白色騎士，敵意併購與股東利益

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摘　　要

　　在股東利益假說下，本研究探討當公司成為敵意併購者的併購對象時，若其採取引入白色騎士的方式以抵禦此併購的成功，以白色騎士之股東角度去觀察此舉對於達成目標之效率程度。本研究之樣本採用發生於 1980 年至 2007 年間敵意併購案件中成功併購目標公司的 323 家主併公司做為研究對象，並且進而將此樣本分為三個群組：成功完成併購之白色騎士、在白色騎士存在下，成功完成併購之敵意併購者，以及在白色騎士不存在下，成功完成併購之敵意併購者。經由呈現出此三個群組在併購宣告效果與交易內容結構之箇中差異後，本研究認為以白色騎士做為抵禦敵意併購的手段是支持管理者掠奪假說的行為。此外，由於交易內容結構為白色騎士或敵意併購者與目標公司共同協商的產物，本研究也對此進行深入剖析，發現雖然交易內容結構對於證明股東利益假說與管理者掠奪假說是很好的觀察重點，但是其對於解釋成功主併公司的宣告效果卻不明朗。最後，因為財務型併購者在併購市場中的獨特角色，本研究更將原先樣本之三個群組依照其投資屬性再加以分類。經由比較三個群組的交易內容結構之後發現，財務型併購者在取得目標公司股權比例以及併購溢酬上的差異並不是非常明顯。總而言之，本研究顯示引入白色騎士無法為目標公司及其本身之股東帶來好處。

關鍵詞：白色騎士、敵意併購、管理者掠奪假說、股東利益假說

White Knights, Hostile Takeovers and Shareholders' Interests

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Abstract

Based on the stakeholder hypothesis, this paper examines the efficiency to shareholders of adopting white knights as a device to protect target firms against hostile takeovers. A total of 323 successful acquirers in the hostile takeover events over the period 1980 to 2007 are studied. The sample was divided into three groups: successful white knights, successful hostile bidders with white knights present and successful hostile bidders without white knights present. Comparisons of some aspects between the three groups indicate that adopting a white knight as an antitakeover provision supports a managerial entrenchment hypothesis. Moreover, since the deal structures are the products of negotiations between target firms and white knights, this aspect is also investigated and shows that although observing deal structures are excellent for illuminating two competing hypothesis, the managerial entrenchment hypothesis and the shareholders interest hypothesis, they are not responsible for the announcement effects experienced by acquirers. Finally, as a result of the special characteristics of financial buyers in the acquisition market, this study further divides the original three groups on the basis of the type of acquirer, and find that financial buyers are less concerned about share holdings and are indifferent in premiums, regardless of their characters in a hostile takeover event, a totally different outcome compared to corporate buyers. All in all, white knights do not benefit shareholders of target firms or themselves.

Key words: white knight, hostile takeover, managerial entrenchment hypothesis, shareholders interest hypothesis

誌　　謝

目錄

表目錄

I.   Introduction

Numerous defense strategies are available for firms to defend themselves against
unsolicited takeover attempts. However, the motivations and effectiveness of adopting such
strategies are subject to suspicions. When reading financial newspapers a few years recently,
the reader is often exposed to articles discussing the topics of hostile takeovers. "How
Microsoft Could Go Hostile" is a heading for an article in The New York times, 2008, and
depicts Microsoft's bear hug letter designed to put an unwilling takeover notice to Yahoo,
with the message that they are no longer safe. Another article, "Gant inquest for white knight",
where the Swedish company, Gant is searching for a third part i.e. a white knight, to avoid a
hostile takeover of the corporation by Maus Fréres (Ibison, 2008). Between the mid-1970s
and the late-1980s the increasing occurrence of hostile bids resulted in significant changes in
the market for corporate control. All listed companies run the risk of being a target for a
hostile takeover, and until nowadays many companies are trying to involve themselves in
action programs protecting them from possible threats. When faced with a takeover attempt
that was judged likely to be both unfavorable to present management and successful, some
companies searched for another, more acceptable, firm to acquire them. Such an acquiring
firm was known as a "white knight." The white knight adoption is one of the popular
strategies employed by target firms to defeat hostile bidders. The framework for previous
analysis has been investigating whether such adoptions benefit the stockholders, a proof
which supports stockholders interest hypothesis or is just an outcome of self-interested
behavior of the managers as contended by managerial entrenchment hypothesis. The
shareholders interest hypothesis states that target management will only resist takeover bids if
they believe that the bidder's offer is below the target's true market value. In this setting, bid
resistance is a bargaining tool that is used by management to increase the wealth of target
shareholders by improving the terms of the takeover. However, the managerial entrenchment

hypothesis states that target management will resist takeover bids that threaten their power, reputation or company-specific human capital. In this setting, bid resistance is a defensive ploy used by self-interested management, which results in a decrease in the wealth of target shareholders. These two competing hypothesis constitute traditional concepts for evaluating the overall effect of takeover barriers on shareholders wealth.

This paper adds a new dimension to the corporate control literature by providing evidence on the wealth effect of shareholders after expanding visions into deal structures of finished hostile takeover events. If the white knight adoption stimulates hostile bidders to raise premiums in order to ensure their success, in the mean time with the announcement effects being significantly positive, then it supports shareholders interest hypothesis. On the contrary, if white knights help target firm managers to seize as much share holdings as possible and cause the announcement effects to be significantly negative, then it supports managerial entrenchment hypothesis.

The proliferation of the entries of financial buyers in the acquisition markets also started in the 1980s. What seems to have particularly galvanized public opinion are the aggressive tactics of financial investors. The active financial investors that purchased operating companies were dubbed "corporate raiders" and were also subject to congressional actions. Business professionals seeking advantages through changes in corporate control were portrayed as "slick Gordon Geckos, destroyers of wealth" or worse. As a result, it's worthwhile to do further investigations to examine whether the attributes of acquirers in the hostile takeover events affect deal structures and shareholders' interests.

The structure of this paper is as follows. Section 2 demonstrates previous research regarding related issue of this paper. Section 3 describes the sample and its descriptive statistics. Section 4 presents methodology used in this study and discusses the results from this study. Section 5 contains the conclusions.

2

II.   Literature Review

2.1 Theoretical perspectives of shareholder wealth effects of antitakeover provisions

Agency costs in the corporation, as defined by Jensen and Meckling (1976), are the difference between the value of the firm if monitoring of management were costless and the value of the firm as actually operated. Agency costs are mitigated by the takeover market that creates a check on management that cannot be replicated by incentive mechanisms. An incentive scheme may check opportunism but will be inadequate if management lacks the capabilities to maximize stockholder wealth. The takeover market is one mechanism that places checks on both incompetent decision-making as well as managerial shirking (Ryngaert, 1988). Since the takeover market is a critical component in our "institutions of capitalism" (Moerland, 1995; Rediker and Seth, 1995), antitakeover provisions need to be scrutinized carefully by agency theorists.

Stockholders Interest Hypothesis

According to the stockholders interest hypothesis, the market would react positively to the adoption of antitakeover provisions for at least two reasons. First, the adoption of antitakeover provisions effectively creates a long-term contract with the current management team and may encourage them to make firm-specific capital investments and long-term investments which are in the long-run best interest of stockholders (Knoeber, 1986). Second, antitakeover mechanisms provide corporate management additional veto power in certain takeover situations, enabling management to negotiate better deals for their stockholders. In fact, it seems that different tactics for resisting hostile bidders lead to entirely diverse outcomes. Generally, resistance is associated with wealth gains and a lowering of the probability of bid

success. (Holl and Kyriazis, 1997) In more recent empirical results, which indicated management in unprotected firms is disciplined by other corporate governance mechanisms than the market for corporate control, including the legal protection of shareholders. As a result, unprotected firms do not outperform protected firm. (Rose, 2002) In addition, shareholders adopting antitakeover devices are aware of management's efficient contracting with stakeholders and hence adopt these devices to protect efficient management. (Ruf, Meade-Christie and Brown, 2004) But there're also voices suggest that whether or not the targets protect themselves by adopting antitakeover strategies, those are not efficient ways to create advantages for shareholders. For example, once in a contested situation, the capacity of executives to use takeover defenses either to entrench themselves or to boost the bid premium for shareholders was found to be limited. (Schoenberg and Thronton, 2006) The information content dispatched by defeating acquirers might also be concerns. The defense is undertaken not to correct mispricing of the target's stock by providing additional information to shareholders to remain independent, but rather to drive up the purchase consideration and increase shareholders' wealth. (Cooke, Luther and Pearson, 1998) There is significant evidence that firms that meet the demands of their stakeholders employ shareholder approved antitakeover devices. (Ruf, Meade-Christie and Brown, 2004) On the other hand, the 1998 to 2001 aggregate dollar loss of acquiring-firm shareholders is so large because of a small number of acquisitions with negative synergy gains by firms with extremely high valuations. Without these acquisitions, the wealth of acquiring-firm shareholders would have increased. In the end, firms that make these acquisitions with large dollar losses perform poorly afterward. (Moeller, Schlingemann and Stulz, 2005)

Managerial Entrenchment Hypothesis

The "managerial entrenchment" perspective argues that defensive tactics are primarily

4

self-serving devices employed by incumbent executives to protect their positions by reducing the likelihood that any takeover approach will proceed to completion (Wilcox, 1988). Viewed in this way, bid defenses operate against the best interests of shareholders by obstructing the market for corporate control. Empirical support for this "managerial entrenchment" perspective has been provided by a number of US studies, which have generally confirmed that the introduction of anti-takeover amendments by a company leads to negative movements in the firm's share price (Jarrell and Poulsen, 1987; Ryngaert, 1988). According to the managerial entrenchment view, antitakeover provisions protect inefficient incumbent management that may indulge in shirking and maintaining short time horizons, resulting in a present-value loss for the firm. Those who subscribe to the "managerial entrenchment" view argue that all of the "institutions of capitalism" are mechanisms which mitigate, but do not eliminate, managerial discretion (Williamson, 1985). Supporters of the managerial entrenchment view indicate that the additional managerial veto power provided by antitakeover mechanisms reduce the probability of a firm receiving valuable takeover offers from alternative management teams. Empirical evidence also indicates that managers of firms with antitakeover provisions oppose takeover bids almost twice as frequently as firms without antitakeover provisions (Pound, 1987), exacerbating the principal-agent problem of incentive misalignment resulting from the separation of ownership and control (Berle and Means, 1932). With regard to the empirical results in the past decades, for instance, a strongly negative effect on stockholder wealth supports the managerial entrenchment view of the antitakeover provisions. (Mahoney and Mahoney, 1993; Mahoney, Sundaramurthy and Mahoney, 1996)

It is said that bid defense activity generates tangible rewards for the managers of firms subject to an unwelcome takeover bid. Moreover, due to two features the benefits received by managers are underestimated. First, for convenience researches generally defined managerial interests solely in terms of job security and the associated annual salary. It seems too narrow to reflect the truth. Second, it is not appropriate to investigate the effect of the bid defenses in

isolation. When facing unwelcomed takeovers, managers often seek to construct an effective combination of strategies in order to defeat them. Especially, from a management perspective a white knight defense seems to be the least effective of all. (Holl and Kyriazis, 1997)

Use IPO firms as observations, which come to the conclusion that the presence of a defense is negatively related to subsequent acquisition likelihood, yet has no impact on takeover premiums for firms that are acquired. (Field and Karpoff, 2002)

Takeover defenses might also influence managerial incentives with respect to long-term investments, excess liquidity and capital structure. Generally protected firms have significantly less debt to equity. Besides, protected firms are not significantly more oriented towards the long-term and do not have significantly more excess liquidity. Thus the existence of protective measures is detrimental to performance of targets. (Rose, 2005)

2.2 Literature on white knight

Companies enact defenses against hostile takeovers to protect their independence and current management initiatives, or to help ensure that hostile bidders are pressured to present their best offers. The critical challenge for executives is to determine—in anticipation of attacks on their firm—which defense strategies will best fortify stockholder investments. (Pearce II and Robinson, Jr, 2004) Theoretically, it was said that white knight as the management resistance to takeovers can benefit shareholders. In particular, discouraging some potential acquirers may increase shareholder wealth because it encourages others to pursue a combination with the targets. This occurs because the number of competing acquirers is reduced and because resistance can signal that the target does not have access to a white knight. This signaling effect may explain why share price decline after management resists a takeover, even when such resistance is value-maximizing in the long-run. (Shleifer and Vishny, 1986) In fact, when taking a review on the white knight literatures from various

dimensions, there're entirely different outcomes from the results inferred before. From synergy viewpoint, white knight synergies are insignificantly different form synergies generated in hostile acquisitions when taking multiple bidders controlling into consideration. The paper also posits that if white knights overbid, then target shareholders should experience higher acquisition gains in white knight acquisitions. (Niden, 1993) Later research provides evidence for Niden. Evidence shows that white knights experience a decrease in their value, as measured by negative abnormal security returns, which provides partial support for the hypothesis that white knights overbid to acquire targets. (Lefanowicz and Robinson, 2000) White knights pay significantly higher premiums. It might result from the fact that unrelated industry acquirers that win bidding contests may overbid due to weaker information about the true value of the target. (Flanagan and K.C. O'Shaughnessy, 2003) An analysis of the sequence of bidding in corporate control contests involving white knights reveals a category of white knights termed as 'delayed bid' white knights who make their bid after two consecutive hostile bids. The 'immediate bid' white knights make their bid in relative haste after the first hostile bid. Overpayments by white knights are much larger for the 'immediate bid' white knights. (Bannerjee and Owers, 2006) Finally, the combination of these two anti-takeover devices (white knight intervention and managerial control over the bargaining process) may allow a white knight with synergies with the target firm lower than those of the hostile raider to actually win the takeover contest. (Calcagno and Falconieri, 2008) From announcement effect viewpoint, White knights did not earn abnormal returns either before or after announcement of their tender offers. (Smiley and Stewart, 1985) From welfare viewpoint, gainers (targets and hostile bidders) can potentially compensate the losers (white knights). (Bannerjee and Owers, 1992) Finally, from manager viewpoint, white knight managers make less efficient decisions than do hostile bidders. Historically white knights have over-invested and their acquisition of the target is one more negative NPV investment. Alternatively, hostile bidders' past investment decisions have increased shareholder wealth. The announcement of a

white knight bid results in negative, significant excess returns. (Carroll, Griffith and Rudolph, 1998) Furthermore, white knights' returns upon the announcement of their bid have a significant negative relationship with free cash flow, implying that their bid reveals information about white knight management's investment decisions. (Carroll, Griffith and Rudolph, 1999) Academics have claimed that even friendly acquisitions are negotiated in the "shadow" of a hostile takeover bid (White knights, for example.) But after taking account of four realities that are present in many if not most corporate M&A deals—alternatives away from the negotiating table (i.e., other potential targets), high costs of launching a hostile bid, information disparities, and managers with divided loyalties—the author demonstrates that only a fraction of friendly acquisitions are in fact negotiated in the shadow of a hostile takeover threat. (Subramanian, 2005) When employing auction theory to structure the analysis and examine the valuation consequences for bidding firms. An immediate white knight response to a hostile bid is met with a strong, negative market reaction. When the white knight and hostile bidder get into a 'bidding war' with follow-up bids by each, the white knight (but not the hostile bidder) loses each time it bids. However, if the white knight bid follows two consecutive, hostile bids and the contest ends, there are minimal losses to the white knight, which are statistically indistinguishable from the mildly positive reaction to the preceding hostile bids. (Banerjee and Owers, 1996) Statistical analysis also reveals that white knight was one of the most effective takeover defences when compared with other defensive techniques. (Schoenberg and Thornton, 2006) For example, white knight defences significantly increase shareholder returns but do not lower the probability of bid success, which seems to enhance the interests of manager. However, it also indicated that white knights can become black knights to the detriment of incumbent management, but there's no evidence about the effects of such acquisitions on managerial employment to substantiate their claims that 'managers for whom job security is essential are best advised not to adopt a white knight defence.' (Wright, 1997) There's also research about the comparison of failed

acquirers who are either white knights or hostile bidders. In the short-term window (120

trading days) following the first-bid announcement made by the hostile bidder (failed acquirer)

commencing its takeover attempt of the intended target, the white knight, on average,

outperforms the failed acquirer, though both parties experience negative mean compounded

abnormal returns. However, in the short-term window (120 trading days) following the

announcement date of the consummation of a deal between the white knight and the intended

target, the hostile bidder (failed acquirer), on average, outperforms the white knight. In

situations where the failed acquirer's deal attitude is hostile, the bidder experiences negative

abnormal returns for the period subsequent to disclosing its intention to acquire the target firm

through the short-term window following its official withdrawal; when the failed acquirer

terminates its hostile campaign. (Shah, 2005) There's a study which its grouping method is

similar to that of mine. The article examines the long-term shareholder wealth performance of

four types of acquirers- friendly bidder, hostile bidder, white knight and hostile bidder facing

a white knight or another hostile bidder. It is said that friendly acquirers with high

stock-market ratings destroyed more value than hostile acquirers with a similar rating.

Friendly acquirer top managers suffered greater job losses than those of hostile acquirers,

perhaps paying the price for their inferior value-creation performance. The study provides

evidence of the superior value-creation performance of hostile acquirers and makes the case

against takeover regulatory rules that may impede hostile takeovers. (Sudarsanam and Mahate,

2006)

2.3 Deal structure and deal characteristics

One of the most important aspects of merger negotiations involves the determination of the

value and structure of the merger consideration. The consideration, a price that the acquirer

pays for the target company, can be composed entirely of cash or a combination of cash and

securities. Old findings, supported by analysis of nonconvertible bonds, are attributed mainly to signaling effects and imply that the inconclusive evidence of earlier studies on takeovers may be due to their failure to control for the method of payment. (Travlos, 1987) Consistent with earlier evidence, several deal and target characteristics significantly affect the method of payment choice. (Faccio and Masulis, 2005)

There is also study which support hypotheses that firm size and cash-flow payout impact the decision to acquire. Capital structure, management performance, and cash-flow payout are related to the wealth effects of acquisition announcements. Better fitting models result when industry effects are controlled by measuring firm characteristics as relative deviations from industry values. (Trahan, 1993)

While the target firm's shareholders gain significantly from mergers and acquisitions, those of the bidding firm do not. Findings also indicate that the use of stock financing has a significant impact on the wealth of both the target and bidding firms' shareholders. (Datta, Pinches and Narayanan, 1992) In fact, the difference in announcement-period target returns between cash offers and stock exchange offers can be explained by the difference in capital gains tax liabilities of the target shareholders and/or the difference in the information effect of the method of payment.

A variety of literatures discussed that diverse deal structures, such as premiums, convey some noticeable information. It is said that low target chief executive officer share ownership, low fractions of inside directors, and the presence of large outside blockholders, is positively correlated with takeover premiums in 1990s friendly takeovers. By contrast, studies of takeovers in the hostile environment of the 1980s have shown a negative relation between target shareholder control and takeover premiums. (Moeller, 2005) There's evidence that high merger premiums paid are unlikely to be responsible for acquirers' long-run post merger underperformance but positively correlated to the level of the premium paid by acquirer in the short run. (Antoniou, Arbour and Zhao, 2008)

Since the 1980s, the number of acquisition deals has increased as the use of investment bankers. Among their many strategic and financial advisory roles, investment bankers negotiate acquisition premiums. Studies have found support for agency conflicts between acquirers and their bankers, resulting in bankers being associated with acquirers' payments of higher acquisition premiums. Findings indicated that the presence of acquirers' bankers along with transaction-specific attributes can influence acquisition premiums. (Porrini, 2006)

By reviewing their bid contents and their performances, past literatures find that since the same bidder chooses different types of targets and methods of payment, any variation in returns must be due to the characteristics of the target and the bid. Results imply bidder shareholders gain when buying a private firm or subsidiary but lose when purchasing a public firm. Further, the return is greater the larger the target and if the bidder offers stock. These results are consistent with a liquidity discount, and tax and control effects in this market. (Fuller, Netter and Stegemoller, 2002) On the contrary side, another research suggests in the short-run, bidders break even when acquiring public targets and gain significantly when buying private and subsidiary targets. This result is robust after controlling for relative size, bidder's book-to-market ratio, target origin, and industry diversification. The long-run evidence, however, reveals that acquirers experience, significant wealth losses regardless of the target type acquired, indicating that markets may initially overreact to the acquisition announcement. (Antonios, Petmezas and Zhao, 2007)

2.4 Acquirer attributes

Scholars employ corporate takeover decisions to investigate the impact of institutional ownership on corporate performance. The OLS regressions of bidder gains on institutional ownership indicate a positive relation between the two. Findings do not find any evidence that active institutional investors as a group enhance efficiency in the market for corporate control.

These findings cast doubt on the superior selection monitoring abilities of institutional investors. (Duggal and Millar, 1999) Moreover, previous studies investigated that whether financial buyers are more likely to initiate takeovers of inefficient firms. Results show that they indeed are and thus conclude that takeovers by financial buyers play a potentially beneficial role in the allocation of corporate assets in the U.S. economy. (Frydman, Frydman and Trimbath, 2002)

III. Sample Selection and Descriptive Statistics

3.1 Sample selection

The study covers hostile takeover events that were announced between January 1980 and December 2007. The subjects in this research are the acquirers in these events. During this period, there was a significant increase in the frequency of mergers and acquisitions that were opposed by boards of directors and management. When a company was merged or acquired in such circumstances it was said to be the victim of a hostile takeover. This occurred when an individual or an organization (known as the "bidder" or "raider") acquired, or gained control of, a sufficient number of the shares of a public company (the "target") to be able to force a particular course of action.

The initial sample was obtained from the Securities Data Corporation (SDC) Mergers and Acquisitions database. Besides, the stock price and contemporary market index information are collected from the Center for Research in Securities Price (CRSP) and Thomson Datastream, respectively. A transaction is included in the sample if it satisfies the following criteria:

1. The mergers are successfully completed.

2. The announcement date of the merger is available on SDC.

3. Among the succeeded events, acquirers who are white knights or hostile bidders are included as the observations in this research.

4. The stock prices for both acquirers and targets are all exist.

5. The deal structure information (share holdings, payment method, and initial bidding price) could be found in the SDC database.

6. The investor characteristics (industry, country, and investor type) are all available for all acquirers.

SDC contains 323 acquirers that satisfy the above six conditions. Furthermore, I divide these acquirers into three groups by the criterions of their positions in the hostile takeover events:

Group	Definition
G1	Succeeded white knights in the hostile takeover events constitute this group; in other words, at first target management must initially reject the unsolicited bid of a hostile bidder, and then the white knight's bid is subsequent to the announcement of a hostile bid to successfully acquire control right of the target.
G2	Succeeded hostile bidders with white knights' existence make up this group; that is, target management initially reject the unsolicited bid of a hostile bidder, and the adoptions of white knight still fails to defeat the hostile bidder. Finally, hostile bidders successfully gain control over the target firms.

G3	This group is composed of succeeded hostile bidders without white knights' existence; target management initially rejects the unwelcomed bid of a hostile bidder and does not use the white knight device to protect firm from taking over. Finally, the hostile bidder wins the control right of target without facing white knight's competition.

(The indicator of hostility is the SDC measure of hostility. A bid is characterized as hostile by SDC if the takeover bid is unsolicited by target management. All other bids are characterized as friendly by SDC. Mørck et al. (1988) find that the motives for a takeover of US fortune 500 companies often determine its mood. Using a measure of hostility similar to the SDC measure, they find that the motive for hostile takeovers is to discipline non-value maximizing target mangers, whereas the motive for friendly takeovers is to capture potential synergies from merging two companies. However, Schwert (2000), using a sample of 2346 US exchange-listed takeovers, finds that friendly and hostile bids classified according to the SDC criteria are indistinguishable in economic terms. Furthermore, he finds that strategic bargaining, rather than non-value maximizing behavior by target management, is the motivation for hostility. Schwert argues that bid resistance is a bargaining tool that is used by target management to improve the terms of the takeover for their shareholders. In response, there's also study (Maheswaran and Pinder, 2005) constructing a second measure of hostility that is based on both the SDC flag for hostility and the target directors' final bid recommendation. If a bid is characterized as hostile by SDC and target directors recommend that the bid be rejected, the target is deemed to have maintained its hostility and the bid is classified as hostile. Therefore, unlike the SDC measure of hostility, which only captures the initial mood of the takeover, the maintained/non-maintained hostility measure captures the effective resistance of target management over the bid process.)

By classifying the initial sample into three groups, the comparisons of some meaningful aspects between them will be clearer based on their special characteristics.

3.2 Descriptive statistics

Table 1 presents the distribution of the sample by country and year, conditional on the character of acquirers. Panel A of Table 1 presents the country distribution of the sample. In group 1, the largest concentrations of acquirers are in United States and Canada; in group 2, acquirers of United States and United Kingdom become the most; the largest share of the group 3 acquirers are in United States and Australia. Note that sample in United States are much easily obtained due to data availability, with 64.3%, 60.5% and 53.5% of the sample, respectively. Besides, white knight adoption was once popular used by US firms as an effective device rejecting unsolicited bids. Panel B exhibit the time series distribution of the sample. It indicates that the white knights appeared prosperously in the bottom half of 1980s, which are subsequent to the proliferation of hostile takeover activities beginning in the top half of 1980s. On the contrary, the hostile takeover activities still lively in the 1990s, but it seems that target firms no longer that much prefer to adopt white knight device defeating the hostile bids.

Table 1

Panel A. Sample Distribution by Country

Country	Group1		Group2		Group3	
	Sample size	Percentage	Sample size	Percentage	Sample size	Percentage
Australia	3	0.043	2	0.053	33	0.153
Austria	0	0.000	0	0.000	1	0.005
Belgium	0	0.000	1	0.026	1	0.005
Bermuda	3	0.043	0	0.000	0	0.000
Brazil	0	0.000	0	0.000	1	0.005
Canada	7	0.100	3	0.079	13	0.060
France	1	0.014	1	0.026	3	0.014
Germany	1	0.014	0	0.000	1	0.005
Hong Kong	1	0.014	0	0.000	0	0.000
Ireland-Rep	0	0.000	0	0.000	3	0.014
Italy	0	0.000	0	0.000	1	0.005
Japan	3	0.043	0	0.000	3	0.014
Luxembourg	0	0.000	1	0.026	0	0.000
Malaysia	0	0.000	0	0.000	1	0.005
Netherlands	2	0.029	0	0.000	3	0.014
New Zealand	0	0.000	0	0.000	3	0.014
Norway	0	0.000	0	0.000	1	0.005
Portugal	0	0.000	0	0.000	1	0.005
South Africa	0	0.000	0	0.000	1	0.005
Spain	0	0.000	0	0.000	1	0.005
Sweden	1	0.014	1	0.026	4	0.019
Switzerland	1	0.014	0	0.000	1	0.005
United Kingdom	2	0.029	6	0.158	24	0.112
United States	45	0.643	23	0.605	115	0.535
Total	70	1.000	38	1.000	215	1.000

Panel B. Sample Distribution by Year

Year	Group1		Group2		Group3	
	Sample size	Percentage	Sample size	Percentage	Sample size	Percentage
1980	0	0.000	0	0.000	0	0.000
1981	0	0.000	0	0.000	10	0.047
1982	0	0.000	0	0.000	6	0.028
1983	0	0.000	1	0.026	7	0.033
1984	0	0.000	0	0.000	4	0.019
1985	7	0.100	4	0.105	6	0.028
1986	4	0.057	3	0.079	10	0.047
1987	7	0.100	3	0.079	12	0.056
1988	10	0.143	10	0.263	12	0.056
1989	7	0.100	2	0.053	9	0.042
1990	1	0.014	1	0.026	1	0.005
1991	0	0.000	0	0.000	1	0.005
1992	0	0.000	0	0.000	6	0.028
1993	0	0.000	0	0.000	5	0.023
1994	0	0.000	2	0.053	11	0.051
1995	4	0.057	3	0.079	19	0.088
1996	1	0.014	2	0.053	18	0.084
1997	6	0.086	1	0.026	10	0.047
1998	8	0.114	0	0.000	12	0.056
1999	1	0.014	0	0.000	17	0.079
2000	8	0.114	2	0.053	6	0.028
2001	1	0.014	0	0.000	3	0.014
2002	0	0.000	1	0.026	3	0.014
2003	0	0.000	1	0.026	3	0.014
2004	0	0.000	0	0.000	5	0.023
2005	2	0.029	1	0.026	11	0.051
2006	3	0.043	1	0.026	5	0.023
2007	0	0.000	0	0.000	3	0.014
Total	70	1.000	38	1.000	215	1.000

This table summarizes country and time series distributions of the 323 acquirer samples within a 28-year period from January 1980 to December 2007. The samples are classified as three groups: Group 1 represents succeeded white knights; Group 2 is composed of succeeded hostile bidders in events with white knights' existence; Group 3 is constituted by succeeded hostile bidders in events without white knights' existence. The samples are collected from SDC on the criterions that deal structures, deal characteristics and returns are all available in SDC, Datastream or CRSP. Penal A presents country distributions of all samples and Panel B exhibit time series data.

Table 2 presents descriptive statistics of the sample. Panel A demonstrate the patterns of the *deal structures* of the three groups. There are several items contained in *deal structures*: *Average share holdings* represent the percentages of outstanding shares acquired by succeeded acquirers. *Premium* could be obtained by dividing the difference between the initial bid price and the target market price 5 day prior to the announcement by the target price 5 day prior to the announcement. I use market price a few days before the announcement date in order to avoid information leakages destroy true market values. I use ratios to demonstrate them with the intent to avoid currency confusions. In addition, the derivation technique is similar to what Porrini (2006) used in his research, but the only divergence is the base date selected. *Bidding price differences between white knights and hostile bidders* only has meaning when reviewing deal structure patterns of group 1. It could be computed by subtracting hostile acquirers' bidding price from the bidding price submitted by white knights and then divided this difference by hostile acquirers' bidding price. Here I use ratios for the same considerations as the premiums discussed above. *Average percentage of each payment method* means the percentage of each payment method used by the succeeded acquirers in one deal event; there are three types of consideration structures in this research, which are cash, stock and others, respectively. The *other* classification includes all option-linked instruments, such as convertible bonds or warrants. By summarizing features of deal structures demonstrated by each group, it provides further directions of study from these discoveries.

First, succeeded white knight gained almost 100% of the outstanding shares of targets, which is consistent to the implications of managerial entrenchment theory. Incumbent

executives generally desire to protect their positions by reducing the likelihood that any

takeover approach will proceed to completion, and they strive for grabbing as many shares as

possible when facing challenges from hostile bidders. By negotiating with white knights,

management teams might achieve such a selfish-toward goal more quickly. Second,

succeeded acquirers in this research use cash as the main payment method to complete the

deal regardless of the acquirers are white knights or hostile bidders. Note that succeeded

hostile bidders with white knights' existence (Group 2) employ *Other* payments much more

than the remaining two groups. There's conjecture that when white knights are also present in

the bidding competitions, hostile bidders could use this unique consideration structure to get

the final success, with 29.50% in this category. In contrast, *Other* payment might not be

popular option to white knights, with only poor 7.39% in group 1. With regard to the

premiums paid by acquirers, there's surprising the highest ratio in the hostile bidders without

white knights' existence classification (Group 3), by contrast white knights do not benefit

shareholders, because they pay the least to the shareholders. Consistent with the previous

guess, the introduction of white knights to the arena of acquisitions is just the reflection of

managerial entrenchment hypothesis.

   Panel B provides ***deal characteristics*** of the acquisition events in this research. First,

Shelton (1988) writes that 'value is created when the assets are used more effectively by the

combined entity than by the target and bidder separately' and finds that M&A that enable the

bidder to access new but related markets create the most value with the least variance.

Furthermore, diversifying mergers may possibly be driven by management overconfidence as

managers may overestimate their expertise in unrelated target firm industries. Maquiera et al.

(1998) back the idea that corporate

diversification strategies destroy value. Here *Focus* represents that the acquirers and targets

are in the same industry whereas *Diversified* represents the opposite. Second, it is usually said

that the performances of cross border acquisitions are worse than domestic acquisitions. Stock

returns and operating performances are negatively associated with an increase in both global and industrial diversification. (Moeller and Schlingemann, 2005) The *Domestic* indicates the acquirers and their targets are in the same country whereas *International* indicates the targets locate abroad. Third, because of the unique participations of financial buyers in the acquisition markets, it's worth analyzing if this characteristic affecting their returns. The category of *Financial buyers* includes investment bankers plus private investors. On the other hand, *Corporate buyer* means acquirers from all industries except financial industry. ***Deal characteristics*** could be viewed as control variables in this research, because they are factors affecting returns of buyers besides deal structures, which are main topics discussed in the following sections.

Look at the industry distribution patterns in this sample. Among the three groups, acquisitions happen almost equally in both intra-industry and inter-industry. It seems that the industry factor is not as important as originally imagined relating to success in hostile takeover events. Then note that the country distribution is a bit more interesting. In all three groups, successful acquirers in hostile takeover events usually completed domestically, which is consistent with the results from previous research. To apply this in my research, it suggests that it's not worthwhile for white knights to rescue targets located abroad or it's not effective for buyers to precede hostile takeovers across nations. Finally, there's strongly diverse in the distributions of acquirers' investment type. Financial buyers are far less than corporate buyers; nevertheless, this huge difference is partly due to data availability of financial buyers, because some of whom are private investors.

Table 2   Descriptive Statistics

	Group1	Group2	Group3
Panel A			
Deal Structure			
Average share holding	95.57%	89.89%	77.61%
Premium	0.15	0.32	0.51
Bidding price differences between white knights and hostile bidders	0.14	none	none
Average percentage of each payment method			
cash	71.30%	57.59%	69.01%
other	7.39%	29.50%	14.66%
stock	21.30%	12.88%	15.52%
Panel B			
Deal Characteristics			
Industry			
Focused	36/70	20/38	109/215
Diversified	34/70	18/38	106/215
Country			
International	14/70	6/38	39/215
Domestic	56/70	32/38	176/215
Investor Type			
Corporate buyer	66/70	32/38	208/215
Financial buyer	4/70	6/38	7/215

This table reports deal structures and deal characteristics for the sample. The sample comprises 323 takeovers that were announced over the 1980 to 2007 period. Panel A presents deal characteristics. *Average share holdings* represent the percentages of outstanding shares acquired by succeeded acquirers. *Premium* could be obtained by dividing the difference between the initial bid price and the target market price 5 day prior to the announcement by the target price 5 day prior to the announcement. *Bidding price differences between white knights and hostile bidders* could be computed by subtracting hostile acquirers' bidding price from the bidding price submitted by white knights and then divided this difference by hostile acquirers' bidding price. *Average percentage of each payment method* means the percentage of each payment method used by the succeeded acquirers in one deal event. Panel B presents deal characteristics. There're three classifications in Panel B. *Industry*: *Focus* represents that the acquirers and targets are in the same industry whereas *Diversified* represents the opposite; *Country*: *Domestic* indicates the acquirers and their targets are in the same country whereas *International* indicates the targets locate abroad; *Investor type*: *Corporate buyer* means acquirers from all industries except financial industry and *Financial buyers* includes investment bankers plus private investors.

IV. Methodology and Empirical Results Discussion

When an acquisition is announced, a considerable amount of information is revealed about the potential transaction, and this information can be used to assess the stock market reaction to an acquisition announcement. If the announcement effects are significant, shareholders' wealth might change. Besides, deal structures contain implications that provide manifestations of the hypothesis discussed in this research, which are shareholders interest hypothesis and managerial entrenchment hypothesis, respectively. If there're significant differences in deal structures of the groups, then further research could be done for trying to construct an appropriate model based on the relationship between announcement effects and deal structures of each group. Finally, this research also provides special topics of attributes of acquirers. It would be interesting to scrutinize if differences in deal structures partly result from financial buyers' participations in acquisition markets. I focus on several issues in this research:

(1) Determine whether average abnormal returns of each groups are significantly different from zero.

(2) Compare average abnormal return of the three groups to observe the patterns of shareholders' wealth effect changes.

(3) Do comparisons among deal structures of the three groups to see if there exist significant differences.

(4) Use regression model to fit the relationships between deal structures and average abnormal returns, controlled by some deal characteristics in events.

(5) Analyze if financial buyers' characteristics affect the deal structures appeared in their acquisitions.

4.1 Announcement effect between groups

To evaluate the economical substance of shareholders' wealth effect in hostile takeover events, I estimate daily abnormal return for each targets over 3 and 5 days centered on the bid announcement date, [-1,1] and [-2,2] using the modified market model, where the market return is represented by the return on World-Datastream Market price index. The parameters in market model are estimated using the estimation window [-150,-50]. I choose this event window to capture the entire wealth effect to acquirer shareholders.

Table 3 presents the share price performance results over different event windows and groups. It also provides between-group comparisons. The left half of Table 3 shows means of the cumulated average abnormal returns of the sample over groups and different time intervals. Cumulated average abnormal returns are all significantly negative regardless of which group is examined, which are tested by *two-sided t test* under the hypothesis that the mean equals zero. Moreover, I conduct equality tests of the mean (*single factor ANOVA*) to determine whether returns obtained by these groups are statistically different (The fifth column shows that p-value is 0.875 for [-1,1] and 0.995 for [-2,2].) The results suggest that white knights not only be unable to create wealth for shareholders but also do not make any prominent difference from what hostile bidders experience. This is consistent with the managerial entrenchment hypothesis, that is, the white knight adoptions are indeed devices at discretions of the managerial team which neglects shareholders' interest and agency problems might be concerns.

The right half of Table 3 exhibits between-group comparisons of CAAR. I employ Tukey's HSD to accomplish this multiple comparisons because of equality of variance in CAARs. From the table demonstrated above, I found that the between-group comparisons are all insignificantly different. In addition, the mean differences are all negative except the *Difference (G1-G2)* at [-1,1] time interval, which means that white knights' shareholders actually experience the most negative returns compared with that of the hostile bidders, albeit

insignificantly. This result at least does not support shareholders interest hypothesis. The implications of these comparisons are as follows:

(1) G_{12} : The comparison between white knight and hostile bidder under the circumstances that white knights join the bidding competitions

(2) G_{23}: The comparison between hostile bidders between the circumstances that are with and without white knights' existence

(3) G_{13}: The comparison between succeeded white knight and succeeded hostile bidder

Table 3   Analysis of CAAR

Time interval	Mean of CAAR				Difference between groups		
	G1	G2	G3	F-statistics	G_{12}	G_{23}	G_{13}
[-1,1]	-0.0547	-0.0551	-0.0259	0.133	0.00036	-0.02917	-0.02882
	(0.000)***	(0.000)***	(0.000)***	(.875)	(1.000)	(0.935)	(0.899)
[-2,2]	-0.0570	-0.0488	-0.0482	0.005	-0.00825	-0.00062	-.00887
	(0.000)***	(0.000)***	(0.000)***	(.995)	(0.998)	(1.000)	(0.995)

Cumulative average abnormal returns are calculated for the three [-1,1] and five days [-2,2] around the announcement (day 0) of a takeover. Abnormal returns are estimated using a modified market model:

$$AR_{it} = R_{it} - R_{mt},$$

where R_{it} is the day t return on acquirer i and R_{mt} is the return on World-Datastream Market price index. The parameters in market model are estimated using the estimation window [-150,-50]. The left half of this table shows equality tests of the mean (single factor ANOVA) determining whether returns obtained by these groups are statistically different. The right half of this table shows between-group comparisons of CAAR, using Tukey's HSD to accomplish this because of equality of variance in CAARs.

P-values of statistics are reported in parentheses.

*, **, and *** denote significance at the 1%, 5%, and 10% levels, respectively.

4.2 Deal structures comparisons

Table 4 presents means of share holdings and premiums of the sample over groups and different deal structure items. Moreover, I conduct equality tests of the mean (*single factor ANOVA*) to determine whether deal structures of these groups are statistically different. First let's look at the share holdings of the sample. Among the three groups, there're strongly significant differences between groups. In order to get more details from this significant outcome, I further conduct multiple comparisons using Dunnett's T3 because of inequality of variance in deal structures.

Table 4   Analysis of deal structures

Deal structure	Mean				Difference between groups		
	G1	G2	G3	F-statistics	G_{12}	G_{23}	G_{13}
Share holdings	97.57%	89.89%	77.61%	15.785 (.000)***	7.68% (0.003)***	12.28% (0.000)***	19.95% (0.000)***
Premiums	0.155	0.319	0.511	2.961 (.053)*	-0.164 (0.170)	-0.193 (0.296)	-0.356 (0.001)***

This table describes means of share holdings and premiums of the sample over groups and different deal structure items. The left half of this table shows equality tests of the mean (single factor ANOVA) determining whether deal structures demonstrated by these groups are statistically different. The right half of this table shows between-group comparisons of deal structures, using Dunnett's T3 because of inequality of variance in deal structures.

P-values of statistics are reported in parentheses.

*, **, and *** denote significance at the 1%, 5%, and 10% levels, respectively.

By observing the right half of the table, I could easily find that the mean differences are all significantly positive at the 1% significant level. (p-value is 0.003 for *Difference (G1-G2)*, <0.001 for *Difference (G2-G3)* and <0.001 for *Difference (G1-G3)*.) The data description in the previous part has shown that the share holdings obtained by white knights (Group 1) is the highest among the three groups. The statistical tests in this part further provide the fact that

it's not only the highest but very significant. This result is consistent with the implications of managerial entrenchment hypothesis, suggesting that by introducing white knights into the acquisition competition, managers could effectively protect their positions from taken over by unsolicited acquirers. The *Difference (G2-G3)* is significant at the 1% level, too. It suggests that hostile bidders put more effort in grabbing as many shares as possible when facing challenges from white knights. Finally, the significance demonstrated by The *Difference (G1-G3)* tells that white knights generally gain far more shares in takeover activities, probably because they are invited with the advantages that they possess inside information and targets' formal consent. Second, let's turn to premiums of the sample. When proceeding three groups test of equality of means, here shows significant difference at 10% level, nearly 5%. Then after reviewing the differences between groups of premiums, I got the outcome that they mainly result from *Difference (G1-G3)*, with the p-value 0.001, representing that white knights pay far less than what hostile bidders pay. Though *Difference (G1-G2)* and *Difference (G2-G3)* do not diverse too much, the mean differences are indeed all negative. White knights' bids are the least among three groups, so shareholders could not benefit from adopting white knight device to defeat hostile bidders in the view of premiums got. It contracts with the spirits of shareholders interest hypothesis.

4.3 Multivariate results

To determine the impact of design of deal structures on cumulative average abnormal returns (CAARs), hereby I develop a regression model for returns of each group. Besides, I have extended the original regression models to simultaneously control for deal characteristics that might affect acquirers' returns. The cumulative average abnormal returns for the [-1,1] and [-2,2] period surrounding the announcement day are the dependent variable in each regression model. Model (1) concerns the relationship between cumulated average abnormal

return and deal structures. Independent variables in Model (1) are as follows: *Share holdings*, the percentages of outstanding shares acquired by succeeded acquirers; *Premiums*, the ratio of the difference between the initial bid price and the target market price 5 day prior to the announcement to the target price 5 day prior to the announcement; *Bidding price difference*, the ratio of the difference between the bidding price submitted by white knights and hostile acquirer's bidding price to hostile acquirer's bidding price. *Cash*, *Other*, and *Stock* are all dummy variables which present 1 if acquirers use one of them as the sole payment method in an event, respectively; if acquirers use mix of them as the consideration structure, then I'll put 0 to all of these three variables. Model (2) adds deal characteristics as the control variables for the original model which interprets acquirers' return only by patterns of deal structures. I express these deal characteristics using dummy variables: *Industry*, with a value of 1 if targets and acquirers are in the same industry, or 0 otherwise; *Country*, with a value of 1 if targets and acquirers are in different countries, or 0 otherwise; *Investor type*, with a value of 1 if acquirer is corporate buyer, and 0 indicates financial buyer. The regression models are expressed as follows:

Model (1): $CAAR = \beta_0 + \beta_i * deal\ structure_i + \varepsilon_i$

Model (2): $CAAR = \beta_0 + \beta_i * deal\ structure_i + \gamma_j * deal\ characteristic_j + \varepsilon_{ij}$

As reported in Table 5, deal structure and deal characteristics together do not explain the returns of Group1 and Group 3 well in the view of the low R-squared obtained, nor does any independent variable shows a little significance even at the level of 10%. It suggests that deal structures might not as significantly as imagined to explain CAARs, albeit the deal structures are strongly diverse among these groups. After adding deal characteristics to the regression model, the explanation capability still does not improve too much, with increased R-squared ranges from 0.006 to 0.029 across time intervals and groups. Things would have been

changed if moving eyes onto results of Group 2. When considering time interval of [-2,2] in

Model (1), the *Other* variable is significant at 10% level with a negative sign, which

represents if hostile bidders face competitions from white knights, the sole option-linked

payment would decrease their returns, but in a moderate degree (p-value is 0.098). It seems a

little strange that descriptive statistics of Group 2 show acquirers in this category prefer to use

Other payment particularly, there 's conjecture that they probably make somewhat tradeoff

between success likelihood in takeover event and returns. When considering deal

characteristics, I found that the cross-border acquisition deteriorate returns obtained regardless

of what time interval used, with p-value 0.099 for [-1,1] and 0.023 for [-2,2]. Since Group 2 is

composed of hostile bidders entering acquisitions that the targets adopt white knight devise to

defeat them, the outcome from the regression indicates that it's not wise for hostile bidders to

execute takeover action abroad when target firm managers try to introduce white knight to

this competition. In addition, the *Investor type* also exhibits significance at 10% level in

[-1,1] time interval with a positive sign (p-value is 0.091). It implies that corporate buyers

have the advantage in pursuing hostile takeovers even with white knights' existence. The goal

of this research provides insights into deal structures and characteristics in hostile takeover

events in determining returns.

Table 5   Regression analysis

	Model (1)		Model (2)	
Panel A: Group1	CAAR[-1,1]	CAAR[-2,2]	CAAR[-1,1]	CAAR[-2,2]
Intercept	0.004	0.057	0.198	0.332
	(0.993)	(0.925)	(0.747)	(0.624)
Share holding	-0.002	-0.003	-0.002	-0.002
	(0.705)	(0.645)	(0.787)	(0.714)
Premium	0.015	0.027	0.008	0.005
	(0.958)	(0.931)	(0.979)	(0.988)
Bidding price difference	0.090	0.158	0.034	0.108
	(0.815)	(0.713)	(0.934)	(0.815)
Cash	0.183	0.204	0.164	0.182
	(0.160)	(0.156)	(0.220)	(0.216)
Other	0.173	0.298	0.204	0.364
	(0.703)	(0.553)	(0.677)	(0.500)
Stock	0.150	0.068	0.144	0.062
	(0.389)	(0.724)	(0.418)	(0.749)
Industry			-0.084	-0.107
			(0.438)	(0.369)
Country			0.022	0.003
			(0.884)	(0.984)
Investor type			-0.198	-0.261
			(0.387)	(0.301)
R-squared	0.043	0.051	0.065	0.080
F statistics	0.470	0.564	0.461	0.583
p-value	0.828	0.757	0.895	0.806
Increased R-squared	none	none	0.022	0.029
Panel B: Group2				
Intercept	0.409	1.189	0.544	2.112*
	(0.544)	(0.274)	(0.442)	(0.061)
Share holding	-0.002	-0.009	-0.008	-0.021
	(0.808)	(0.486)	(0.379)	(0.120)
Premium	-0.105	-0.173	0.085	0.096
	(0.554)	(0.541)	(0.677)	(0.761)
Cash	-0.292	-0.288	-0.211	-0.142
	(0.224)	(0.452)	(0.380)	(0.702)
Other	-0.318	-0.636*	-0.275	-0.572
	(0.182)	(0.098)	(0.242)	(0.121)
Stock	-0.222	-0.3	-0.248	-0.256
	(0.532)	(0.598)	(0.475)	(0.633)
Industry			-0.007	-0.105
			(0.968)	(0.702)
Country			-0.397*	-0.871**
			(0.099)	(0.023)
Investor type			0.389*	0.207
			(0.091)	(0.555)
R-squared	0.092	0.147	0.229	0.319
F statistics	0.649	1.105	1.079	1.700
p-value	0.664	0.377	0.405	0.141
Increased R-squared	none	none	0.137	0.172

Panel C: Group3

Intercept	0.105	0.156	0.183	0.26
	(0.424)	(0.408)	(0.428)	(0.433)
Share holding	0.000	-0.001	0.000	-0.002
	(0.408)	(0.353)	(0.417)	(0.339)
Premium	0.007	0.027	0.007	0.025
	(0.781)	(0.472)	(0.805)	(0.505)
Cash	-0.069	-0.135	-0.062	-0.133
	(0.471)	(0.329)	(0.523)	(0.345)
Other	-0.150	-0.140	-0.151	-0.144
	(0.246)	(0.452)	(0.245)	(0.441)
Stock	-0.024	-0.033	-0.034	-0.049
	(0.870)	(0.874)	(0.817)	(0.814)
Industry			0.067	0.107
			(0.341)	(0.292)
Country			-0.042	-0.017
			(0.650)	(0.900)
Investor type			-0.111	-0.154
			(0.570)	(0.585)
R-squared	0.010	0.012	0.016	0.018
F statistics	0.415	0.495	0.413	0.468
p-value	0.838	0.780	0.912	0.878
Increased R-squared	none	none	0.006	0.006

This table reports regression analysis of acquirer returns on variables for deal structures and deal characteristics. The cumulative average abnormal returns for the [-1,1] and [-2,2] period surrounding the announcement day are the dependent variable in each regression model. Model (1) concerns the relationship between cumulated average abnormal return and deal structures. Independent variables in Model (1) are as follows: *Share holdings*, the percentages of outstanding shares acquired by succeeded acquirers; *Premiums*, the ratio of the difference between the initial bid price and the target market price 5 day prior to the announcement to the target price 5 day prior to the announcement; *Bidding price difference*, the ratio of the difference between the bidding price submitted by white knights and hostile acquirer's bidding price to hostile acquirer's bidding price. *Cash*, *Other*, and *Stock* are all dummy variables which present 1 if acquirers use one of them as the sole payment method in an event, respectively; 0 for all of them if acquirers use mix of them as the consideration structure. Model (2) adds deal characteristics as the control variables for the original model. Deal characteristics are expressed using dummy variables: *Industry*, with a value of 1 if targets and acquirers are in the same industry, or 0 otherwise; *Country*, with a value of 1 if targets and acquirers are in different countries, or 0 otherwise; *Investor type*, with a value of 1 if acquirer is corporate buyer, and 0 indicates financial buyer.

The p-values of the regression coefficients are reported in parentheses.

*, **, and *** denote significance at the 1%, 5%, and 10% levels, respectively.

4.4 Endogeneity checks

Table 6   Two stage least square regressions

	Group 1		Group 2		Group 3	
	CAAR[-1,1]	CAAR[-2,2]	CAAR[-1,1]	CAAR[-2,2]	CAAR[-1,1]	CAAR[-2,2]
Model (3)						
Intercept	1.146	0.403	0.981	2.438	-0.646	-2.352
	(0.867)	(0.957)	(0.454)	(0.265)	(0.783)	(0.638)
Share holdings	-0.012	-0.005	0.012	-0.028	0.008	0.030
	(0.861)	(0.950)	(0.428)	(0.255)	(0.791)	(0.645)
R-squared	0.000	0.000	0.018	0.036	0.000	0.001
F statistics	0.031	0.004	0.642	1.336	0.070	0.213
p-value	0.861	0.950	0.428	0.255	0.791	0.645
Model (4)						
Intercept	0.204	0.270	0.055	0.184	0.200	0.319
	(0.750)	(0.725)	(0.679)	(0.409)	(0.696)	(0.692)
Premiums	-1.674	-2.114	-0.347	-0.732	-0.441	0.717
	(0.685)	(0.668)	(0.324)	(0.212)	(0.657)	(0.642)
R-squared	0.002	0.003	0.027	0.043	0.001	0.001
F statistics	0.166	0.185	1.001	1.617	0.198	0.211
p-value	0.685	0.668	0.324	0.212	0.657	0.646

P-values of statistics are reported in parentheses.

*, **, and *** denote significance at the 1%, 5%, and 10% levels, respectively.

Due to the fact that changes in share holdings and premiums tend to impact each other contemporaneously because they are demonstrated in the same acquisition event, in addition, the differences of deal structures of three groups are strongly significant, I also apply two-stage least squares (2SLS) to solve this potential simultaneous equation bias problem, thereby reducing the possibility of biased or inconsistent OLS coefficient estimates. In my study, I consider share holdings or premiums as endogenous variable and premiums or share holdings as instrumental variable of each other. Here I construct two sets of simultaneous equations as follows:

Model (3):

$CAAR = \beta_0 + \beta_i * Share\ holdings + \varepsilon_i$

$Share\ holdings = \beta_0 + \beta_i * premiums + \varepsilon_i$

Model (4):

$CAAR = \beta_0 + \beta_i * premiums + \varepsilon_i$

$Premiums = \beta_0 + \beta_i * Share\ holdings + \varepsilon_i$

Model (3) presents the relationship between CAAR and share holdings, and I choose premiums as the instrumental variable for interpreting share holdings. Model (4) interchanges the independent variable and instrumental variable of Model (3), that is, it presents the relationship between CAAR and premiums, choosing share holdings as the instrumental variable for interpreting premiums. The results are showed in Table 6. I found that regardless of which time interval and group are examined, all of the coefficients in these models are not significant. In short, deal structures are not so qualified for variables of CAAR models.

4.5   Special topics for acquirer attribute

The purpose of this section is to provide insights into acquirers attribute by proceeding similar test as that for three groups in previous section but further divide these three groups on the criterion of investor type. Note that here I may introduce nonparametric statistical tests because of the scarce sample of financial buyers. As defined in previous section, the category of *Financial buyers* includes investment bankers plus private investors. On the other hand, *Corporate buyer* means acquirers from all industries except financial industry. Table 7 presents means of share holdings and premiums of the sample over groups and different deal

structure items and further divide these three groups on the criterion of investor type. To

compare deal structures of *Corporate buyers* to that of *Financial buyers*, I also employ

independent-samples T test to accomplish this task. By viewing Table 7 vertically, it indicates

that the deal structures demonstrated by these two groups do not significantly diverse. In short,

acquirer attribute does not have impacts on deal structures. When viewing Table 7

horizontally, it presents equality tests of the mean to determine whether deal structures of

these groups are statistically different, using one-factor ANOVA for *Corporate buyers* and

Kruskal Wallis test for *Financial buyers*. The results are demonstrated in the left half of Table

7.

   First let's look at the share holdings of the sample. Among the three groups, there're

strongly significant differences between groups for both *Corporate buyers* and *Financial

buyers*, with p-values <0.001 and 0.039, respectively. However, they do not inform the facts

that which groups that make the difference. Therefore I further conduct multiple comparison

methods which are designed to discover the groups that make the difference, using Dunnett's

T3 for *Corporate buyers* because of inequality of variance in deal structures and both

Mann-Whitney and Wilcoxon tests for *Financial buyers*, which are demonstrated in the right

half of Table 7. When considering only *Corporate buyers*, all of the combinations are

significantly different at 1% level, with p-values are as follows: 0.01 for *Difference (G1-G2)*,

0.001 for *Difference (G2-G3)* and <0.001 for *Difference (G1-G3)*, respectively. The results

are similar with the between-group comparisons without sample partition based on acquirer

attribute. When concerning *Financial buyers*, *Difference (G1-G2)* and *Difference (G1-G3)* are

still significant under 1% and 10% level, but *Difference (G2-G3)* is not significant anymore. It

implies that whether hostile bidders are challenged by white knights do not affect their efforts

put to acquire shares of target firms. Financial hostile buyers might concerns more on

profitability than control rights in target firms. Nevertheless, white knights still gain the most

shares among acquirers in hostile takeover events, which is again correspond with the

implications of managerial entrenchment hypothesis, while profitability is the main concern

for *Financial buyers*.

Table 7   Analysis of deal structures across investor types

Deal structure	Mean					Difference between groups		
	Full sample	G1	G2	G3	F-statistics (or Chi-square)	G_{12}	G_{23}	G_{13}
Share holdings								
Corporate Buyer	83.16%	97.42%	89.58%	77.64%	14.162 (0.000)***	7.84% (0.010)***	11.94% (0.001)***	19.78% (0.000)***
Financial Buyer	87.47%	100.00%	91.55%	76.81%	6.492 (0.039)**	8.45% (0.010)***	14.74% (0.945)	23.19% (0.073)*
Difference	-4.31% (0.539)	-2.58% (0.641)	-1.97% (0.707)	0.83% (0.947)				
Premiums								
Corporate Buyer	0.402	0.155	0.270	0.501	2.664* (0.071)	-0.115 (0.484)	-0.231 (0.181)	-0.346 (0.001)***
Financial Buyer	0.578	0.155	0.579	0.819	3.647 (0.161)	-0.424 (0.257)	-0.240 (0.366)	-0.664 (0.109)
Difference	-0.176 (0.522)	-0.000 (0.998)	-0.309 (0.163)	-0.319 (0.530)				

These tables describes means of share holdings and premiums of the sample over groups and different deal structure items
and further divide these three groups on the criterion of investor type. To compare deal structures of *Corporate buyers* to that
of *Financial buyers*, independent-samples T test is employed; results could be read from viewing the left half of this table
vertically. The left half of this table shows equality tests of the mean (single factor ANOVA for Corporate buyers; Kruskal
Wallis test for *Financial buyers*.) determining whether deal structures demonstrated by these groups are statistically different.
The right half of this table shows between-group comparisons of deal structures, using Dunnett's T3 for *Corporate buyers*
because of inequality of variance in deal structures and both Mann-Whitney and Wilcoxon tests for *Financial buyers*.
P-values of statistics are reported in parentheses.
*, **, and *** denote significance at the 1%, 5%, and 10% levels, respectively.

Second, premium of the sample is another consideration when samples are sorted by their

investment traits. The test of equality of means between groups for Corporate buyers is still significant under 10% level (p-value is 0.071), but for Financial buyers is now not at all (p-value is 0.161). When considering only *Corporate buyers*, the outcomes showed in the table resembles with what have obtained in previous section, which presents significant mean difference in premiums paid by Group 1 and Group 3. Corporate white knights pays the least compared with that of hostile bidders. Shareholders' benefit in the view of stock returns does not advance because of the introduction of white knights by managers. *Financial buyers* tell another entirely distinct story about premiums. All of the mean differences are not significant. It's a conventional reflection of financial buyers' investment attribute. Albeit white knight yet pays the least among these three groups when only considering *Financial buyers*, the degree of the divergence is not that obvious due to the primary investment concern raised by them, profitability after all. It makes no difference for shareholders to accept white knights or hostile bidders in a hostile bidding competition.

V.   Conclusions

This research documents for a global sample of hostile acquisitions, completed by white knights, hostile bidders with white knights' existence, or hostile bidders without white knights' existence, and this research do every analysis based on these three designed groups. To explore the effects of their participations in bidding competitions on shareholders' wealth, this research introduce two completing hypothesis, shareholders interest hypothesis and managerial entrenchment hypothesis, as the main subjects. Succeeded acquirers of all of the groups experienced strongly significant negative average abnormal returns around the announcement date, and the returns do not show any considerable differences between groups, which suggests that white knight does not benefit shareholders in the view of stock returns gained, and it at least does not support shareholders interest hypothesis.

Deal structure is another issue for manifestation of the two hypotheses. If the contents of a deal demonstrate high shareholdings while experiencing negative announcement returns, then it conforms managerial entrenchment hypothesis, because incumbent managers exchange the shareholders' wealth for the advantages of ensuring their positions from not being taken over from unsolicited biddings; otherwise, if the contents of a deal demonstrate high premiums while experiencing positive announcement returns, then it conforms shareholders interest hypothesis, for shareholders benefit from favors from the acquirers. This research provides that fact that white knight adoptions do not make any advances in shareholders' wealth at all, and these actions are just the reflection of hubris and selfishness of managers. The group which consists of only white knights in this research not only gains the most shareholdings but also pays the least premiums among other acquirers in hostile takeover events while their returns are significantly negative as well as do not diverse from that of others. Besides, it's interesting to mention that the existence of white knights has substantially positive effects on the efforts put by hostile bidders to acquire target firms' outstanding shares.

Since deal structures are essentially distinct between groups, this research also conducts regression analysis to try to construct a model to describe the relationships between acquirers' announcement effects and their deal structures. It is surprised that deal structures do not explain the returns experienced by the three groups adequately. There's only moderate relationship between hostile bidders' returns and the indicator of the national sameness under the circumstance that white knight also be in the bidding competition. It suggests that it's not wise for hostile bidders to execute takeover action abroad when target firm managers try to introduce white knight to this competition. In short, deal structures might not as significantly as imagined to explain CAARs, but they constitute a core area for manifestation of the competing two hypotheses.

Finally, this research provide insights into acquirers attribute by proceeding similar test as that for three groups but further divide these three groups on the criterion of investor type.

Whether hostile bidders are competing white knights do not affect their efforts put to acquire shares of target firms. financial hostile buyers might concerns more on profitability than control rights in target firms. Nevertheless, financial white knights still gain the most shares among acquirers in hostile takeover events, which are consistent with the implications of managerial entrenchment hypothesis, while profitability is eventually the main concern for financial buyers. Although white knight yet pays the least among these three groups when only considering financial buyers, the degree of the divergence is not significant anymore due to profitability concerns. It makes no difference for shareholders to accept white knights or hostile bidders in a hostile bidding competition. Generally, results of corporate buyers are almost identical with the pure comparisons of the original three groups.
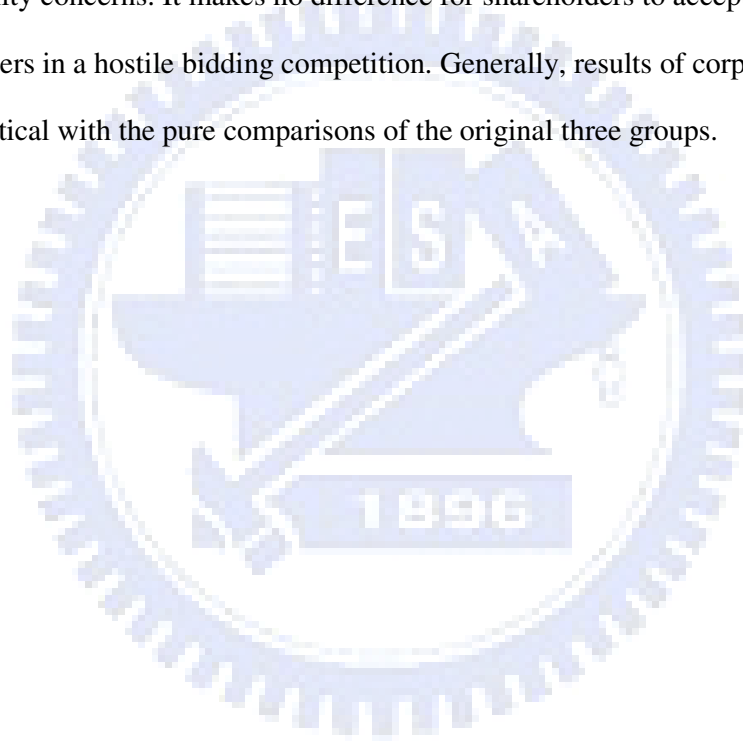
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