06	-0.08	-0.09	-0.10	-0.06	-0.07
	(-0.26)	(-0.28)	(-0.26)	(-0.19)	(-0.26)	(-0.24)	(-0.27)	(-0.28)	(-0.16)	(-0.23)
TMB	0.00	0.00	-0.00	0.00	0.00	0.01	0.01	0.01	0.00	0.01
	(0.03)	(0.03)	(-0.05)	(0.02)	(0.00)	(0.47)	(0.54)	(0.63)	(0.27)	(0.68)
TDE	0.02	0.02	0.02	0.02	0.02	-0.00	0.00	0.01	0.01	-0.00
	(0.57)	(0.81)	(0.84)	(0.81)	(0.70)	(-0.16)	(0.13)	(0.27)	(0.48)	(-0.02)
TFCF	0.17	0.12	0.09	0.19	0.17	0.25	0.17	0.12	0.11	0.27
	(0.45)	(0.30)	(0.23)	(0.51)	(0.45)	(0.57)	(0.37)	(0.26)	(0.26)	(0.65)
TLNMCAP	0.15	0.14	0.15	0.15	0.14	0.20	0.19	0.18	0.21	0.19
	(3.02)***	(2.81)***	(2.86)***	(2.98)***	(2.95)***	(4.63)***	(4.48)***	(4.14)***	(4.17)***	(4.53)***
BFCF	1.19	1.17	1.14	1.00	0.98	0.38	0.37	0.35	0.05	0.21
	(3.41)***	(3.37)***	(3.41)***	(2.57)***	(2.62)***	(0.77)	(0.77)	(0.75)	(0.08)	(0.44)
BROA	-0.91	-0.95	-0.93	-0.75	-0.79	-0.42	-0.44	-0.46	-0.14	-0.26
	(-2.58)***	(-2.94)***	(-2.89)***	(-2.43)**	(-2.81)***	(-0.75)	(-0.86)	(-0.94)	(-0.24)	(-0.51)
BDE	0.07	0.07	0.07	0.07	0.07	0.05	0.04	0.04	0.05	0.05
	(3.47)***	(3.57)***	(3.47)***	(3.61)***	(3.73)***	(2.58)***	(2.59)***	(2.64)***	(2.78)***	(2.49)**
BMB	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02

	(-2.81)***	(-2.85)***	(-2.83)***	(-2.78)***	(-2.86)***	(-1.00)	(-1.04)	(-0.44)	(-1.15)	(-1.01)
BLNMCAP	0.03	0.03	0.03	0.02	0.02	-0.02	-0.02	-0.02	-0.03	-0.03
	(1.16)	(1.13)	(1.07)	(0.74)	(0.91)	(-0.63)	(-0.53)	(-0.63)	(-1.05)	(-1.00)
N	476	476	476	476	476	298	298	298	298	298
Pseudo R^2	0.26	0.26	0.26	0.26	0.26	0.40	0.40	0.40	0.41	0.40
Year dummies	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Industry dummies	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

* is significant at 10%, ** is significant at 5%, and *** is significant at 1%.

The table reports the results of a probit regression examining factors which influence the choice to structure an acquisition as a SOA. The dependent variable is a binary variable coded as one when the acquisition is a Scheme of Arrangement. Numbers in parentheses are robust *t*-statistics clustered by industry and target firm. All variables are defined in Appendix A.

Table 6: Descriptive statistics for additional variables included in the model of takeover premiums

	ALL DEALS					FRIENDLY DEALS				
Variable	N	Overall Mean	Mean-SOA	Mean - Takeover	Stat Diff	N	Overall Mean	Mean - SOA	Mean-Takeover	Stat Diff
PREM15	831	0.25	0.23	0.26	-1.26	536	0.26	0.22	0.30	-2.89***
PREM30	831	0.27	0.24	0.28	-1.47	536	0.28	0.23	0.32	-2.91***
PREM60	831	0.31	0.30	0.32	-0.74	536	0.34	0.28	0.39	-2.70***
PAYT	831	0.61	0.51	0.66	-16.68***	536	0.61	0.51	0.68	-17.40***
MULT	831	0.21	0.14	0.24	-11.04***	536	0.15	0.09	0.19	-10.51***
FRIENDLY	831	0.65	0.82	0.56	56.54***	536	-	-	-	-
BDIROWN	476	0.12	0.11	0.13	-1.17	298	0.13	0.12	0.13	-0.62
BLISTED	476	0.57	0.57	0.57	0.03	298	0.56	0.58	0.54	0.75

* is significant at 10%, ** is significant at 5%, and *** is significant at 1%. Stat diff is a *t*-test for continuous and Chi^2-test for binary variables. All variables are defined in Appendix A.

Table 7 Pearson Correlation Matrix for additional variables included in the model of takeover premiums

Panel A: All bidders	*PREM15*	*PREM30*	*PREM60*	*BDIROWN*
PREM15	1			
PREM30	**0.83**	1		
PREM60	**0.70**	**0.76**	1	
BDIROWN	-0.04	-0.07	-0.08	1
TOP20	0.03	0.04	0.04	0.05
TOP5	0.05	0.04	**0.06**	0.02
TOP1	**0.08**	0.06	**0.08**	-0.04
SUBSHNO	-0.04	-0.03	-0.05	0.07
SUBSHPER	0.03	0.01	-0.01	0.07
TOEHOLD	**0.17**	**0.12**	**0.11**	0.03
TDIROWN	0.03	0.00	**0.07**	**0.22**
TROA	-0.05	-0.03	-0.05	**-0.14**
TMB	-0.01	0.02	0.03	-0.01
TDE	0.01	**0.07**	**0.08**	-0.01
TFCF	0.01	**0.06**	**0.06**	**-0.18**
TLNMCAP	**-0.12**	**-0.12**	**-0.10**	**-0.31**
BDE	-0.03	-0.04	-0.01	-0.07
BMB	-0.04	0.01	0.03	-0.12
BROA	0.05	0.06	0.04	-0.01
BLNMCAP	**0.11**	**0.10**	**0.17**	**-0.33**
BFCF	0.07	0.04	0.06	-0.06

Correlations that are significant at 10% or lower are denoted in bold text. All variables are defined in Appendix A.

Table 7 Pearson Correlation Matrix for additional variables included in the model of takeover premiums - continued

Panel B: Listed bidders	*PREM15*	*PREM30*	*PREM60*	*BDIROWN*
PREM15	1			
PREM30	**0.85**	1		
PREM60	**0.75**	**0.79**	1	
BDIROWN	-0.06	-0.04	-0.06	1
TOP20	0.03	0.03	0.02	-0.02
TOP5	0.06	0.04	0.02	-0.03
TOP1	0.07	0.03	0.03	**-0.10**
SUBSHNO	-0.03	-0.02	-0.02	0.08
SUBSHPER	0.04	0.03	0.01	0.07
TOEHOLD	**0.22**	**0.15**	**0.14**	0.04
TDIROWN	0.00	-0.01	0.04	**0.22**
TROA	-0.06	-0.03	-0.03	-0.09
TMB	-0.02	0.02	0.03	0.02
TDE	0.02	0.05	0.07	-0.01
TFCF	0.01	0.06	**0.08**	**-0.13**
TLNMCAP	**-0.14**	**-0.15**	**-0.14**	**-0.30**
BDE	-0.03	-0.04	-0.03	-0.09
BMB	-0.03	0.01	0.03	0.09
BROA	0.04	0.03	0.02	0.01
BLNMCAP	**0.18**	**0.13**	**0.19**	**-0.36**
BFCF	0.09	0.02	0.02	**-0.04**

Correlations that are significant at 10% or lower are denoted in bold text. All variables are defined in Appendix A.

Table 8: Second stage OLS model of takeover premiums

Panel A: All bidders	ALL DEALS			FRIENDLY DEALS		
	PREM15	*PREM30*	*PREM60*	*PREM15*	*PREM30*	*PREM60*
Intercept	0.61	0.62	0.51	0.61	0.82	0.90
	(3.47)***	(3.97)***	(3.37)***	(3.25)***	(4.16)***	(4.02)***
SOA	-0.19	-0.18	-0.16	-0.27	-0.32	-0.35
	(-1.67)*	(-1.92)*	(-1.72)*	(-2.52)**	(-2.80)***	(-2.63)***
PAYT	0.05	0.01	0.01	0.04	0.02	0.07
	(1.35)	(0.34)	(0.53)	(1.14)	(0.60)	(1.68)*
MULT	0.06	0.00	-0.03	-0.08	-0.03	0.00
	(1.82)*	(0.39)*	(-1.38)	(-2.75)***	(-0.94)	(0.04)
FRIENDLY	0.07	0.05	0.03	-	-	-
	(2.20)**	(1.98)**	(1.17)			
TOEHOLD	-0.03	-0.00	0.07	-0.00	-0.13	-0.20
	(-0.23)	(-0.05)	(0.68)	(-0.06)	(-1.04)	(-1.30)
TDIROWN	0.07	-0.09	-0.03	-0.14	-0.18	-0.09
	(0.64)	(-1.16)	(-0.51)	(-1.85)*	(-2.05)**	(-0.78)
TROA	-0.04	-0.02	-0.02	-0.03	-0.02	-0.05
	(-1.02)	(-0.58)	(-0.56)	(-0.56)	(-0.47)	(-0.88)
TMB	0.00	0.00	0.00	-0.00	-0.00	0.00
	(1.28)	(1.01)	(0.27)	(-0.31)	(-0.78)	(1.32)
TDE	0.14	0.01	0.00	0.00	0.01	0.02
	(2.12)**	(1.96)**	(0.86)	(1.38)	(2.12)**	(2.15)**
TFCF	0.21	0.18	0.07	0.07	0.19	0.28
	(2.43)**	(2.33)**	(0.92)	(0.76)	(2.06)**	(2.75)***
TLNMCAP	-0.02	-0.02	-0.01	-0.01	-0.02	-0.02
	(-1.58)	(-1.89)*	(-1.31)	(-1.07)	(-1.82)*	(-1.70)*
BLISTED	-0.10	-0.05	-0.05	-0.05	-0.05	-0.10
	(-3.03)***	(-1.75)*	(-1.85)*	(-1.47)	(-1.32)	(-2.33)**
MILLS	0.14	0.12	0.12	0.16	0.18	0.21
	(1.96)*	(1.99)**	(2.03)**	(2.43)**	(2.54)**	(2.37)**
N	831	831	831	536	536	536
Adjusted R^2	0.07	0.05	0.05	0.08	0.06	0.09
F-Stat	5.86***	4.13***	4.22***	4.88***	4.05***	5.38***

Year dummies	Y	Y	Y	Y	Y	Y
Industry dummies	Y	Y	Y	Y	Y	Y

* is significant at 10%, ** is significant at 5%, and *** is significant at 1%.

The table reports the results of an OLS regression testing the association between takeover premiums and whether an acquisition is a SOA. The dependent variable is alternatively measured as the takeover premium calculated using the target share price 15 (*PREM15*), 30 (*PREM30*) and 60 (*PREM60*) days before the takeover announcement. Numbers in parentheses are robust *t*-statistics clustered by industry and target firm. All variables are defined in Appendix A.

Table 8: Second stage OLS model of takeover premiums - continued

Panel B: ASX Bidders	ALL DEALS			FRIENDLY DEALS		
	PREM15	*PREM30*	*PREM60*	*PREM15*	*PREM30*	*PREM60*
Intercept	0.25	0.33	0.12	0.27	0.55	0.41
	(1.48)	(1.81)*	(0.58)	(1.20)	(2.39)**	(1.62)
SOA	-0.10	-0.12	-0.28	-0.18	-0.21	-0.40
	(-1.24)	(-1.40)	(-2.54)**	(-2.08)**	(-2.25)**	(-3.43)***
PAYT	-0.07	-0.08	-0.07	-0.05	-0.06	-0.04
	(-2.10)**	(-2.20)**	(-1.81)*	(-1.26)	(-1.43)	(-0.97)
MULT	-0.02	0.00	0.02	-0.05	-0.02	-0.01
	(-0.59)	(0.10)	(0.24)	(-1.40)	(-0.32)	(-0.22)
FRIENDLY	0.00	0.04	0.04	-	-	-
	(0.00)	(1.13)	(1.04)			
TOEHOLD	0.12	0.06	-0.06	0.06	-0.08	-0.25
	(1.00)	(0.42)	(-0.41)	(0.44)	(-0.53)	(-1.46)
TDIROWN	0.10	0.02	0.64	-0.06	-0.10	-0.10
	(1.04)	(0.18)	(0.57)	(-0.52)	(-0.78)	(-0.76)
TROA	0.00	-0.00	0.02	0.03	0.11	0.06
	(0.05)	(-0.16)	(0.35)	(0.78)	(0.25)	(1.23)
TMB	0.00	0.00	0.00	0.01	0.02	0.00
	(1.00)	(1.17)	(0.68)	(2.28)**	(2.49)**	(1.70)*
TDE	-0.00	-0.00	0.00	-0.00	-0.00	0.00
	(-0.41)	(-0.26)	(0.44)	(-0.01)	(-0.00)	(0.89)
TFCF	0.00	0.13	0.18	-0.06	0.06	0.17
	(0.09)	(1.37)	(2.12)**	(-0.51)	(0.53)	(1.67)*
TLNMCAP	-0.05	-0.05	-0.06	-0.05	-0.06	-0.07
	(-3.86)***	(-4.24)***	(-4.26)***	(-3.38)***	(-3.94)***	(-3.75)***
BDE	0.00	-0.00	0.00	-0.00	-0.00	-0.00
	(0.21)	(-0.13)	(0.00)	(-0.08)	(-0.20)	(-0.52)
BMB	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00
	(-2.03)**	(-0.58)	(-0.46)	(-1.69)*	(-0.92)	(-0.23)
BROA	-0.02	0.05	-0.10	-0.17	-0.02	-0.13
	(-0.22)	(0.59)	(-0.91)	(-1.21)	(-0.18)	(-0.96)
BLNMCAP	0.04	0.04	0.07	0.05	0.05	0.06
	(5.02)***	(4.86)***	(6.48)***	(4.88)***	(4.11)***	(4.89)***
BFCF	0.14	-0.02	0.05	0.29	0.04	-0.01

	(1.23)	(-0.13)	(0.38)	(1.73*)	(0.26)	(-0.07)
BDIROWN	-0.00	-0.00	0.00	-0.07	-0.08	-0.10
	(-0.80)	(-0.62)	(0.61)	(-0.70)	(-0.73)	(-0.71)
MILLS	0.04	0.07	0.16	0.08	0.06	0.21
	(0.85)	(0.75)	(2.25**)	(1.45)	(1.13)	(2.58)**
N	476	476	476	298	298	298
Adjusted R^2	0.08	0.07	0.12	0.14	0.12	0.18
F-Stat	3.21***	2.89***	4.66***	3.90***	3.36***	5.06***
Year dummies	Y	Y	Y	Y	Y	Y
Industry dummies	Y	Y	Y	Y	Y	Y

* is significant at 10%, ** is significant at 5%, and *** is significant at 1%.

The table reports the results of an OLS regression testing the association between takeover premiums and whether an acquisition is a SOA. The dependent variable is alternatively measured as the takeover premium calculated using the target share price 15 (*PREM15*), 30 (*PREM30*) and 60 (*PREM60*) days before the takeover announcement. Numbers in parentheses are robust *t*-statistics clustered by industry and target firm. All variables are defined in Appendix A.

Table 9: Propensity score matched pair covariate balance of means

	All bidder types			All bidder types friendly only			Listed bidders only			Listed bidders and friendly bids		
	SOA	Takeover	*t*-test	SOA	Takeover	*t*-test	SOA	Takeover	*t*-test	SOA	Takeover	*t*-test
TOEHOLD	0.03	0.06	-4.43***	0.04	0.12	-7.71***	0.01	0.04	-4.33***	0.01	0.11	-10.37***
TOP1	0.23	0.22	0.28	0.23	0.24	-0.24	-	-	-	-	-	-
SUBSHNO	-	-	-	-	-	-	2.84	3.01	-0.89	2.90	3.14	-1.12
TDIROWN	0.10	0.11	-0.88	0.10	0.13	-1.81*	0.09	0.11	-1.49	0.09	0.14	-2.78***
TROA	0.01	-0.06	1.76*	0.02	-0.04	1.50	-0.01	-0.04	0.68	0.01	-0.07	1.43
TMB	2.33	2.31	0.08	2.24	2.18	0.26	2.59	2.30	0.79	2.38	2.20	0.52
TDE	1.57	1.10	2.14**	1.53	1.02	2.17**	1.77	0.87	2.85***	1.55	1.18	1.07
TFCF	0.01	-0.10	0.84	0.01	0.00	0.19	-0.01	-0.04	1.00	-0.01	-0.01	0.05
TLNMCAP	18.99	18.46	3.32***	18.88	18.17	4.47***	18.92	18.23	3.12***	18.84	17.89	4.46***
BFCF	-	-	-	-	-	-	0.03	-0.00	1.75*	0.19	0.28	-0.55
BROA	-	-	-	-	-	-	0.01	0.00	0.51	0.01	0.02	-0.51
BDE	-	-	-	-	-	-	2.58	1.25	2.98***	2.29	1.25	2.33**
BMB	-	-	-	-	-	-	3.31	3.54	-0.35	3.11	3.20	-0.15
BLNMCAP	-	-	-	-	-	-	20.04	19.53	2.01**	19.98	19.92	0.19
N	276	276		226	226		158	158		130	130	

* is significant at 10%, ** is significant at 5%, and *** is significant at 1%. This table reports mean values for each variable for the propensity score matched sample of SOA and takeovers. The table also reports a t-test indicating whether the difference in means between SOA and takeovers is significant.

Table 10: Propensity score matched pair mean premium differences

	All bidder types			All bidder types friendly only			Listed bidders only			Listed bidders and friendly bids		
	SOA	Takeover	*t*-test	SOA	Takeover	*t*-test	SOA	Takeover	*t*-test	SOA	Takeover	*t*-test
PREM15	0.23	0.22	0.39	0.22	0.28	-1.97**	0.16	0.19	-0.82	0.14	0.28	-3.70***
PREM30	0.24	0.25	-0.35	0.23	0.31	-2.58**	0.17	0.20	-0.88	0.15	0.33	-4.56***
PREM60	0.29	0.28	0.37	0.28	0.38	-2.49**	0.18	0.20	-0.59	0.16	0.37	-4.66***
N	276	276		226	226		158	158		130	130	

* is significant at 10%, ** is significant at 5%, and *** is significant at 1%. This table reports mean takeover premiums for the propensity score matched sample of SOA and takeovers. The table also reports a t-test indicating whether the difference in means between SOA and takeovers is significant.

Table 11: OLS regression of propensity score matched pairs

Panel A: All bidders	ALL DEALS			FRIENDLY DEALS		
	PREM15	*PREM30*	*PREM60*	*PREM15*	*PREM30*	*PREM60*
Intercept	0.27	0.29	0.30	0.30	0.30	0.38
	(5.35)***	(5.35)***	(5.22)***	(6.10)***	(6.10)***	(5.98)***
SOA	0.01	-0.02	0.01	-0.06	-0.08	-0.08
	(0.29)	(-0.51)	(0.27)	(-2.14)**	(-2.60)**	(-2.21)**
PAYT	0.03	0.01	0.09	0.06	0.03	0.11
	(0.93)	(0.38)	(2.04)**	(1.46)	(0.74)	(2.25)*
MULT	-0.03	0.01	0.05	-0.09	-0.03	-0.02
	(-1.21)	(0.29)	(1.32)	(-3.03)***	(-0.86)	(-0.37)
FRIENDLY	-0.02	0.01	0.02	-	-	-
	(-0.59)	(0.25)	(0.60)			
BLISTED	-0.08	-0.10	-0.15	-0.06	-0.07	-0.11
	(-2.26)**	(-2.64)***	(-3.34)***	(-1.59)	(-1.66)*	(-2.21)**
N	552	552	552	452	452	452
Adjusted R^2	0.03	0.03	0.08	0.05	0.03	0.079
F-Stat	3.29***	3.23***	9.21***	5.65***	3.76***	7.95***
Year dummies	Y	Y	Y	Y	Y	Y
Industry dummies	Y	Y	Y	Y	Y	Y
Panel B: Listed bidders	ALL DEALS			FRIENDLY DEALS		
	PREM15	*PREM30*	*PREM60*	*PREM15*	*PREM30*	*PREM60*
Intercept	0.19	0.19	0.16	0.29	0.35	0.35
	(4.77)***	(4.93)***	(3.86)***	(9.16)***	(9.65)***	(8.52)***
SOA	-0.02	-0.04	-0.02	-0.13	-0.19	-0.19
	(-0.51)	(-0.96)	(-0.52)	(-3.62)***	(-4.60)***	(-4.23)***
PAYT	0.03	0.00	0.09	0.05	0.00	0.11
	(0.74)	(0.10)	(1.93)*	(1.24)	(0.11)	(2.15)**
MULT	0.01	0.02	0.03	-0.04	-0.01	-0.01
	(0.24)	(0.37)	(0.70)	(-1.17)	(-0.14)	(-0.12)
FRIENDLY	-0.02	0.02	0.02	-	-	-
	(-0.57)	(0.42)	(0.43)			
BDIROWN	-0.00	-0.00	0.00	-0.17	-0.14	-0.19
	(-0.75)	(-0.44)	(1.23)	(-1.64)	(-1.09)	(-1.17)
N	316	316	316	260	260	260
Adjusted R^2	0.01	0.01	0.02	0.07	0.08	0.10
F-Stat	0.50	0.64	1.13	4.32***	5.44***	6.78***
Year dummies	Y	Y	Y	Y	Y	Y
Industry dummies	Y	Y	Y	Y	Y	Y

* is significant at 10%, ** is significant at 5%, and *** is significant at 1%.

The table reports the results of an OLS regression testing the association between takeover premiums and whether an acquisition is a SOA for a propensity score matched sample. The dependent variable is alternatively measured as the takeover premium calculated using the target share price 15 (*PREM15*), 30 (*PREM30*) and 60 (*PREM60*) days before the takeover announcement. Numbers in parentheses are robust *t*-statistics clustered by industry and target firm. All variables are defined in Appendix A.

Appendix 1

Variable names and definitions

Variable name	Definition
PREM15	The takeover premium calculated as the offer price minus the target share price 15 days prior to the takeover announcement, divided by the price 15 days prior to the takeover announcement
PREM30	The takeover premium calculated as the offer price minus the target share price 30 days prior to the takeover announcement, divided by the price 30 days prior to the takeover announcement
PREM60	The takeover premium calculated as the offer price minus the target share price 60 days prior to the takeover announcement, divided by the price 60 days prior to the takeover announcement
SOA	An indicator variable denoting acquisitions which are implemented using a Scheme of Arrangement
CONC	Target firm ownership concentration measured alternatively as: the ownership of the Top 20 (*TOP20*)/Top 5(*TOP5*)/Top 1 (*TOP1*) shareholders or the number of substantial shareholders (*SUBSHNO*) or the aggregate ownership of substantial shareholders (*SUBSHPER*)
PAYT	An indicator variable denoting takeovers in which the method of payment is exclusively cash
MULT	An indicator variable denoting takeovers in which there are two or more competing offers for the target firm
FRIENDLY	An indicator variable denoting target firms where the initial recommendation of the target firm board is takeover acceptance
TOEHOLD	The toehold stake of the bidder in the target firm at the announcement of the takeover
TDIROWN	The percentage ownership of the target firm board in the target firm at the announcement of the takeover
TROA	Target firm return on assets for the year prior to the takeover
TMB	Target firm market-to-book ratio calculated at the end of the financial year prior to the takeover announcement
TDE	Target firm ratio of debt to equity at the end of the financial year prior to the takeover announcement
TFCF	Target firm free cash flow for the financial year prior to the takeover announcement
TLNMCAP	Target firm size measured as the natural logarithm of market capitalisation at the end of the financial year prior to the takeover announcement
BDE	Bidding firm ratio of debt to equity at the end of the financial year prior to the takeover announcement
BMB	Bidding firm market-to-book ratio calculated at the end of the financial year prior to the takeover announcement
BROA	Bidding firm return on assets for the year prior to the takeover
BLNMCAP	Bidding firm size measured as the natural logarithm of market capitalisation at the end of the financial year prior to the takeover announcement
BFCF	Target firm free cash flow for the financial year prior to the takeover announcement
BDIROWN	The percentage ownership of the bidding firm board in the bidding firm at the announcement of the takeover
BLISTED	An indicator variable denoting acquisitions in which the bidding firms is

	listed on the ASX
MILLS	The inverse Mills ratio