

**PRE-BID ACQUISITIONS OF TARGET STOCK
AND MANAGEMENT-CONTROLLED EQUITY**

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Classification: mergers and acquisitions

Keywords: takeovers, toehold, entrenchment, strategy

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Abstract

This paper addresses the question of how target manager entrenchment impacts on bidders' initial takeover strategy, which comprises the toehold and the initial bid premium decisions, modeled as conjoint. We document several empirical regularities. The first is that the toehold alone has no explanatory power in explaining bidders' takeover strategy. The second finding is that a cost savings construct internalizing the toehold and premium choices satisfactorily identifies the drivers of initial takeover strategies. Since our measure of cost savings is a direct measure of free rider cost savings, our conclusion is that free rider costs drive toehold and initial bid premium choices. Third, we show empirically that toeholder cost savings are increasing in the target management block after controlling for likely determinants of the toehold/principal outsider decision. Hence, free rider cost savings are higher for owner managers than entrenched managers.

1. Introduction

A toehold is a pre-bid acquisition of target stock by an intending bidder that reduces free rider costs (Grossman and Hart, 1980). Toeholds have been argued to induce overpayment (the owner's curse¹) (Burkart, 1995; Singh, 1998), deter competing bids (Ravid and Spiegel, 1999) and may also enable savings on the offer premium (Betton and Eckbo, 2000; Shleifer and Vishny, 1986; Hirshleifer and Titman, 1990). In a recent paper Betton, Eckbo and Thorburn (2005) argue that toeholds are avoided by bidders when a toehold induces target resistance on account of a lower likelihood of a contest, so when resistance is already present toeholds have zero incremental cost. Hence, a toehold acquisition is predicated when intending bidders confront entrenched target managers. The benefit to the toeholder consists of free rider cost savings. In this paper we present direct evidence on this issue by constructing a free ride cost savings variable that allows us to identify the complementary role of the principal outsider.

Goldman and Qian (2005) alone internalize pre-offer target board ownership. Consistent with the free rider rationale, they demonstrate that large toeholds generate profits if a takeover succeeds, hence consistent with Hirshleifer and Titman (1990), Walking (1985), Choi (1991), Jennings and Mazzeo (1993) and Betton and Eckbo (2000) toehold size increases with the probability of success. However, Goldman and Qian (2005) show that larger toeholds can be detrimental to bidders if takeovers fail because failure signals a higher than anticipated level of entrenchment, whereupon larger toeholds suffer larger losses when the market corrects. Entrenchment occurs when managers choose investments that make it costly for shareholders to replace them (Morck, Shleifer and Vishny, 1988), thus enabling

¹ Bidders who acquire toeholds also face the risk of the *owner's curse*: Burkart (1995) and Singh (1998) show analytically that a single bidder with a toehold will bid more aggressively to induce an outsider to bid higher than the toeholder's private value, but at the risk of acquiring the target at a price higher than its value to the toeholder. Bulow Huang and Klemperer (1999) obtain a similar result for multiple block-holders who bid and have common values.

consumption of private benefits. Consistent with Mikkelson and Ruback (1985), Ruback (1988), Choi (1991) and Saffedeine and Titman (1999), all show that stock prices respond negatively to the announcement of a failed takeover. Denis and Serrano (1996) report direct evidence that entrenchment is value-reducing: failed takeovers leaving managers in control have ineffective outsider block monitoring and underperform relative to firms that replace managers. Following Denis and Denis (1995) and Denis and Serrano (1996), an inverse relation is expected between target board ownership and the principal outsider because the latter monitors managers not inclined to accept value-increasing bids. Hence, toeholds are expected increasing in principal outside blocks.

Measurement of entrenchment has been problematical in all prior research. Typically many variables have been used either separately or in combination to identify entrenching behavior and/or board ownership thresholds consistent with entrenchment. For instance, Berger, Ofek and Yermack (1997) use CEO direct stock ownership, CEO vested options, the presence of at least one blockholder, CEO tenure, board composition, excess compensation and asset uniqueness as proxies for entrenchment. A major difficulty is that such attributes do not map directly into toehold and bid premium arguments. Morck et al. (1988) suggest a lower bound of 5 per cent of outstanding common (equal to the minimum disclosure threshold) and an upper bound of 25 per cent (along with Cronqvist and Nilsson, 2003), which we modify on two counts. First, with respect to the lower bound, the presence of any positive toehold signals that intending bidders were expecting target manager resistance (Betton, Eckbo and Thorburn, 2005), so target management blocks below 5 per cent also suggest entrenchment. Second, with respect to the upper bound, toeholds are effectively capped at 20 per cent of target outstanding target stock, which lowers the upper bound accordingly. As a consequence, target management blocks observed above this level are consistent with owner-manager status, independently of the toehold.

We focus on how target manager entrenchment impacts on bidders' initial takeover strategy. This strategy comprises two key elements: the toehold and the initial bid premium, which are reasonably assumed to be set conjointly. We document several empirical regularities. The first is that the toehold alone has no explanatory power in explaining bidders' takeover strategy. The second finding is that a cost savings construct internalizing the toehold and premium choices satisfactorily identifies the drivers of initial takeover strategies. Since our measure of cost savings is a direct measure of free rider cost savings, our conclusion is that free rider costs drive toehold and initial bid premium choices. Third, we show empirically that toeholder cost savings are increasing in the target management block after controlling for likely determinants of the toehold/principal outsider decision. Hence, free rider cost savings are higher for owner managers than entrenched managers.

The remainder of the paper is organized as follows. The toeholds literature is reviewed in the next Section, where we focus on the state of knowledge concerning inter-relationships between toehold size, target management control of equity, target management entrenchment, principal shareholdings and bid premiums, along with their valuation consequences. The composition of the sample is described in Section 3 together with details of the measures employed. The analysis takes place in Section 4, followed in the final Section by the summary and conclusions.

2. Review

Target managers who consume private benefits are found least likely to accept a tender offer when they control an intermediate equity block-holding (Shleifer and Vishny, 1989; Morck, Shleifer and Vishny, 1988). The latter report the agency costs of entrenchment are likely highest when target managers own between 5% and 25% of the target's stock, implying entrenchment is highest for this group relative to target managers who control smaller or larger blockholdings. In the latter case target managers are effectively owner-

managers. As target board ownership increases to an owner-manager threshold, the incentive to reject value-increasing offers diminishes to zero. The convergence-of-interests hypothesis (Morck, Shleifer and Vishny, 1988) predicts that increased board ownership is associated with higher market valuation as the agency costs of entrenchment are reduced, while the entrenchment hypothesis predicts that corporate assets are less valuable when managed by an individual free from checks on her control. Hence, the convergence-of-interests hypothesis suggests a positive relation between target board ownership and market valuation, but the entrenchment hypothesis implies a negative relation for moderate levels of board equity ownership. If toeholds have a propensity to provoke target management resistance (Betton, Eckbo and Thorburn, 2005), under the convergence-of-interests hypothesis no toehold is predicated because target management will always accept value-increasing offers². Alternatively, under the entrenchment hypothesis target boards are already resistant, so toehold size becomes a decision variable (Goldman and Qian, 2005). As target board ownership falls below that of an owner-manager the probability of entrenchment rises, and as a consequence toeholds are expected decreasing in entrenchment.

Consistent with the free rider rationale of Grossman and Hart (1980), Goldman and Qian (2005) demonstrate that large toeholds generate profits if a takeover succeeds, but they also show that large toeholds cause losses for bidders if the takeover fails. Their argument does not require information asymmetry at the time of the tender offer, but a failed takeover in combination with a large toehold suggests a higher than expected level of target manager entrenchment. Failed takeovers have two consequences: bidders lose (Mikkelson and Ruback, 1985; Ruback, 1988; Choi, 1991 and Saffedeine and Titman, 1999) and targets gain only if target management learns from the experience or the target is subsequently acquired. Saffedeine and Titman (1999) show that target company shareholders stand to gain from

² Betton, Eckbo and Thorburn (2005) measure resistance with reference to the propensity not to offer a termination contract (either a target breakup fee or lockup option).

failed bids only if incumbent managers change their policies: absent such changes, target shareholders are better off with a successful takeover. Denis and Serrano (1996) find that target managers remaining in control after failed takeover bids impose costs on their shareholders, so entrenched managers have no incentive to change their policies without compensation for their lost private benefits³. They also find that failed takeovers in which target management retains control are characterized by ineffective block shareholder monitoring and under-perform relative to firms that replace their managers. Further, Jarrell and Poulsen (1987), Ryngaert (1988) and Malatesta and Walkling (1988) all show that anti-takeover measures result in negative stock price responses. Finally, Jennings and Mazzeo (1993) find that the probability of a competing bid increases with target management resistance but does not justify the expected wealth loss due to rejection of existing bids. This body of evidence is strongly consistent with the notion that target management resistance is to the detriment of their shareholders.

To the extent that monitoring by outside blockholders reduces the cost of managerial entrenchment (Denis and Serrano, 1996), the presence of at least one large independently-owner equity block diminishes the necessity for a large toehold. Owner-managed companies have a diminished probability of having large, independently-owner equity blocks because less monitoring is presumably needed. Targets with entrenched managers are therefore likely to exhibit one or more independently-owned equity blocks because these have been shown to be an efficient structure for monitoring. Since the presence of such block-holdings coaxes entrenched managers into accepting value-increasing tender offers, a toehold is not needed to match the equity position of target management. But when the principal independently-owned equity block (or principal outside block) is relatively small, large toeholds are needed to defray the costs of buying out the target management position; i.e., to increase the

³ Morck, Shleifer and Vishny (1988) show that agency costs of entrenchment are at a maximum for intermediate management blocks and decline as larger blocks describe owner-managers

probability of a successful bid. Further, toeholds need to approach the size of the block controlled by target management in order to have strategic value. In summary, when target managers are entrenched, an inverse relation is expected between toehold size and principal shareholdings.

3. Sample and measures

In Australia, the disclosure threshold for substantial shareholder stock acquisitions is 5 per cent of the number of outstanding common voting stock. As in the U.S., substantial shareholder notices (Form 603) must be lodged with the ASX within two business days whenever a shareholder owns more than 5 per cent of the outstanding ordinary shares of a listed company (*Corporations Law*, s. 710(4))⁴. Material changes above 5 per cent must also be advised. This threshold is usually many times daily trading volume, especially for low market capitalization stocks. In both the U.S. and Australia, large companies are similarly characterized by high concentrations of equity ownership in the hands of pension and other investment funds. However, high concentrations of equity ownership in small companies usually exist for another reason: either the chairman or the CEO effectively controls the company while at the same time maintaining a sufficiently wide shareholder base to comply with listing requirements. Thus, we are able to capture many owner-manager observations necessary to construct this control group. Since entrenchment costs are decreasing in target board ownership, and given that owner-managers have no incentive to reject value-increasing takeover offers, entrenchment costs for this group are assumed to be virtually zero. This is a useful advantage because entrenchment costs are not directly observed.

⁴ A substantial shareholder is defined by s.708 of the *Corporations Law* as a person who has a substantial shareholding, that is, an entitlement to not less than 5 per cent of: (a) where the voting shares are not divided into two or more classes - those voting shares; or (b) where the voting shares are divided into two or more classes - the shares in one of those classes.

However, the principal advantage of employing an Australian data set relates to the mandatory bid rule, which is set at 20 per cent of outstanding target stock by statute^{5,6}. The intent of the rule is to promote equity between all shareholders: pre-emptive purchase of large toeholds is effectively prohibited. During the sample period and subject to only a few exceptions, once a blockholding reached 20 per cent or more the owner was required to bid for all or a proportion of remaining target stock. Equity blocks could grow beyond 20 per cent provided growth was below 3 per cent every six months⁷, or the equity block had been acquired pursuant to an approved acquisition (typically being limited shareholder acceptances from a previous takeover bid). Toeholds that are purchased quickly are therefore constrained by a cap of 20 per cent. This creates the opportunity to distinguish between target managers who are entrenched and those who are owner-managers. Specifically, the mandatory bid threshold implies an upper bound of 20 per cent for target management entrenchment. Board ownership above 20 per cent is compatible with owner-manager status. A further advantage of an Australian data set relates to the paucity of termination contracts. Since these were virtually absent during our sample period, the relation between entrenchment and toeholds can be observed without any need to control for the impact of such agreements.

Our sample comprises 88 takeovers or mergers of companies listed on the Australian Stock Exchange (ASX) involving a pre-acquisition toehold, from 1989 through 2000, with a preponderance of observations coming from the mid-1990s⁸. Toeholds not leading to an offer by the toeholder were excluded. Only first bids are taken because Betton and Eckbo (2000) show that multiple-bidder contests serve principally to increase the gains to target shareholders without materially affecting takeover strategy as represented by the toehold and the bid premium. Toehold size is measured as the ratio (reported as a percentage) of target

⁵ *Corporations Law*, s. 615.

⁶ There is no mandatory bid rule in the U.S.; the corresponding percentage in the United Kingdom is 30 per cent.

⁷ *Corporations Law*, s. 618.

stock acquired pre-bid (pursuant to the first *Substantial Shareholder* notice) to the target's outstanding voting stock on the day the notice is lodged with the ASX, which is taken as the toehold acquisition date. The toehold date is the earliest announcement date of establishment of a toehold or the first in a series of toehold acquisitions where the series subsequently triggers a disclosure. The initial bid premium is calculated as $\frac{\text{offer price}_t - \text{target stock price}_{t-3}}{\text{target stock price}_{t-3}}$, where the target stock price is measured three clear days prior to the offer date. The intention is to measure the offer premium in relation to the stock price prevailing when the offer terms are decided; industry comments suggest this can be as recent as three trading days before the offer announcement⁹. In other words, we are assuming the toehold target and the planned initial bid premium are decided upon simultaneously. As a consequence, there is no need to control for any pre-bid target stock price runup. Our final sample was arrived at as follows:

Total number of takeover offers with a toehold purchase (1989-2000)	181
Less deletions due to	32
(i) insufficient disclosures	
(ii) thin trading	61
around toehold acquisition or bid dates	
Remaining sample	88

Financial data were obtained primarily from company annual reports and the now defunct *DataDisc* service of the ASX, the latter providing copies of the initial Form 603 lodged with the ASX and the date of lodgment, which is taken as the announcement date.

The sequence of takeover events outlined in Figure 1 represents a typical time line for the early stages of a takeover but is subject to some variation. The toehold acquisition date is t_0 . An offer may be made simultaneously or later ($t_0 +$). Shareholders may accept the offer as soon as it is made, but more commonly shareholders wait for the recommendation

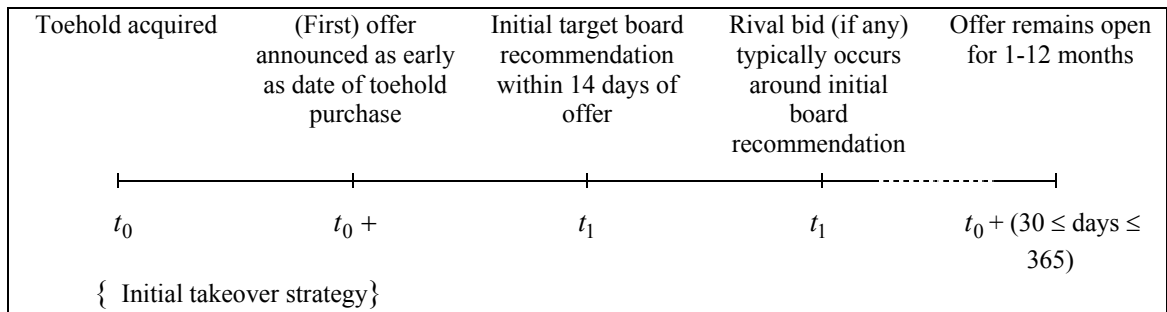
⁸ The sample is believed to approach the population size.

⁹ This reference price is considerably more recent than the 3-6 months pre-bid price used in most empirical takeover studies to eliminate any stock price runup caused by bid anticipation, thus enabling a measure of 'true' target value.

of their board, which must be made known within 14 days of the offer (t_1). The board recommendation is not binding on shareholders, but is likely to influence uninformed investors. A rival bid (if any) can occur any time after the first offer has been made, but more usually a competing bid occurs after the initial board recommendation has been formally announced (in a Part B or Part D statement). We characterize the time of a rival bid (if any) also as t_1 . Often the board recommendation is made in anticipation of a competing bid and perhaps a revised first bid. In the event of a bidding contest an offer may be revised and/or extended but must close no later than 12 months from the original offer date¹⁰. We define the initial takeover strategy as comprising the toehold and offer price decisions. The initial target board recommendation and emergence of a rival are responses to the first bid.

Figure 1. Typical sequence of events in initial stages of a takeover

The illustration is for a bid (not ‘on-market’) that occurs more than ten days following purchase of a toehold; when toehold purchase and bid coincide, t_1 merges with t_0 .



Equity block distributions are reported in Table 1. Panel A shows independent frequencies of toeholds, target management blocks and principal independently-owned blocks by block quintiles defined with reference to target outstanding common. Several regularities are observed. First, toeholds in Australia are clustered between the minimum disclosure threshold of 5 per cent and the mandatory bid threshold of 20 per cent, with heavy clustering

¹⁰ s. 624(1). ‘On-market’ bids, which are rare, are extendable to a maximum of 6 months.

immediately below 20 per cent. In contrast, target management blocks are distributed much more widely (up to a value of 80 per cent) but there is clustering in the first quintile (below 5 per cent), reflecting the low ownership stakes of many target boards, particularly in large companies. Third, the distribution of principal independent stockholdings is skewed to the left, with 68 cases exhibiting block sizes below 20 per cent. Correlations among block sizes are reported in panel B. Principal independent blockholdings are positively related with toeholds but negatively with target management blocks. The former relation suggests toeholders are cognizant of the principal stockholder investment when acquiring their toehold, while the latter relation is consistent with the argument of Denis and Serrano (1996) that principal outsider investors have a monitoring role. The lack of correlation between toeholds and target management blocks together with the negative relation between target management blocks and principal blockholdings indicates that toeholds are more sensitive to principal than target management positions.

TABLE 1. Equity block distributions

‘Toehold’ is the ratio (expressed as a percentage) of stock acquired pre-bid pursuant to the first *Substantial Shareholder* notice to the target’s outstanding voting stock on the day the notice is lodged with the ASX, which is taken as the toehold acquisition date. ‘Target management block’ is the ratio (expressed as a percentage) of the number of voting stock in which target company directors have a direct or indirect interest to the aggregate number of voting stock outstanding at the toehold acquisition date. ‘Principal outside block’ is the ratio (expressed as a percentage) of the largest single stockholding excluding the toehold and the block target management block to the aggregate number of voting shares outstanding at the toehold acquisition date.

Block size relative to outstanding common (percentage)	Toehold	Target management block	Principal outside block
<i>Panel A: unsorted</i>	(count)	(count)	(count)
0 < block < 5	0	39	11
5 ≤ block < 10	24	3	18
10 ≤ block < 15	25	10	25
15 ≤ block < 20	38	4	14
20 ≤ block < 25	1	4	6
25 ≤ block < 30	0	5	5
30 ≤ block < 35	0	8	0
35 ≤ block < 40	0	2	2
40 ≤ block < 100	0	13	7

<i>Panel B: Pearson correlations</i>			
Toehold		-.061 (.573)	.188* (.079)
Target management block			-.367*** (.000)

Descriptive statistics are presented in Table 2. Of the 88 toehold acquisitions sampled, 56 take place in the context of entrenchment (target management ownership less than 20 per cent), while the remaining 22 toeholds are associated with owner-managers. Major differences on contest parameters are entrenchment-attributed firms have (i) lower percentages of target board initial acceptance¹¹, (ii) higher percentages of revised bids, and (iii) lower percentages of successful bids (to the toeholder). All three inequalities are consistent with entrenchment. A successful (failed) bid is defined as one that secures at least (less than) 35 per cent of target stock, which in Australia is reckoned sufficient to exercise effective control in the absence of an even larger independently-owned block^{12, 13}. Entrenchment-attributed firms are about twice the size (measured by total assets) of owner-managed firms and the median management blockholding is a very modest 1.21 per cent of outstanding target stock. As expected, owner-managed group shows smaller principal outsider blocks than the entrenchment sub-group.

Following Smith and Watts (1992), Skinner (1993) and Berger and Ofek (1995), investment opportunities are measured by the ratio of the market value of issued ordinary shares to the book value of net assets for the first fiscal year-end following the bid date

¹¹ A 'no recommendation' by the target board is classified as a rejection.

¹² Legally, bidders in Australia have the right to return acceptances if their pre-specified minimum acceptance condition is not met, but in practice most bidders waive this right. In about one-third of cases the minimum acceptance condition was set at zero, meaning that bidders were obliged to accept any acceptances received.

¹³ This percentage is consistent with those frequently applied in the market. The Australian Accounting Standard, AASB 1024, para. 9, defines control as "the capacity of an entity to dominate decision-making, directly or indirectly, in relation to the financial and operating policies of another entity so as to enable that other entity to operate with it in pursuing the objectives of the controlled entity".

(market-to-book of equity). The figures indicate there are no significant differences in growth opportunities between entrenchment-attributed and owner-managed firms. Leverage is measured by the ratio of total debt to total assets, and again there is no difference between the two sub-groups. This result is in contrast to Berger, Ofek and Yermack (1997) who argue and find that entrenched managers use less debt than owner-managers. Finally, Table 2 also shows that the total risk (measured by the standard deviation of a minimum 36 monthly stock returns prior to the toehold acquisition date) of both sub-groups is essentially the same. From this result we infer that entrenching assets have the same overall risk as non-entrenching assets.

TABLE 2. Descriptive statistics

A successful (failed) bid is defined as a bid made by the toehold that secures at least (less than) 35 per cent of target stock. 'Target firm size' is calculated measured by the book value of total assets for the first fiscal year-end following the bid date. 'Target management block' is the ratio (expressed as a percentage) of the number of voting stock in which target company directors have a direct or indirect interest to the aggregate number of voting stock outstanding at the toehold acquisition date. 'Principal outsider' is the ratio (expressed as a percentage) of the largest single stockholding excluding the toehold and the block controlled by target management to the aggregate number of voting shares outstanding at the toehold acquisition date. 'Target market-to-book of equity' is measured by the ratio of the market value of issued ordinary shares to the book value of net assets for the first fiscal year-end following the bid date. 'Target leverage' is measured by the ratio of total debt to total assets. 'Standard deviation of stock returns' is determined from a minimum of 36 monthly returns prior to the toehold acquisition date.

	Target management block	
	< 20 per cent (entrenchment)	≥ 20 per cent (owner-manager)
Number of cases	56	32
<i>Contest parameters</i>		
Percentage of bids initially accepted by target board	32.1	50.0
Percentage of revised bids	44.6	31.3
Percentage of bids attracting a rival	30.4	40.6
Percentage of bids uncontested and not revised	46.4	43.8
Percentage of successful bids by toehold	67.9	81.3
Percentage of contests won by a rival bidder	19.6	12.5
Target firm size (\$m)		
mean	205.2	141.0
median	49.7	23.9
Standard deviation	526.8	542.4
<i>t</i>		0.540
<i>Mann-Whitney U</i>		582.0***

Target management block (percentage)			
mean	4.55		40.42
median	1.21		30.61
Standard deviation	5.85		15.66
<i>t</i>		-12.474***	
<i>Mann-Whitney U</i>		0.000***	
Principal outsider (percentage)			
mean	20.26		10.38
median	14.64		9.26
Standard deviation	15.67		6.19
<i>t</i>		4.184***	
<i>Mann-Whitney U</i>		489.5***	
Target market-to-book of equity			
mean	1.82		1.84
median	1.21		1.08
Standard deviation	1.59		1.92
<i>t</i>		833.0	
<i>Mann-Whitney U</i>		-0.040	
Target leverage (percentage)			
mean	36.69		40.60
median	38.92		38.60
Standard deviation	22.52		25.14
<i>T</i>		-0.728	
<i>Mann-Whitney U</i>		829.0	
Standard deviation of stock returns (percentage)			
mean	13.9		14.0
median	13.2		13.8
Standard deviation	6.7		4.7
<i>t</i>		-0.017	
<i>Mann-Whitney U</i>		842.0	

*** Two-tail significance at the 1% level.

4. Analysis

We identify four acquisition strategy variables, comprising the toehold, toehold/principal outsider, the initial bid premium and (free rider) cost savings¹⁴. Their values are presented separately by entrenchment/non-entrenchment in Table 3, which also shows bidder cumulative abnormal returns at bid. *Cost savings* are the product of the toehold investment and the initial bid premium, expressed as a percentage. Thus, a higher premium directly

generates higher savings. Goldman and Qian's (2005) expectation of smaller toeholds for entrenched managers is not observed because toehold size does not differ significantly between the two sub-groups. In contrast, initial bid premiums and toehold/principal outsider are both significantly lower for the entrenchment sub-group. This constitutes evidence that intending bidders adopt a different strategy when confronting entrenched managers. Instead of attempting to match the higher premium demanded by owner-managers, intending bidders actually reduce the premium initially offered and at the same time pare the toehold investment relative to the principal outsider block. When dealing with owner-managers, intending bidders offer a higher premium and at least match the investment of the principal outsider. However, we find that cost savings are higher for owner-managers than the entrenchment group because the higher initial bid premium is spread over a slightly smaller toehold. This is shown by cost savings that are marginally lower for the entrenchment group than owner-managers. In other words, the toehold decision is bound with the bid premium choice together with pre-existing target management and principal outsider blocks. Finally, bidder cumulative abnormal returns at bid are effectively zero and do not differ between entrenchment and non-entrenchment. Despite lower cost savings when confronting entrenched managers, bidders are not penalized by the equity market. This outcome is even more notable when the lower posterior probability of success with respect to entrenched managers is recognized (refer Table 2). In short, the zero cumulative abnormal returns indicate that bidders have successfully adapted their acquisition strategy to deal with entrenched managers, at no cost to their shareholders.

TABLE 3. Acquisition strategy variables

'Toehold' is the ratio (expressed as a percentage) of stock acquired pre-bid pursuant to the first *Substantial Shareholder* notice to the target's outstanding voting stock on the day the notice is lodged with the ASX, which is taken as the toehold acquisition date. 'Premium' is the initial bid premium,

¹⁴ For the whole sample there is no relation between toeholds and the initial bid premium ($\rho = -.146, p = .174$).

calculated as $\frac{\text{offer price}_t - \text{target stock price}_{t-3}}{\text{target stock price}_{t-3}}$, where the target stock price is measured three trading

days prior to the offer date. 'Principal outsider' is the ratio (expressed as a percentage) of the largest single stockholding excluding the toehold and the block controlled by target management to the aggregate number of voting shares outstanding at the toehold acquisition date. 'Cost savings' are the product of the toehold investment and the initial bid premium, expressed as a percentage. Abnormal stock returns are determined by subtracting the expected daily return (using market model estimates) from the observed daily return, which has been adjusted for capitalization changes and dividends. The two-day cumulative abnormal return is the product of the day-1 and day 0 returns, where day 0 is the announcement day. 'Target management block' is the ratio (expressed as a percentage) of the number of voting stock in which target company directors have a direct or indirect interest to the aggregate number of voting stock outstanding at the toehold acquisition date.

	Target management block	
	< 20 per cent (entrenchment)	≥ 20 per cent (owner-manager)
Toehold (percentage)		
Mean	14.07	13.28
Median	14.89	13.45
Standard deviation	5.13	5.27
<i>t</i>		0.684
<i>Mann-Whitney U</i>		797.0
Premium (percentage)		
mean	10.67	20.94
median	8.88	12.78
Standard deviation	18.30	23.43
<i>t</i>		-2.135**
<i>Mann-Whitney U</i>		642.0**
Toehold/principal outsider		
mean	1.070	1.965
median	0.973	1.295
standard deviation	0.913	1.802
<i>t</i>		3.093***
<i>Mann-Whitney U</i>		564.0***
Cost savings (percentage)		
mean	1.360	2.567
median	0.923	1.416
standard deviation	2.925	2.983
<i>t</i>		-1.838*
<i>Mann-Whitney U</i>		663.0**
Bidder cumulative abnormal returns at bid		
mean	-0.014	-0.011
median	-0.007	-0.008
standard deviation	0.063	0.035
<i>t</i>		0.338
<i>Mann-Whitney U</i>		837.0

*** Two-tail significance at the 1% level.

** Two-tail significance at the 5% level.

* Two-tail significance at the 10% level.

Entrenchment-driven differences do not reveal interactions between toehold and bid premium decisions and takeover parameters. To commence, we mimic Betton and Eckbo's (2000, p. 859) OLS regression estimation as regression (1) in Table 4:

$$Toehold = \alpha_0 + \beta_1 Premium + \beta_2 Hostile + \beta_3 Success + \beta_4 Rival\ win + \beta_5 Revise + \beta_6 Single\ bid + \varepsilon$$

where *Premium* is the initial bid premium, with the remaining variables representing takeover parameters. *Hostile* is a binary variable that assumes a value of unity if the target board does not initially recommend acceptance of the first bid, *Success* = 1 if the toehold's bid secures at least 35 per cent of target stock, *Rival win* = 1 if a rival wins a bidding contest, *Revise* = 1 if the initial bid is revised, and *Single bid* = 1 if there is a rival bid. In contrast to Betton and Eckbo (2000), this estimation is unsuccessful, no doubt reflecting the exclusion of zero toeholds from our sample.

Since toehold and the initial bid premium are likely a joint decision (Betton and Eckbo, 2000), we next regress *Cost savings* on the same explanatory variables except *Premium* (regression (2)). There is no improvement in the fit, suggesting the explanatory variables employed by Betton and Eckbo (2000) do not capture the determinants of the initial takeover strategy. Hence, in estimation (3) *Cost savings* is instead regressed on *Principal outsider*, *Toehold/principal outsider* to capture interaction between the toehold and the principal outside block, *Target management block* and $\ln(\text{toehold}/\text{target management block})$. The estimation is successful, but only *Toehold/principal outsider* achieves significance (positive). Thus, for a sample of positive toeholds we find that cost savings are associated with the toehold choice relative to the principal outside block, but not in relation to the principal outside block or the target management block (either in absolute or relative terms). From this result we infer that intending bidders set their toehold in relation to the principal outside block, to the exclusion of target management blocks. The implication is that

intending bidders do not factor in target management entrenchment when deciding their initial takeover strategy.

TABLE 4. OLS Regressions

‘Toehold’ is the ratio (expressed as a percentage) of stock acquired pre-bid pursuant to the first *Substantial Shareholder* notice to the target’s outstanding voting stock on the day the notice is lodged with the ASX, which is taken as the toehold acquisition date. The initial bid premium is calculated as $\frac{\text{offer price}_t - \text{target stock price}_{t-3}}{\text{target stock price}_{t-3}}$, where the target stock price is measured three trading days prior to the offer date. ‘Premium’ is the initial bid premium, ‘Hostile’ is a binary variable that assumes a value of unity if the target board does not initially recommend acceptance of the first bid, ‘Success’ = 1 if the toeholder’s bid secures at least 35 per cent of target stock, ‘Rival win’ = 1 if a rival wins a bidding contest, ‘Revise’ = 1 if the initial bid is revised, and ‘Single bid’ = 1 if there is a rival bid. ‘Principal outsider’ is the ratio (expressed as a percentage) of the largest single stockholding excluding the toehold and the block controlled by target management to the aggregate number of voting shares outstanding at the toehold acquisition date. ‘Target management block’ is the ratio (expressed as a percentage) of the number of voting stock in which target company directors have a direct or indirect interest to the aggregate number of voting stock outstanding at the toehold acquisition date.

<i>n</i> =88 Dependent variable:	(1) Toehold	(2) Cost savings	(3) Cost savings
Adjusted R^2	.051	.041	.123
<i>F</i>	1.774	1.747	4.055
Probability	.115	.133	.005
Durbin-Watson <i>d</i>	1.851	1.797	1.420
Constant	10.688*** (4.244)	-.193 (-.140)	-.809 (-.987)
Premium	-.058** (-2.019)		
Hostile (=1)	.760 (.572)	-.473 (-.654)	
Success (=1)	4.659** (2.222)	2.462** (2.179)	
Rival win (=1)	4.380* (1.702)	2.060 (1.480)	
Revise (=1)	-1.766 (-.978)	-.789 (-.797)	
Single bid (=1)	1.402 (.738)	-.041 (-.039)	
Principal outsider			.046

			(1.635)
Toehold/principal outsider			.819*** (2.959)
Target management block			.032 (1.374)
$\ln(\text{toehold/target management block})$.101 (.596)

*** Two-tail significance at the 1% level.

** Two-tail significance at the 5% level.

* Two-tail significance at the 10% level.

A potential difficulty with regression (3) is that *Cost savings* and *Toehold/principal outsider* are likely determined simultaneously, which renders OLS coefficients inconsistent. To overcome this problem we perform a two-stage least squares (2SLS) regression of *Cost savings* on *Target management block*, *Hostile*, *Target Size* and *Target leverage*, with *Toehold/principal outsider* as the instrument:

$$\begin{aligned} \text{Toehold/principal outsider} = & \alpha_0 + \alpha_1 \text{Target management block} + \alpha_2 \text{Hostile} \\ & + \alpha_3 \text{Target size} + \alpha_4 \text{Target leverage} \end{aligned} \quad (\text{i})$$

$$\begin{aligned} \text{Cost savings} = & \beta_0 + \beta_1 \text{Target management block} + \beta_2 \text{Hostile} \\ & + \beta_3 \text{Target size} + \beta_4 \text{Target leverage} + \beta_5 \text{Toehold/principal outsider} \end{aligned} \quad (\text{ii})$$

The results are presented as regression (1) in Table 5. *Cost savings* are found to be strongly increasing in *Target management block* once *Toehold/principal outsider* is controlled for. Since entrenchment is decreasing in the target management block, this result implies toeholder cost savings are lower when target managers are entrenched, consistent with entrenched managers requiring compensation for their lost private benefits.

For a robustness check, we split the dependent variable *Cost savings* into its constituent parts (*Toehold* and *Premium*) and perform another 2SLS estimation with *Premium* as the dependent variable in regression (2)¹⁵:

¹⁵ *Toehold* is not trialed as a dependent variable because toeholds are clustered below the 20 per cent cap.

$$\begin{aligned} \text{Toehold} = & \alpha_0 + \alpha_1 \text{Hostile} + \alpha_2 \text{Target management block} \\ & + \alpha_3 \text{Target size} + \alpha_4 \text{Target leverage} \end{aligned} \quad (\text{i})$$

$$\begin{aligned} \text{Premium} = & \beta_0 + \beta_1 \text{Hostile} + \beta_2 \text{Target management block} \\ & + \beta_3 \text{Target size} + \beta_4 \text{Target leverage} + \beta_5 \text{Toehold} \end{aligned} \quad (\text{ii})$$

Since the *Cost savings* variable captures interaction between the toehold and initial bid premium choices, we expect regression (1) to outperform regression (2). This outcome obtains because all regression parameters are weaker than in regression (1) and no significance is achieved on *Toehold*. Thus, for a sample of positive toeholds the *Cost savings* construct outperforms separate analysis of the toehold and premium decisions.

Table 5. Two-stage least squares regressions

‘Target management block’ is the ratio (expressed as a percentage) of the number of voting stock in which target company directors have a direct or indirect interest to the aggregate number of voting stock outstanding at the toehold acquisition date. ‘Toehold’ is the ratio (expressed as a percentage) of stock acquired pre-bid pursuant to the first *Substantial Shareholder* notice to the target’s outstanding voting stock on the day the notice is lodged with the ASX, which is taken as the toehold acquisition date. ‘Cost savings’ are the product of the toehold investment and the initial bid premium, expressed as a percentage. ‘Premium’ is the initial bid premium, calculated as $\frac{\text{offer price}_t - \text{target stock price}_{t-3}}{\text{target stock price}_{t-3}}$, where the target stock price is measured three trading days prior to the offer date.

<i>n</i> =88 Dependent variable:	(1) Cost savings	(2) Premium
Adjusted R^2	.098	.010
F	10.479	1.878
probability	.002	.174
Constant	.794* (1.835)	21.976*** (3.694)
Target management block	.720*** (3.238)	
Toehold		-.555 (-1.370)

*** Two-tail significance at the 1% level.

* Two-tail significance at the 10% level.

5. Summary and conclusions

Our analysis of Australian toeholds yields several insights on bidders' initial takeover strategy when target managers are entrenched. The toehold and the initial bid premium when considered separately have no explanatory power in explaining bidders' takeover strategy. While a higher bid premium increases the likelihood of target board acceptance and a successful takeover, it alone is not effective in dealing with entrenched managers who have less incentive to accept bids emanating from value-increasing takeovers. Instead, we find that a cost savings construct internalizing the toehold and premium choices identifies the determinants of bidders' initial takeover strategy. The free rider cost saving potential of toeholds is found to be decreasing in target manager entrenchment, as measured by target management ownership levels, after controlling for likely determinants of the toehold/principal outsider decision. Hence, cost savings are higher for owner managers than entrenched managers.

Importantly, our findings have been established in the context zero correlation between toeholds and the initial bid premium. In contrast to previous studies (Shleifer and Vishny, 1986; Hirshleifer and Titman, 1990 and Betton and Eckbo, 2000), the regularities we have documented do not rely on a prior argument concerning the relation between toeholds and premiums. Further, we have shown that the principal outsider impinges on the toehold and initial bid premium choices across variations in the target management block. We recognize that our results are specific to an Australian database characterized by capping of toehold size in Australia at 20 per cent (unlike the U.S.). Australian toeholders appear effectively to circumvent the mandatory bid rule by targeting the principal outsider in their quest for control. However, an Australian database has also allowed us to reveal an expanded role for major outside investors in a regulated environment. In addition to their monitoring role in an unregulated environment, the size of the principal outside block has also been shown to influence bidders' toehold choice in a regulated environment. In other words,

regulation increases the economic significance of principal shareholders in the formation of initial takeover strategies.

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