

The Bargaining Power of Target Firms and the Stock Market Response: Evidence from a Natural Experiment

Hang Li, Nicholas F. Carline, and Hisham Farag*

Birmingham Business School, University of Birmingham, Birmingham B15 2TY, UK

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Abstract

We examine the effect of the alteration of the takeover regulation on improving the takeover efficiency and the bargaining position of the targets. We manually collect the first and final offer price for each takeover and distinguish takeovers with and without possible offers. We evidence that the threats of being offered effectively restrained by the reform irrespective of having possible offers or not. In the post-reform period, the offer premiums are significantly improved after controlling for other factors, and the stock market responds more optimistically captured by higher shareholder returns of targets. These document that in general the reform has achieved its expected function. By shedding light on the ‘28-day put-up shut-up’ claim exclusively regulating the takeovers with possible offers, we observe that the pre-public negotiation duration is truncated, which implies that the takeover efficiency is improved. However, the bargaining power of the target side seems not to change. This may be due to lower initial offer price when offerors choose to announce possible offers or stronger negative response towards being part of the Scheme of Arrangement in the post-reform period.

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* Corresponding author: Hang Li; Tel.: (+44)7563976154; Email: HXL445@bham.ac.uk

The Bargaining Power of Target Firms and the Stock Market Response: Evidence from a Natural Experiment

1. Introduction

The bargaining position between the acquirer and target sides determines the allocation of wealth gains through mergers and acquisitions (M&As) announcements (e.g. Ahern, 2012; Rhodes-Kropf and Robinson, 2008). The Williams Act and Amendments enacted in 1968 and 1970 respectively introduce the government intervention in protecting target shareholders by requiring more information disclosure during the offer process, and this Act increases the offer price and decreases the stock returns to acquirers (e.g. Malatesta and Thompson, 1993; Jarrell and Bradley, 1980). Irrespective to this federal law, most states in the US have their own state laws relevant to different aspects such as tender offer and antitakeover activities, which commonly regulate the takeover negotiation process and the firm's takeover protection (Karpoff and Wittry, 2015; Jarrell and Bradley, 1980). Hence, it is hard to split the Williams Act effect from other state laws effect when investigating the contribution of the federal law on the threats of bidding and the bargaining power of both sides. However, in the UK, there is no different state laws regulating takeovers. Additionally, the substantial reform in some of the City Code terms regulating the behaviour of takeover participants in 2011 constructs a natural experimental environment for us to examine whether the revised City Code achieves its cofounding objectives such as improving the target firm's position in deal negotiation and protecting target shareholders' benefits.

The 'bargaining power hypothesis' states that firms with strong takeover defences are less attractive for potential acquirers because acquired sides are able to extract more benefits in the negotiation processes. More takeover defences implies more managerial entrenchment and agency conflicts between managers and shareholders (Humphery-Jenner and Powell, 2011; Humphery-Jenner, 2014). Unlike US, a distinguishing feature of the UK acquisitions regime is

that any pre-emptive anti-takeover provisions (ATPs) is not permitted. Hence takeovers in the UK market are less likely to be dominated by the entrenched managers or agency problems. In addition, deals originated in the UK are not subjected to different state laws. It provides a cleaner environment to test on the function of the takeover law (the City Code). Comment and Schwert (1995) specify that deal premiums are higher when target firms are protected by state laws or other pills, which implies the relatively low bargaining power of targets in the UK where both state laws and pre-emptive provisions do not exist. The UK Takeover Code updates a new edition on 19 September, 2011, which aims at modifying the imbalanced bargaining power between targets and acquirers. This paper for the first time systematically compares the *ex ante* and the *ex post* takeover threats and deal performance around the 2011 Takeover Code reform.

We begin by investigating the exogenous shock effect on the threats of being acquired. To be specific, we design a natural experiment to explore the shift of threats of being taken over before and after the reform decree. One of the new terms on the updated Takeover Code in 2011 is that the identified offeror of possible offer announcement should clarify if they have the formal bidding intention within 28 days since the day they make the possible offer under the pressure from the Takeover Panel, which is defined as ‘28-day put-up or shut-up’ (28-day PUSU). Possible offer announcement refers to the announcement where a potential bidder is interested in making an offer, but is not aimed at making a firm bid by that time. The possible offer is allowed to announce during our whole sample period, but the 28-day PUSU restriction towards possible offer deals is newly added in the City Code reform in 2011. However, the SDC platinum does not provide a possible offer flag or distinguish the dates of possible offers and final offers. Hence we manually collected the dates of possible offer and the final offer if applicable. By employing the updating regime, potential offerors are expected to become more cautious about how and when to offer, so they may bid when they feel that they are ready to

bid. Due to the 28-day PUSU, we expect the reform have different effects on the possibility of being targeted at by possible offers initially and by formal offer in magnitude. We evidence that the threats of being taken over of firms in the UK plummet in the post-reform period irrespective of being approached by possible offers or formal offers. This indicates that the updating regulation overwhelms firm's hospitality of bidding.

Next, we are interested in examining how the reform counteracts the imbalance between acquirers and targets. To examine it, we employ the first and final deal premiums as proxies for bargaining power of target, and shareholder returns of target firms as a proxy for target shareholder protection. Subsequently, we look at the change before and after the reform in 2011. Due to the 28-day PUSU exclusively applying for deals initiated by possible offers, we control this group when generally examining the bargaining power change. Additionally, we classify all takeovers into takeovers with possible offers and without possible offers to examine the function of the alteration of the City Code in these two groups. According to the purpose of 28-day PUSU claim, we may expect that takeovers explicating possible offerors in advanced of corresponding formal offer announcement may have stronger bargaining position reflected by higher offer premiums or announcement returns compared with other types of deals. Both initial and final offer premiums happened in the post-reform period are statistically significantly higher than that of takeovers announced prior the reform after controlling for other factors potentially contributing to the premiums.

Combining the distinction of deals approached by the possible offers in the first place and by the formal offers only and the pre- and post-reform time frames, we are able to construct a quasi-natural experiment to explore whether possible offers encourage higher deal premiums successfully in the post-reform period. This design introduces an endogeneity issue caused by offerors' self-selection. To sort it out, we employ the Propensity Score Matching (PSM) to match deals announced with and without possible offer announcements. Based on PSM sample

set, we employ difference-in-difference (DiD) method to examine if 28-day PUSU regulating deals with possible offers happened after the reform takes additional impact on deal premiums.

Our results show that takeovers initiated by possible offers do not own incrementally higher offer premiums, which implies that the 28-PUSU term does not further strength the bargaining position of target side from the perspective of offer premiums. We support this finding by investigating the effect of the alteration of the City Code on offer premiums based on subsample analysis. Interestingly, the results illustrate that there is no significant improvement in either first or final offer premiums after the reform decree for deals approached by the possible offers in the first place. In contrast, for deals approached by formal offers directly, the reform has strikingly boosted the offer premiums. Hence we document the updated City Code takes diverse effects on the premiums of deals with or without possible offers, and the 28-day PUSU term does not work as efficiently as expected originally.

Notwithstanding offer premiums, we also compare the stock market responses towards targets measured by cumulative abnormal returns (CARs) before and after the City Code amendment. Eckbo (2009) points out that the abnormal stock returns of targets capture ample information including the offer price, the bidding competition, and the possibility of bid success around the offer date. Hence, it represents more than the bargaining power of target through a deal and the abnormal returns effectively measure the protection of target's shareholder' interests. We hypothesize that the stock market responds more positively in terms of the offers in general, in the post reform period. Thus the target shareholders are expected to earn higher wealth gain through deal announcement for the post-reform period. Our results show that deals happened in the post-reform period systematically outperform deals happened before the reform with regard to the target shareholder returns. The group of deals started from possible offer announcements do not additionally improve the target shareholder returns. These findings are robust when estimating CARs of targets with or without a concern of the takeover rumor.

In order to examine the function of the 28-day PUSU term and account for the potential endogeneity issue, we run the CARs DiD regressions using the samples after employing PSM as we do for the premium regressions. Surprisingly, the strikingly negative association between the interaction of possible offer dummy and post-reform dummy indicates that targets approached by possible offers initially gain significantly lower announcement returns for their shareholders when deals are happened after the reform.

Although our results have demonstrated that the takeovers approached by possible offers do not have substantial higher offer premiums in the post-reform period, we are still interested to scrutinize the function of having possible offers on the offer price change. Interestingly, we present that takeovers initiated by possible offer announcements have higher offer premium change, but this effect is not further improved after being subject to the 28-day PUSU claim. In addition, from our results, higher competition in the public negotiation period effectively inflates the offer price. However, takeovers with possible offers happened in the post-reform period do not additionally and significantly contribute to the increase of offer price. It seems that offerors announcing possible offers are prone to bid with relatively lower offer price and increase the bidding price afterwards, while the price increase afterwards does not indemnify the wealth loss caused by the relatively lower initial offer price.

Finally, we provide one of the possible explanations about why takeovers approached by the possible offers initially in the post-reform period have strong and inverse stock market response. Under the context of the UK takeover regime, the takeovers can be progressed by two types of transactions: the takeover offers to shareholders or the Scheme of Arrangement. The scheme is undertaken by the court, for example convening the shareholder meeting (Franks and Harris, 1989). It requires major voting rate (at least 75 percent) with pass to agree the formal proposal, which scarifies the benefits of minor shareholders to some extent (Payne, 2011). The content of the scheme induces us to investigate if being in the scheme explains the unique market

response for takeovers approached by possible offers. By regressing the scheme indicator on CARs based on the group of takeovers with possible offers, we find that the takeovers progressed by the scheme help target shareholders generate prominent wealth gains on average. However, when the 28-day PUSU takes effect, the market responds negatively towards the scheme. This observation may be explained by the analysis of the Scheme of Arrangement that undermines the minor shareholders' interests in previous research (e.g. Payne, 2011). Alternatively, we may interpret that the scheme restricts the flexibility of arguing for a better offer price in the round, although they can reject the offer in the process of the scheme.

This paper is the first academic study working on investigating the influence of the 2011 takeover regulation reform in the UK. It evidences the effective function of this reform on balancing the relatively bargaining power of acquiring firms and acquired firms. Additionally, previous studies rarely look at the negotiation process in the UK,¹ we are the first one carefully analysing the process of deal negotiation from rumor recognition until the formal deal announcement. This paper is also the first work specially targeting at 28-day PUSU term to examine whether it distinguishes the performance of deals with possible offer and without possible offer. Following this, we try to explain possible reasons in terms of the non-enhanced bargaining power of target in possible offer cases. This research provides valuable information for M&As regulation and policy makers for reference when they expect to further improve the acquisitions market efficiency.

2. The Negotiation Process of Takeover in the UK and the Reform of the Takeover Code in 2011

2.1. The Negotiation Process in the UK

¹ Studies relevant to the negotiation process in the US acquisitions market are limited. **Betton, Eckbo, and Thorburn (2009)** identify a takeover process model when investigating the toehold power in the negotiation procedure. They clarify that two stages in the negotiation process: private negotiation first, if it fails, then a public competitive procedure. **Boone and Mulherin (2007)** shed light on the selling process from the perspective of target companies. They point out that before the public contest, there is a private takeover process. The contacted bidders receive non-public information but promise not to announce an unsolicited deal (**Hansen, 2001**).

The timing of takeover negotiation for takeovers happened in the UK is shown as Figure 1. There are six types of deal announcements: possible offer announcement with rumor only in advance; possible offer announcement without rumor in advance; formal offer announcement with possible deal announcement only in advance; formal offer announcement without possible deal announcement and rumor; formal offer announcement with rumor only in advance; formal offer announcement with both possible offer announcement and rumor in advance. At the date of recognizing takeover rumor, possible offerors normally are not identified. Specifying the name of possible offeror is not required before the reform in 2011, while after the reform the specific offeror of possible deal should be recognised when announcing a possible offer. Hence, the duration between the rumor recognition and the possible deal announcement where applicable is defined as pre-public negotiation. Next, when a firm chooses to make both possible deal announcement and formal deal announcement, the period between these two announcements is defined as public negotiation. Not all types of deals have these two negotiation periods, and according to the updated Takeover Code in the UK, only deals with possible offer are subject to the specific 28-day PUSU clause.

UK publically listed companies are acquired by two channels. The most pervasively applied one is offer for shares made to the stockholders of target straightaway. In this circumstance, offers are progressed after being accepted by at least 50 percent of shares outstanding. When a potential offeror have gained 90 percent of the outstanding shares, then it can buy out all remainings afterwards at the same price. The other channel is the 'Scheme of Arrangement'. Differentiated from the takeover offer going for the shareholders, takeovers in the scheme will be conducted by the court such as convening the shareholder meetings. Hence the scheme requires more cooperation from the target shareholders. According to the scheme, the takeover is passed when at least 75 percent of the outstanding shares support the passage. However, for the traditional takeover offers, the offerors can buyout only when they hold at least 90 percent

of total outstanding shares. Therefore, the scheme undermines the interests of minor shareholders.

Since deal progress under the 'Scheme of Arrangement' is directed by the court, a more restricted time schedule is enforced. Normally, the deal process can be finished eight weeks after the execution of the scheme. Moreover, this requires more disclosed information provided through the process, which decreases the impact of asymmetric information between two sides of the deal. 'Virtual bid' with bidders who are reluctant to complete deals are less likely to happen. Therefore, targets encounter less uncertainty. At the same time, it seems that target shareholders are less likely to argue for a higher bidding price in this round, although they have rights to reject it.

2.2. Updated Terms in the UK Takeover Code Decreed in 2011

One of the principles embodied in the City Code is to proscribe target companies to frustrate a bid (Armour, Deakin, and Konzelmann, 2003), which largely scarifies bargaining power of the target side in a deal negotiation process such as the offer price and other terms related to the benefits of managers and shareholders of targets. The anecdotal evidence of the deal offered by Kraft Foods towards Cadbury plc raises an attention to the potential problem of the Takeover Code: hostile offerors are highly likely to be successful due to the imbalanced power between potential acquirers and targets (Healey, 2011). This takeover is also a direct fuse for the reform of the City Code in 2011 (Payne, 2011).

On 19 September, 2011, the UK takeover regime has reformed significantly mainly focusing on the imbalance of power between offerors and offerees and the threats in relation to 'virtual bids' (Payne, 2011). Compared with the previous version of the Takeover Code, the updated one incorporates four new features: general prohibition of the usage of inducement fees, potential bidder identification at the beginning of offer period, automatic 28-day PUSU

deadlines and enhanced disclosure in relevant offer documents (Clifford Chance, 2012). Taken together, these four new features consistently contribute to improve the bargaining power of firms in the target side of deals.

Bates and Lemmon (2003) indicate that the cost of terminating the offer talk is heavy for target sides, the limitation of the usage of target inducement fees unloads target's burden of monetary penalties when they expect to withdraw the offer talk. Hence, acquired parties own stronger bargaining power as they are able to stop the offer talk without penalty if their shareholders are not satisfied with the terms in the offer.

The potential bidder identification at the beginning of the offer period reduces the risk of targets as shareholders and other investors will know who are on the bidder sides so that they can monitor from the beginning of the offer period. Jarrell and Bradley (1980) suggest that ignoring the identification of potential bidders is costly to target shareholders. The Williams Act (1968) in the US has the intention to protect target shareholders and Eckbo (2009) state the mandatory disclosure requirements leading to higher competition in deal level presumably increase offer premiums, and therefore scare away some hesitating offerors. Similarly, a more rigorous requirement on offeror information disclosure including the potential bidder identification in the new version of the Takeover Code potentially benefits the shareholders of targets by reducing information asymmetries and promoting higher offer price so that offer premiums. Ahern and Sosyura (2014) investigate how firms use media coverage to influence its negotiation process, and they suggest that media coverage generates upward stock price pressure in short term because of the attention from investors. This research may implies that by requiring more disclosure for the takeover process, the stock price of the target side may increase. The 28-day PUSU secures the length of the offer period between the date of the potential offeror identification and formal deal announcement so that the price volatility of targets and offerors caused by information can be effectively controlled to some extent (Code

Committee, 2012). In particular, the market response time to the possible deals is tightly restricted, which leaves less space for offerors, namely free-riders to gain benefits from the pre-offer period and reduces duration of targets being subject to takeover risk. Moreover, it tends to improve the bargaining power of targets as they are more able to reject to further talk or extend the deadline of PUSU when the first 28-PUSU deadline comes if they are unsatisfied with the terms in offer discussion.

Therefore, the new updated regulation directly contributes the process of bidding in the UK acquisitions market and is expected to influence the target threats of takeover and relatively bargaining power between acquiring firms and acquired firms.

3. Samples and Research Design

This section lists all research hypotheses and describes the samples and methodologies for each research question. The cases of takeovers announced from 1st January, 2006 to 31st December, 2016 are downloaded from SDC Mergers and Acquisitions Database. Since the reform year is 2011, by the end of year 2016, we have five-year post-reform observations. All target firms should be UK publically traded, while acquirers are public firms, private firms or subsidiaries. Deals with target companies assigned in finance and utility industries (ICBIC code: 7,000 and 8,000) are excluded from our samples. We also require that initial toehold plus shareholding sought by offeror should be lower than 50 percentage of total shareholding of target firm. For deals announced by multiple bidders before the resolution of the first bidder, they are identified as auctions. Under this circumstance, only deals announced by the first bidders are included. Through these screening criteria, 990 deals are yielded in our deal sample set. 686 deals are announced by the end of the reform year, and 304 deals are announced after the reform year. Although our sample period includes six years prior the reform and five years after the reform, we still find that the bidders' interests of targeting at UK publically traded companies slashed after the updated reform issued.

However, several potential problems existing in the SDC database may lead to biased analyses. Firstly, the deal announcement dates recorded in the SDC do not specify that it is the possible offer date or formal offer date. Hence for deals with these two announcements, the recorded deal announcement dates are confusing, especially in this research, it is necessary to distinguish the dates of possible offers and formal offers. Secondly, the SDC provides initial and final offer price and premiums (e.g. Officer, 2003; Cai and Sevilir, 2012) whilst the offer price observations are much lower than the deal observations. From previous literature focusing on deal premiums, we know it is possible that acquirers and targets do not disclose their bidding price in the document (Moeller, Schlingemann, and Stulz, 2004). We still look through the original document of deal offer stored in PI Navigator database and manually collect initial and final offer prices to indemnify the completion and accuracy of offer price. For deals without offer price change, we make their final offer price equal their initial offer price. We find 712 out of 990 deals with offer price disclosure. In spite of initial and final offer prices, other manual collected information is bid rumor recognition date, possible offer date, formal offer date, toehold,² the nature of acquisitions (recommended, unsolicited, formal sales or others) and termination fee. In this natural experiment, we define the deal announcement date as the formal offer date, while for deals do not have formal offer announcements, the deal announcement date is defined as the possible offer date.

3.1. The Threats of Takeover

The first research question directly raised from the alteration of the City Code in 2011 is that whether the takeover threats have been truncated due to the reform objective of enhancing the bargaining power of target firms. Hence, our first hypothesis is as follows,

² By comparing the collected toehold from the original documents stored by the PI Navigator and the recorded toehold in the SDC, we find that the toehold records in the SDC is reliable to use (we may not mention toehold is hand-collected).

Hypothesis 1. The threats of being taken over is significantly weakened due to the newly added requirements in the City Code decreed in 2011.

To investigate the takeover threats, the probit model of the probability of being offered is constructed. All publically traded firms in the UK are downloaded from the Datastream Database. Corresponding to the deal selection criteria, firms assigned to the finance and utility industries are excluded from our sample. 22,909 firm-year samples are involved in the likelihood model. The reform in 2011 split our sample period into prior-reform period (from years 2006 to 2011) and post-reform period (from years 2012 to year 2016). The main variable in this likelihood model is the dummy variable of post-reform period. The control variables of predicting the bidding threats employed in the probit models are the target firm size in 2015 value, the target firm age, the three-year average sales growth, Tobin's q, liquidity, leverage, and tangibility, which refers to previous literature predicting the possibility of being target firms (e.g. Ambrose and Megginson, 1992; Harford, Humphery-Jenner, and Powell, 2012; Bebchuk, Cohen, and Wang, 2014). Simultaneously, for the purpose of accounting for the time-invariant effects of corresponding year and industry, we control the industry fixed effect based on the industry classification following the Industry Classification Benchmark (ICB) and year fixed-effect.

Since some deals have possible offers while others do not have, we separate deals into two groups: deals with possible offers and deals without possible offers, and then investigate the propensity of approaching targets by initial possible offers or by formal offers only. Irrespective of having following final formal offers after announcing initial possible offers or not, as long as one deal is approached by the possible offer initially and then it is assigned to the group of deals with possible offers. Possible offers are likely to increase the follow up competition and shrink the negotiation duration in the pre-public negotiation period. Due to the special 28-day PUSU restriction on the possible offer announcement, we expect that the post-

reform indicator contributes more significantly and negatively to the propensity of announcing possible offers in magnitude compared with its contribution to the propensity of going for the formal offer straightaway. Here comes our second hypothesis as follows,

Hypothesis 2. The likelihood of being approached by initial possible offers and final offers only is materially decreased respectively after the reform, and the contribution of the post-reform dummy to the likelihood of being approached by initial possible offers is more significant in magnitude.

In our dataset, we observe that 409 out of 990 deals have possible offer announcement regardless of having formal offer later on or not, and other 581 deals are deals only with formal offers. Among these 409 cases, 174 deals do not have follow-up final deal announcement. When looking at the deal announcement before and after the reform in 2011, we recognize that 111 out of 409 possible offer announcements are made in the post-reform period. All other control variables are the same as what we incorporate in the model looking at the probability of being offered.

3.2. Does the reform improve the bargaining power of the target side and deal performance?

Offer premium is widely used by previous studies to represent the relatively bargaining position between targets and bids during the negotiation period (e.g. Bates and Lemmon, 2003; Gaspar, Massa, and Matos, 2005; Betton, Eckbo, and Thorburn, 2008). We inevitably includes deals happened during the global financial crisis period and many other macroeconomic factors may potentially influence the firm's propensity of bidding and the average offer premiums in each year. We would over-control the year effect if we incorporate the year fixed-effect in the natural-experimental design. Therefore, we incorporate the industry fixed-effect to capture the

persistence of each industry and takeover threats indicator³ to identify the high risk years of takeover. Consistent with Betton, Eckbo, and Thoburn (2008; 2009), we calculate both initial premium and final premium using the hand-collected initial offer price and final offer price and compare the offer price with the stock price of target 42 days prior the identified deal announcement date. Subsequently, we run the regressions using both initial and final abnormal premiums respectively. Due to the purpose of the City Code reform in 2011 is to enhance the bargaining position of target side, we expect to see that there is a positive association between offer premiums and the post-reform dummy.

In our sample years, all deals can have possible offer announcement, formal offer announcement or both of them. The 28-day PUSU term exclusively takes effect on deals with possible offer announced after the revolution. This specific term aims at further enhancing the bargaining power of targets because if the offerors choose not to bid within these 28 days, then they proscribe to bid in the following six months.⁴ Alternatively, bidders choose to announce their possible offers may start with a lower price that benefiting their interests because no solid and public negotiation process starts. The 28-day PUSU term may unexpectedly limits the target time of preparing for arguing for higher offer price. Hence, it is hard to predict how the relatively bargaining power change for targets caused by the reform in takeovers with possible offer announcements. Hence, the hypotheses are as follows.

Hypothesis 3. The reform positively contributes to the premiums of deals when effectively controlling for other factors.

³ The takeover threats indicator is assigned to one if the takeover intensity of a year is at least one standard deviation above the average takeover intensity across our sample period. Otherwise it is assigned to zero. This indicator captures the threats of being takeover in each year.

⁴ In another situation, both sides of the deal can commonly apply for an extension towards the Takeover Panel, so that the offerors can withhold their bidding attitudes for an extended period (normally another 28 days).

Hypothesis 4. Because of having possible offers or not, the offer premiums may be influenced by the amendment differently, although it is hard to anticipate which group of deals is more strikingly influenced by the updated regulations.

Meyer (1995) argues that government policy or other shocks not only influence the treatment and control groups, but also may affect the likelihood that an individual received a treatment. Hence, firms may change their strategies of bidding responding to the 28-day PUSU term according to their benefits, which introduces an endogeneity problem. For example, 28-day PUSU probably scares away some potential acquirers who are ‘arbitrageurs’ in nature expecting to earn some benefit from bidding rather than make a complete deals to gain acquisition synergies. However, this rule may also stimulate some firms to deliberately hide the negotiation process and approach tightly so that they are not necessarily to be restricted by 28-day PUSU clause. In the opposite situation, potential bidders may be more likely to offer through possible offer when they expect to get more confidential information from the aimed firms. This acquirer’s endogenous choice may bias our estimation results.

To take account of this endogeneity and to especially test the effect of 28-day PUSU claim, a quasi-experiment is designed and the DiD regressions are run here.⁵ The first difference is deals announced during the prior or post reform period, and the second difference is deals with or without possible offer announcement. Hence the control group is a group of deals having formal deal announcement only, while the treatment group is a group of deals having possible deal announcement irrespective of formal announcement. In the DiD regressions, we need to match treatment samples with control samples to generate valid estimation. Hence, we employ

⁵ Ahern and Sosyura (2014) investigate how firms actively manage their media coverage, to address some endogenous issues, they employ the DID regressions to compare changes in media coverage that issued after the initiation of the public negotiation process for fixed exchange ratio stock mergers relative to floating exchange ratio stock mergers. This research provides an evidence that for cross-sectional data analysis, there is no problem with employing the DID methodology at the individual sample level. Additionally, Humphery-Jenner (2012) construct a quasi-natural experiment to study the function of the EU Takeover Directive in the deal performance. The DiD regressions structure is also based on the deal level as what we do here.

target firm market value in real 2016 term, target industry, target leverage and deal payment method to match samples. We create a treatment group dummy to assign one to deals in the treatment group and then assign zero to deals in the control group.

To summarize, for the treatment group (deals with possible offers), all updated four aspects in the Takeover Code conjunctionally take effect on the relatively bargaining position captured by offer premiums. In contrast, for the control group, we test on the function of the other three updated terms excluding the PUSU one on the offer premiums. Other control variables in our premium regressions are largely consistent with previous studies looking at the determinants of deal premiums (e.g. Schwert, 2000; Moeller, Schlingemann, and Stulz, 2004; Betton, Eckbo, and Thoburn, 2008) including firm-specific and deal-specific characteristics and stock run-up.

3.3. Does the reform further benefit the shareholder wealth gains through deal announcements?

When takeover contracts is more beneficial for the target side and investors can forecast high synergies after the takeover, the stock market is expected to respond optimistically towards the shares of targets. The abnormal stock returns of targets capture more information than the bidding strengths between the two sides of deals (Eckbo, 2009). Aktas, de Bodt and Roll (2010) employ the cumulative abnormal return from 42 days prior the deal announcement until the date of target delisting as an alternative method of calculating premiums. Therefore, firstly we regress CARs on the post-reform dummy and other control variables to investigate how the updated regime contributes to the deal performance. Subsequently, we want to examine whether the 28-day PUSU term takes incremental effect on the performance of deals with possible offers. By assuming that the 28-day PUSU term plays an effective role, we are able to expect a more positive market response towards the takeover approached by the possible offers in the post-reform period. However, the market may not respond so optimistically due to the

unexpected limitation on the preparation of takeover defence and argument. Other control variables include firm-specific and deal-specific characteristics.

Hypothesis 5. Targets of deals announced after the reform have higher shareholder returns when effectively controlling for other factors.

Hypothesis 6. Because of having possible offers or not, the stock market response may be different, although it is hard to anticipate which group of deals is more strikingly influenced by the updated regulations.

We manually collect the deal announcement rumor recognition date, the possible offer announcement date, and the formal offer announcement date. We do two sets estimations using these hand-collected dates to estimate more precise cumulative abnormal returns (CARs) and test if the impact of reform is consistent using both standard and non-standard CARs estimation methods. Following the standard method of estimating CARs, we recognise the possible deal announcement date for each deals as the event date. For those deals do not have early possible announcement before the formal deal announcement, the date of announcing formal deal is identified as the event date. The estimation window is from 242 days prior the recognized event date till 43 days prior the recognized event date. We also define the event window as the duration between 2 days prior the event date till 2 days after the event date. We employ another set of estimation by identifying unique estimation windows for different types of deals. The earliest date of the dates of recognizing rumor⁶, announcing a possible offer, and announcing a formal deal is the real date that the stock market is expected to have a direct response. Hence, the estimation window is from 242 days prior the earliest date of rumor recognition date, possible offer announcement date and formal offer announcement date to 42 days prior the

⁶ From the original takeover documents published on PI Navigator, we collect the date of takeover rumor recognition date which enables us to identify the more accurate date that the stock price is not influenced by the deal process.

earliest date of these three dates. Through this way, we believe that the estimation window more precisely represent the market response without the influences of potential information leakage so that CARs is closer to the natural proxy of abnormal market response.

4. Descriptive Statistics and Results

4.1. The Likelihood of Being Offered

From Model 1 to Model 3 in Panel A of Table 1, they present the regression results of the likelihood of being offered, being offered through possible offers initially, and being offered through formal offer only. 17,322 firm-year observations effectively contribute to the regression results. The key variable is the post-reform indicator, which is assigned to one if firms are active after the year of 2011. Otherwise, the post-reform indicator is assigned to zero. We find that the publicly traded firms in the post-reform period are less threaten by possible takeovers. The marginal effect of the post-reform dummy is -0.0164, which means that on average firms being active after 2011 are 1.64 percent less likely to be offered by other firms on average. Compared with the average takeover intensity⁷ across the whole sample period, we suggest that in line with the *Hypothesis 1*, the reform economically reduces the takeover threats. It evidences that the reform scares away some potential bidders who are not confident to bid. When comparing the likelihood of being approached by possible offers initially and formal offer exclusively shown in Model 2 and Model 3, the results support our *Hypothesis 2* that the reform takes more strikingly effect on the probability of being offered through possible offers both statistically and economically.

We control for the firm-specific and industry-specific characteristics in all likelihood models. We find that larger target firms with higher firm risk captured by three-year-average standard deviation of return on assets (ROA_SD) are less likely to be targeted at by either possible offers

⁷ 990 deals out of 22,909 total firm-year observations makes the average takeover intensity to be 4.32 percent.

or formal offers. More mature firms are less likely to be targeted at. We find that sales growth, tangibility of firms do not significantly determine firms' bidding choices. Tobin's Q, liquidity and leverage represents growth opportunity and resources of firms respectively. Palepu (1986) and Powell (1997) illustrate that a firm's growth-resource imbalance determines its choice whether to bid. For example, firms with low growth opportunities but sufficient financial resources are more likely to approach other firms with growth potential but financial constraints. We find that more liquid firms with higher growth opportunities are more likely to be offered and this is applicable for the likelihood of being offered by possible offers. Financial slack firms are more likely to offered by formal offer straightforward. Interestingly, our results show that the market competition captured by Herfindahl index (HHI) does not influence the likelihood of being taken over, while firms in the period with mega takeovers are more likely to be offered and this takeover threat is dominated by the offers initiated by possible deal announcements.

Panel B of Table 1 presents the likelihood regression results using multinomial probit model. The dependent variable is assigned to one if target firms are approached by possible offers and it is assigned to two if target firms are approached by final offers directly. Otherwise, the dependent variable is equal to zero. Model 1 and Model 2 in Panel B investigate the factors contributing to the takeover threats caused by possible offers and final offers respectively. The negative contribution of the reform on the threats led by possible offer is much prominent than the threats led by final offer only. In general, these observations are consistent with the results of probit regressions shown in Panel A, which approves the reform does help firms counteract the underlying risk of being taken over.

4.2. The Duration Between Possible Deal and Formal Deal Announcements

The updated version of the Takeover Code tends to improve the takeover efficiency, and the specific 28-day PUSU term aims at controlling for the length of the negotiation period. An intuitive measure of efficiency improvement is the shorter length of the pre-public negotiation. The average number of days between possible offer and formal offer is expected to decrease. The negotiation period shown in Figure 1. Before the updated Takeover Code, the offerors with possible deal offers are not required to explicit their bidding intention within a certain period of time. When tracking the record in PI Navigator Database, deals with possible offers only are hard to find the expression date of stating that the potential offerors will not bid formally. Excluding these transactions, we observe 816 cases. We allocate 0 to the duration of deals with formal announcement only.

Table 2 presents the duration change before and after the reform. The average days between the possible and formal offer announcements are roughly 24.09. When splitting deals based on their announcement year, we observe that the average duration for takeovers happened before the decree of the updated City Code in 2011 is 27.81 days. The average days between two announcements become much lower (16.18 days) for takeovers happened after 2011. As we can see from the median value for these three sample sets, over half of our observations do not have possible offer announcements. This is also the reason why the average duration is so short compared with the case with the longest duration. By comparing the longest duration case for prior-reform and post-reform periods, we find that it takes 522 days to terminate the pre-public negotiation with high bidding uncertainty, which is only approximate half of the longest duration (1,156 days) appeared in the prior-reform period. This evidences that although the agreement of extending the deadline of PUSU can prolong the period before entering the public negotiation period, the 28-day PUSU request effectively shrinks the length of pre-public negotiation so that pulls down the takeover risk caused by insincere bidders.

4.3. The Effect of Reform on Deal Premiums

Table 3 presents the descriptive statistics for offer premiums and CARs regressions. We show both first and final offer premiums for each deal. The first (final) offer premium is calculated by the difference between the first (last) offer price and the target share price on 41 days prior the first recognized offer announcement date scaled by the target share price on 41 days prior the first recognized offer announcement date (e.g. Betton, Eckbo, Thorburn, 2007). Where there is no contest, we make final offer premiums equal first offer premiums. The first recognized offer announcement date is also the announcement date for CARs estimation.

We manually collect the possible offer announcement dates and formal announcement dates where they are available from the original documents recorded on PI Navigator database. The announcement date is recognized as the same date of formal announcement date of an offer when it is applicable. When there is no final announcement, then we treat the possible offer announcement date as the recognized offer announcement date. By univariate analysis, we do not observe significant improvement of deal first or final premiums after the update of the City Code in 2011. However, we acknowledge that our sample period includes the global financial crisis period and may be subject to the post-crisis economic recovery. Previous literature has recognized the decreases of takeover frequency in the latest couple of years in our sample period under the global environment (e.g. Erel, Jang, and Weibach, 2015; Reddy, Nangia, and Agrawal, 2014; Aktas, de Bodt, and, Roll, 2013). Hence, with sufficient control of macroeconomic factors that potentially bias the observable reform effect on takeover premiums, the multivariate analysis represents more precise association between the reform dummy and premiums.

From Table 3, we figure out that the average possibility of being approached by possible offers plummets due to the City Code updates. It may be due to the function of the reform that scares away some firms' bidding interests. Incorporating the target termination fees in offers is strongly less likely to happen, which means that the targets have less financial obligations when

terminating the offer by their sides in the post-reform period. Additionally, the average takeover threats is less severe in the post-reform period. In terms of other firm-specific characteristics, it seems that there is no fundamental change in types of firms that are targeted by potential bidders.

Based on the full samples, Panel A and Panel B in Table 4 presents the first offer premium and the last offer premium regression results respectively. Model 1 and Model 2 investigating the exogenous effect of the City Code reform in 2011 on offer premiums with and without controlling for the persistency of the group of deals initiated by possible offer announcements. From Model 1, we demonstrate that the reform has effectively improve the bargaining positive of targets as expectation, which is reflected by the significantly positive coefficient of the post-reform dummy variable. On average, takeovers happened in the post-reform period have 17.67 percent increase in log value of the ratio of offer price scaled by the target stock price at 42 days prior the recognized offer date.

Notwithstanding controlling for the basic firm-specific characteristics and industry fixed effects in our models, we also incorporate the unexpected disclosure to inversely measure the information credibility at the firm level. The unexpected disclosure is developed by Pownell and Waymire (1989) and is calculated by the spread of management forecast or reported annual earnings per share for the fiscal year end and the analyst earnings per share forecasts divided by the absolute value of analyst earnings forecasts. We observe that firms with lower information credibility (higher spread) are strikingly less likely to be targeted at. This implies that the potential bidders have less interests in acquiring firms with high information asymmetries, which accumulates the difficulties of valuation.

Previous literature has clarified that the higher shareholdings prior the deal announcement and the introduction of termination fees of targets effectively protect the bargaining position of

acquirers (e.g. Boone and Mulherin, 2006; Bate and Lemmon, 2003; Officer, 2003; Stulz, Walking and Song, 1990) so that weaken the right of targets in the negotiation period. Hence we also control for the toehold and the termination fees indicator to avoid messing up the firm-level contributors of offer premium and the reform impact. Interestingly, by introducing the breakfee of targets and the toehold, the offer premiums are higher than others and the toehold does not explain the offer premiums. In the premium regressions, we simultaneously control for the yearly threats of being targeted (THREAT_TAKEOVER) to improve the preciseness of the estimation of the association between the reform indicator and offer premiums.

In Model 2 of Panel A, we additionally incorporate the indicator of the group of deals with possible offers. The results of Model 2 are highly consistent with the results of Model 1. We find that approaching by possible offers do not have significantly explanatory power in offer premiums.

Due to the 28-day PUSU term exclusively on deals with possible offers after the reform, we employ the DiD regressions to explore the incremental effect of the 28-day PUSU term on offer premiums. One principle pre-condition of applying the DiD method is that the treatment group (deals with possible offers) and the control group (deals without possible offers) are randomly assigned. However, in our case, potential acquirers may endogenously choose to keep the private negotiation as confidential as they can until they are ready to enter a formal public negotiation duration. Hence we employ the PSM to control for confounding factors in this observational studies by adjusting for the propensity that a target is exposed by a possible offer (Sturmer, Joshi, Glynn, Avorn, and Rothman, 2006). The PSM is pervasively used in quasi-experimental design in the context of corporate finance (e.g. Humphery-Jenner, 2012; Cohen and Wang, 2013; Vig, 2013). However, in the most recent econometric papers, for example King and Nielsen (2016) argue that PSM may trigger a series of problems which are opposite of its primal goal, such as increasing sample imbalance, inefficiency, model dependence, and

estimation bias. To partially sort out the probable problems caused by the PSM, we use the Coarsened Exact Matching (CEM) algorithm to narrow down samples to empirical support before matching based on PSM as suggested by Blackwell, Iacus, King and Porro (2010).

The key variable in Model 3 of Panel A is the interaction between post-reform indicator and the possible offer indicator. The DiD regression results evidence that the 28-PUSU does not incrementally enhance the offer premiums. Combining the fact that after 2011, firms are less likely to be approached by possible offers. We may interpret the insignificant contribution of this incremental effect by two sides. On the one hand, offerors bear less pressure from auctions because some bidders are scared away by the updated regulations or loss interests because of the possible higher costs of negotiation. Hence, the offer price is not necessarily to increase stunningly in order to being accepted. On the other hand, the agency conflicts between managers and shareholders of targets may pin down the insignificant association. Target managers especially entrenched target managers have bargaining strength to argue more personal benefits when they agree to surrender their current positions (Hartzell, Ofek, and Yermack, 2004; Moeller, 2005). Hence, even though the updated City Code aiming at improving the bargaining power of shareholders so that protecting the shareholders of targets, the agency conflicts overwhelm the effectiveness of target shareholder protection.

Panel B of Table 4 presents the regression results when regressing final offer premiums on post-reform dummy and other indicators. On top of the models in Panel A, we include an extra variable: auction indicator to capture the effect, because the competition presumably triggers higher offer price. We show a large consistency in the results of Panel A and Panel B of Table 4. This explicates that the reform does not affect the first and final offer premiums distinguishingly.

Although we demonstrate that there is not incremental effect of deals with possible offers on the offer premiums in the post-reform period, we are able to split deals based on having possible offers or not to investigate if the reform have different effect on offer premiums for these two groups. Models 1 and 2 (3 and 4) of Panel C in Table 4 demonstrate the associations between first (final) offer premiums and post-reform indicator based on deals having possible offers and not having possible offers respectively. Surprisingly, we find that firms with possible offers are less influenced by the reform with regard the first or final offer premiums. In contrast, when firms approached by formal offers only, the offer premiums improve significantly for takeovers happened after 2011.

4.4. The Effect of Reform on Shareholder Returns

As presented in Table 3, target shareholder returns are moderately higher for deals happened after the reform irrespective of measuring CARs in a standard or non-standard method. The CARs regression results are presented in Table 5. In consistent with the structure of Table 4 for deal premium analysis, Panel A and Panel B in Table 5 presents the standard and non-standard CARs regression results respectively. In both panels, Model 1 and Model 2 investigating the exogenous effect of the City Code reform in 2011 on CARs with and without controlling for the persistency of the group of deals initiated by possible offer announcements. Another difference between the regressions in Panels A and B is that we incorporate the dummy variable RUMOR to account for the group of deals acknowledging the private approach(es) from other companies in Panel A as the standard CARs estimation does not take account of the rumor recognition date and its impact.

Focusing on Panel A, the strikingly positive coefficient of post-reform dummy in Model 1 indicates that target shareholders gain much higher returns after the regulation updating. When looking at other control variables, we find that the stock market responses much negatively

when targets are larger firms with higher overvaluation represented by higher Tobin's q . Additionally, shareholders gain less wealth when offerors have higher shareholdings right before the deal announcements. This implies that higher shareholdings makes target in a relatively weaker negotiation position. From Model 2, we unearth that controlling for the group of deals with possible offers does not alter our interpretation for the contribution of the regulation change.

In Model 3 of Panel A in Table 5, we examine the incremental effect of the reform associated with the deals with possible offers based on matched samples shared with Model 3 in Table 4. Alternative understanding is that we particularly test the influence of 28-day PUSU term on the target shareholder returns. Surprisingly, instead of additionally improving the benefits of the target of shareholders, the material and negative coefficient before the interaction explicates that the requirement of expressing acquisition intention within 28 days since the possible offer announced counteracts the wealth gain of target shareholders. This reflects the worries of the market towards the target being approached through possible offers, for instance, lower follow-up competition and shorter time of negotiation preparation for target side. The consistent results from Models 1 to 3 in Panel B in the same table show that the contribution of the reform on deal performance is robust.

In Panel C of Table 5, we separate deals into two types: with possible offers and without possible offers. Models 1 and 2 (Models 3 and 4) in Panel C, they are regression results exploring the association between post-reform indicator and standard (non-standard) CARs using deals with possible offers and without possible offers respectively. The insignificant contribution of the updated regulation in Model 1 and Model 3 once again evidences the target shareholder returns of deals with possible offers do not increase prominently. In contrast, in Model 2 and Model 4, we observe that for targets exclusively approached by formal offers, the

reform significantly improves their announcement returns, which implies that target shareholders are protected effectively by the updated City Code.

To sum up, we suggest that the reform of the City Code does improve the takeover efficiency and relatively bargaining position of targets represented by shorter pre-negotiation period and higher offer premiums and target shareholder returns after considering other control variables. However, by specifically shedding light on the effect of the 28-day PUSU claim, our results demonstrate that it does not additionally help with target shareholders' wealth gain, although it restrains the length of being exposed by the uncertainty of takeover prior the formal and public negotiation.

5. Does the 28-day PUSU claim promote higher offer price change?

In Table 4, the insignificant coefficients of the possible offer indicator and the interaction between possible offer indicator and the post-reform dummy justify that it seems that the time restriction on the PUSU does not accomplish its expected role in strengthening the bargaining power of targets. To reveal its mystery, we are interested in understanding whether the takeovers initiated by possible offers encourage higher follow-up offer price and whether the competition at the deal level has more strikingly effect on the offer premium change after the reform decree.

Table 6 presents the regression results of the offer price increase. The difference of offer premiums is calculated by the dollar difference between the first and the final offer prices of a takeover. In Model 1, we find that the takeover with possible offers have higher offer price increase in the pre-public negotiation period. By further incorporating the interaction of possible offer dummy and post-reform dummy, in Model 2, the insignificant coefficient of the interaction indicates that the possible offers do not incrementally stimulate the follow-up offer price increase. Moreover, in both Model 1 and Model 2, we consistently observe a significant

contribution of the competition towards the offer price change, which supports the findings of Fishman's (1985) work when investigating the strategy of bidding. When shedding light on the incremental effect of deal competition in the post-reform period for takeovers with possible offers, we still do not find a prominent additional impact.

Assembling the results of Table 4 and Table 6, we further understand the divergent offer premiums between takeovers being approached by possible offers in the first place and by formal offers exclusively. Potential acquirers announcing possible offers in the post-reform period may expect to extract some possible benefits by offering relatively lower price from the very beginning because there is no firm obligations. However the 28-day PUSU term bans these potential acquirers away from targeting at the same targets for six months if they state no intention to formally bid following the possible offers. Hence they also need to concern about the probability of acceptance and satisfaction from the target side when setting up the initial offer price and other relevant issues. Otherwise, offerors announcing possible offers are less able to announce formal offers with proper proposals if the possible offers are rejected by the targets. This may be one of the underlying reasons why both possible offer indicator and the possible offer indicator interacted with post-reform indicator only have moderate influence on the initial offer premium.

From Models 1 and 2 of Table 6, we recognize that takeovers initiated by possible offers have significantly higher offer price increase afterwards, but this association is not further reinforced after the regulation changes. It also reflects that after the reform, the relatively bargaining position of targets almost stays at the same level in the negotiation process before the formal offers. Associated with the insignificant coefficients of possible offer dummy in Panel B of Table 4, the increased offer price does not produce a higher final offer premium that raises above the final offer price of a takeover without a possible offer. The coefficient of the

interaction in Model 3, Table 6 evidences that higher competition or not does not influence the offer price changes of takeovers approached by possible offers after the regulation updates.

6. Why does the stock market materially and negatively respond to the stocks of firms being approached by possible offers after the reform?

In Table 5, we observe that takeovers with possible offers happened after the regulation changes additionally drop down the enhanced shareholder wealth gains due to the efficient execution of the updated City Code in general. To address the possible reasons behind, in this section, we exclusively use the group of deals with possible offers.

Notwithstanding the takeover offers, firms can choose to undertake a deal through the Scheme of Arrangement. The scheme requires cooperation from target shareholders and a stricter time schedule for progressing the review. However, at the same time, the costs of being in the scheme are pretty high. It undermines the interests of minor shareholders to some extent and prevents the targets to argue for higher possible offer price when it is under review. Therefore, the stock market is expected to have significantly negative response to the shares of targets. It is hard to have a clue to anticipate to what extent the scheme especially after the reform influences the shareholder returns. However, it is more likely to discover that the costs of being in the scheme overwhelms the benefits of it, which tends to lead a negative market response.

Table 7 presents the association between the scheme and the CARs of target shareholders based on all takeovers with possible offers. From Model 1, the strikingly positive coefficient of the scheme dummy indicates that takeovers with possible offers in the scheme generate more wealth gains for target shareholders. In contrast, after the reform, being in the scheme incrementally and significantly pulls down the shareholders' wealth gains. The CARs decreases by 14.80 percent for takeovers with possible offer being subjected to the updated regulations, which is economically significant. Its effect is even economically stronger than the

positive contribution (11.01 percent) of the scheme indicator. This implies that in general, the costs of the scheme are believed to defeat the benefits. Models 1 and 2 employ standard CARs and non-standard CARs as dependent variable, and we present a stable relationship.

7. Conclusion

The amendment of the City Code in 2011 aims at improving the relatively bargaining position of targets. This study is the first paper to examine the efficiency of the regulation change by investigating its contribution on restraining the threats of being offered and improving the offer premium and deal performance. It contributes to the extant literature on the bargaining power of targets (e.g. Ahern, 2012; Humphery-Jenner and Powell, 2011; Rhodes-Kropf and Robinson, 2008; Comment and Schwert, 1995) and bidding strategy (e.g. Fishman, 1985). Simultaneously, this research is also expected to generate vigorous practical implications such as providing valuable information for policymakers to further develop the efficiency of the takeover regulations in the UK or other countries around the world.

We begin by examining the threats of being taken over in general and demonstrate that the updated regulation effectively lowers down the risks that targets encounter. Subsequently by examining the contribution of the reform on offer premiums and shareholder returns. We evidence that the bargaining position of targets is significantly improved and more protection of target shareholders are presented after requiring more disclosure, potential acquirers identification and less inducement fee of targets, which supports previous research about bargaining power argument (Schouten and Siems, 2010; Bebchuk, 1982)

We notice the newly added 28-day PUSU claim exclusively regulates the duration between the dates of possible offers and formal offers of takeovers approached by possible offers initially so that the offer premiums and deal performance. The duration between possible offers and corresponding formal offers where applicable is shorten effectively. By distinguishing deals

with and without possible offers, we employ a quasi-natural experiment to analyse the associated effect of possible offer announcements and the decree of the updated regulation. Our results show that basically there is no distinct difference between takeovers approached by possible offers and by formal offers straightaway with regard of the offer premiums and stock market response. Interestingly, our premium regression results show that the reform takes much stronger and positive effect on deals without possible offer announcements. In contrast, the bargaining position of targets approached by possible offers initially almost stays at the same level as the effect of the post-reform indicator is insignificant on either first or final offer premiums. When turning to the market response towards stock prices of targets, we surprisingly find that the takeovers owning possible offers undertaken after the reform incrementally lower down the shareholders returns. This unearths the market adverse response towards the possible offer following the regulation change.

To further explore the difference between having or not having possible offers, we demonstrate a significant impact of having possible offers on the offer price increase. We may interpret that offerors of takeovers with possible offers prefer to bid with relatively lower initial offer price and raise it through the negotiation, but the final offer premium is not significantly improved through the public negotiation. Eventually, by focusing on the group of deals with possible offers, we conclude that participating in the Scheme of Arrangement is one of the possible reasons why market response is materially negative in the post reform period. Further research may explore more adequate reasons explaining the differentiation of takeovers with and without possible offers.

Appendix A: Variable definitions

Variable	Definition
POST	Post-reform period. Binary variable for a takeover announced after the reform of the City Code in 2011 from the SDC Platinum database.
POSS_OFFER	Deals with possible offers. Binary variable for a takeover initiated by a possible offer irrespective of having follow-up formal offer or not.
SIZE	Firm size. Market value of equity minus book value of equity plus book value of total assets in nominal terms. For the reporting period end before the (latent) acquisition announcement year from the Datastream database. In million dollar units and real (2016) terms.
TARGET_SIZE	Target firm size. Market value of equity minus book value of equity plus book value of total assets in nominal terms. For the reporting period end before the (latent) acquisition announcement year from the Datastream database. In million dollar units and real (2016) terms.
AGE	Firm age. (Latent) acquisition announcement year minus base year in the Datastream database (minimum 1964) plus one.
AVG_SALES_GROWTH	Growth rate of sales. Average growth rate of sales for a maximum of three and a minimum of two reporting period ends before the (latent) acquisition announcement year from the Datastream database. Sales are annualized and in real (2016) terms.
Q	Market to book ratio. Firm size in market value divided by from size in book value. For the reporting period end before the (latent) acquisition announcement year from the Datastream database.
LIQ	Liquidity ratio. Cash and marketable securities divided by firm size in book value in nominal terms. For the reporting period end before the (latent) acquisition announcement year from the Datastream database.
LVG	Leverage ratio. Book value of total debt divided by firm size in book value in nominal terms. For the reporting period end before the (latent) acquisition announcement year from the Datastream database.
TANGIBILITY	Tangibility ratio. Book value of property, plant, and equipment (PPE) divided by firm size in book value in nominal terms. For the reporting period end before the (latent) acquisition announcement year from the Datastream database.
HHI	Herfindahl index. Industry listed firm concentration. Herfindahl index for the shares of sales (annualized and in decimal units) for the Industry Classification Benchmark industry. For the reporting period end before the (latent) acquisition announcement year from the Datastream database.
THREATS_TAKEOVER	Takeover intensity peak. Binary variable for takeover intensity at least one standard deviation above the average takeover intensity. Takeover intensity is calculated by aggregate transaction value of takeovers in nominal term divided by aggregate value of listed firms in book value in nominal term for reporting period ends in the (latent) acquisition announcement year.
ROA_SD	Volatility of return on assets. Standard deviation of ROA for a maximum of three and a minimum of two reporting period ends before the (latent) acquisition announcement year.
RUNUP	Stock price runup. The cumulative abnormal returns (CARs) of the target firm over the window [-42, -3] prior to the recognized takeover announcement date, where day 0 is the recognized announcement date, and days are counted in trading days relative to the announcement date.

Appendix A (continued)

TOEHOLD	Percentage of shareholdings that the offeror owns in the target firm prior to the takeover announcement.
UD	Unexpected disclosure. The difference between the disclosed earnings before the interests and taxes and analyst earnings forecasts divided by analyst earnings forecasts. For the reporting period end before the (latent) acquisition announcement year from the Datastream database.
ROA	Return on assets. Operating incomes plus depreciation (annualized) divided by firm size in book value in nominal terms. For the reporting period end before the (latent) acquisition announcement year from the Datastream database.
CASH_DEAL	Cash deal. Binary variable for a takeover paid for all in cash from the SDC Platinum database.
SHARE_DEAL	Stock deal. Binary variable for a takeover paid for all in stock from the SDC Platinum database.
PUB_PUB	Public deal. Binary variable for a takeover offered by a public firm from the SDC Platinum database.
PRI_PUB	Private deal. Binary variable for a takeover offered by a private firm from the SDC Platinum database.
DOMESTIC	Domestic deal. Binary variable for a takeover offered by a firm from the same country as the target from the SDC Platinum database.
BREAKFEE	Break fees of targets. Binary variable for a takeover requiring break fees from targets from the SDC Platinum database.
HOSTILE	Hostile deal. Binary variable for a hostile acquisition from the SDC Platinum database.
AUCTION	Deal with more than one offerors. Binary variable for a takeover having other offeror(s).
HORIZONTAL	Horizontal deal. Binary variable for an intra-industry takeover from the SDC Platinum database.
RUMOR	Deal with rumor. Binary variable for a takeover having recognized rumor news before the earlier date of possible offer and final offer announcements from the SDC Platinum database.
SCHEME	The Scheme of Arrangement. Binary variable for a takeover progressed through the Scheme of Arrangement.
SCHEME_INTENSITY	Scheme intensity. Total number of takeovers progressed through the Scheme of Arrangement divided by total number of listed firms for reporting period ends in the (latent) acquisition announcement year.
FIRST_PREMIUM	First offer premium. The difference between the first offer price to each share of the target and the target share price 41 day prior to the identified offer announcement date divided by the target share price 41 days prior to the identified offer date.
FINAL_PREMIUM	Final offer premium. The difference between the final offer price to each share of the target and the target share price 41 day prior to the identified offer announcement date divided by the target share price 41 days prior to the identified offer date.
CAR_STDD	Standard cumulative abnormal returns (CARs). Five-day CARs around the identified offer announcement date. Abnormal returns are calculated based on the market model. The estimation window is over the period of 242 to 43 trading days prior to the identified takeover announcement date.

Appendix A (continued)

CAR_NONSTDD Non-standard cumulative abnormal returns (CARs). Five-day CARs around the identified offer announcement date. Abnormal returns are calculated based on the market model. The estimation window is over the period of 242 to 43 trading days prior to the earliest date of revealing takeover rumor, possible offer announcement and formal offer announcement.

Figure 1: Negotiation process of a takeover

This figure presents the whole negotiation process of a takeover in the UK. Before the date of recognizing rumor of a takeover, it is defined as private negotiation period. The period between the dates of recognized rumor and possible offer announcement is defined as pre-public negotiation. After identifying the possible offer, the duration until the identification of the formal offer is defined as public negotiation. After the formal offer announcement until the resolution date, it is defined as formal public negotiation.

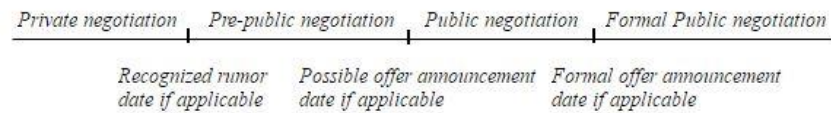


Table 1: Effect of takeover law updates on the likelihood of being offered.

Panel A of this table presents pooled cross-sectional probit regression estimates for listed firm characteristics on takeover likelihood for all UK publicly listed firms. The pooled cross-sectional probit regression estimates are presented at the level of the listed firm/ target for the (latent) takeover announcement year. Model 1 presents estimates of the likelihood of being offered. Model 2 presents the estimates of the likelihood of being offered by possible offers initially. Model 3 presents the estimates of the likelihood of being offered by formal offers exclusively. Panel B of this table presents multinomial probit regression estimates for listed firm characteristics on takeover likelihood for all UK publicly listed firms. The dependent variable is assigned to 1 if a target is approached by a possible offer initially, and assigned to 2 if a target is approached by a formal offer only. Otherwise, it is assigned to 0. The first two columns present the estimates of the likelihood of being offered by possible offers initially, and the final two columns present the estimate of the likelihood of being offered by formal offers exclusively. Each model also includes Industry Classification Benchmark industry. Listed firm characteristics are defined in Appendix. Standard errors are clustered at the level of the listed firm. ***, **, * indicate significance of average marginal effects (AMEs) and Wald statistics at the one, five and ten percent levels respectively.

Panel A: Probit Models	Model 1		Model 2		Model 3	
Dependent Variables	Margins	Std. Err.	Margins	Std. Err.	Margins	Std. Err.
POST	-0.0164***	0.0035	-0.0107***	0.0024	-0.0052**	0.0026
SIZE	-0.0037***	0.0006	-0.0016***	0.0003	-0.0020***	0.0004
AGE	-0.0004**	0.0001	-0.0003***	0.0001	-0.0001	0.0001
AVG_SALES_GROWTH	0.0005	0.0023	0.0009	0.0014	0.0003	0.0018
Q	-0.0049***	0.0016	-0.0037***	0.0013	-0.0015	0.0010
LIQ	-0.0305***	0.0111	-0.0157**	0.0071	-0.0148*	0.0085
LVG	-0.0048	0.0082	-0.0068	0.0056	-0.0003	0.0058
TANGIBILITY	0.0109	0.0076	0.0035	0.0049	0.0073	0.0054
HHI	-0.0147	0.0632	-0.0803*	0.0483	0.0479	0.0433
THREATS_TAKEOVER	0.0114***	0.0034	0.0103***	0.0023	0.0001	0.0026
ROA_SD	-0.0213***	0.0080	-0.0167**	0.0071	-0.0088*	0.0051
CONS	0.0398***	0.0016	0.0176***	0.0010	0.0216***	0.0011
Industry Fixed-Effect	Yes		Yes		Yes	
Observations	17,322		17,322		17,322	
Wald Chi ²	159.07		111.36		80.95	
P-Value	0.0000		0.0000		0.0000	
Pseudo R ²	0.0286		0.0387		0.0212	
Panel B: Multinomial Probit Models	Possible offers		Formal offers			
Dependent Variables	Margins	Std. Err.	Margins	Std. Err.		
POST	-0.0108***	0.0024	-0.0052**	0.0026		
SIZE	-0.0016***	0.0003	-0.0020***	0.0004		
AGE	-0.0003***	0.0001	-0.0001	0.0001		
AVG_SALES_GROWTH	0.0009	0.0014	0.0003	0.0018		
Q	-0.0037***	0.0012	-0.0014*	0.0010		
LIQ	-0.0156**	0.0071	-0.0150*	0.0085		
LVG	-0.0068	0.0056	-0.0002	0.0058		
TANGIBILITY	0.0036	0.0049	0.0072	0.0054		
HHI	-0.0765	0.0460	0.0489	0.0438		
THREATS_TAKEOVER	0.0104***	0.0023	0.0001	0.0026		
ROA_SD	-0.0167**	0.0071	-0.0084*	0.0052		
CONS	0.0176***	0.0010	0.0216***	0.0011		
Industry Fixed-Effect	Yes					
Observations	17,322					
Wald Chi ²	184.63					
P-Value	0.0000					
Log Pseudo Likelihood	-3233.10					

Table 2: Duration over the possible offer announcement and the formal offer announcement

This table presents descriptive statistics for the number of days over the date of possible offer announcement and the date of formal offer announcement for deals. It excludes takeovers without formal offer given. For takeovers approached by formal offer only, the duration is set to be 0.

Duration	Mean	Median	Std. Dev.	Obs.	Max.
All	24.09	0	76.32	816	1,156
Prior-Reform	27.81	0	85.36	555	1,156
Post-Reform	16.18	0	51.40	261	522
Difference	11.62**				

Table 3: Descriptive Statistics for offer premium/CARs regressions

This table presents descriptive statistics for listed characteristics and deal characteristics for all takeover samples. The descriptive statistics are presented at the level of target for the (latent) acquisition announcement year. Listed firm characteristics and deal characteristics are defined in Appendix. ***, **, * indicate significance of mean (median) differences in firm characteristics and deal characteristics between takeovers undertaken before and after the reform of the City Code in 2011 at the one, five and ten percent levels respectively.

Variables	All				Prior-Reform				Post-Reform				Mean	Median
	Mean	Median	Std. Dev.	Obs.	Mean	Median	Std. Dev.	Obs.	Mean	Median	Std. Dev.	Obs.	Diff.	Diff.
FIRST_PREMIUM	0.3350	0.2893	0.8086	712	0.3576	0.2983	0.8648	480	0.2882	0.2802	0.6773	232	-0.0694	-0.0180
FINAL_PREMIUM	0.3697	0.3049	0.8748	712	0.3903	0.3130	0.9315	480	0.3272	0.2918	0.7440	232	-0.0631	-0.0212
CAR_STDD	0.1727	0.1014	0.2735	950	0.1667	0.0960	0.2767	653	0.1858	0.1119	0.2663	297	0.0192	0.3166
CAR_NONSTDD	0.1687	0.0926	0.2676	950	0.1600	0.0820	0.2676	653	0.1878	0.1173	0.2672	297	0.0278	0.1384
POST	0.3071	0	0.4615	990	0.0000	0	0.0000	686	1.0000	1	0.0000	304	-	-
POSS_OFFER	0.4131	0	0.4926	990	0.4344	0	0.4960	686	0.3651	0	0.4823	304	-0.0693**	-
TARGET_SIZE	6.1095	5.9168	2.0949	877	6.0423	5.8343	2.0480	598	6.2533	6.2265	2.1888	279	0.2110	0.3922*
LVG	0.2022	0.1491	0.3301	889	0.2091	0.1492	0.3748	609	0.1872	0.1487	0.2010	280	-0.0219	-0.0005
LIQ	0.1675	0.0971	0.1900	891	0.1727	0.1032	0.1934	610	0.1561	0.0874	0.1823	281	-0.0166	-0.0158
Q	2.1396	1.7756	1.2310	877	2.1766	1.8423	1.2217	598	2.0604	1.6782	1.2492	279	-0.1162	-0.1641**
RUNUP	0.0200	0.0197	0.3087	944	0.0246	0.0384	0.3242	649	0.0100	0.0000	0.2720	295	-0.0146	-0.0384*
TOEHOLD	4.3450	0.0000	11.1452	990	4.2118	0.0000	10.7917	686	4.6454	0.0000	11.9176	304	0.4336	0.0000
UD	0.0603	0.0000	0.6844	990	-0.0537	0.0000	0.6234	686	-0.0752	0.0000	0.8061	304	-0.0215	0.0000
ROA	0.0108	0.0768	0.2787	878	0.0082	0.0823	0.2953	605	0.0166	0.0613	0.2381	273	0.0084	-0.0211**
CASH_DEAL	0.5111	1	0.5001	990	0.5131	1	0.5002	686	0.5066	1	0.5008	304	-0.0065	-
SHARE_DEAL	0.1051	0	0.3068	990	0.1079	0	0.3104	686	0.0987	0	0.2987	304	-0.0092	-
PUB_PUB	0.4172	0	0.4933	990	0.4213	0	0.4941	686	0.4079	0	0.4923	304	-0.0134	-
PRI_PUB	0.2899	0	0.4539	990	0.2945	0	0.4561	686	0.2796	0	0.4495	304	-0.0149	-
DOMESTIC	0.4889	0	0.5001	990	0.5029	1	0.5004	686	0.4572	0	0.4990	304	-0.0457	-
BREAKFEE	0.1859	0	0.3892	990	0.2434	0	0.4295	686	0.0559	0	0.2301	304	-0.1875***	-
HOSTILE	0.0242	0	0.1539	990	0.0262	0	0.1600	686	0.0197	0	0.1393	304	-0.0065	-
AUCTION	0.0646	0	0.2460	990	0.0641	0	0.2452	686	0.0658	0	0.2483	304	0.0016	-
HORIZONTAL	0.3818	0	0.4861	990	0.3805	0	0.4859	686	0.3849	0	0.4874	304	0.0044	-
RUMOR	0.2980	0	0.4576	990	0.3367	0	0.4729	686	0.2105	0	0.4084	304	-0.1262***	-
HHI	0.4519	0.3730	0.2920	990	0.4492	0.3802	0.2932	686	0.4581	0.3730	0.2897	304	0.0089	-0.0072

Table 3 (continued)

THREATS_ TAKEOVER	0.3273	0	0.4695	990	0.1880	0	0.3910	686	0.6414	1	0.4804	304	0.4534***	-
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Table 4: Effect of the reform on first and final offer premiums

This table presents the estimates for target and deal characteristics on offer premiums for all takeover samples. In Panel A and Panel B, the dependent variable is first offer premiums and final offer premiums respectively. Model 1 presents the estimates the effect of the reform on first premiums. Model 2 additionally control for the group of deals with possible offers. Model 3 presents the difference-in-difference (DiD) regression estimates after matching the takeovers approached by possible offers with other takeovers approached by formal offers only. First premium is calculated by the natural logarithm of first offer price divided by the target stock price 41 days prior to the offer announcement. Final premium is calculated by the natural logarithm of final offer price divided by the target stock price 41 days prior to the offer announcement. Models 1 to 4 in Panel C presents the estimates for target and deal characteristics on first offer premiums of takeovers with and without possible offers and final offer premiums of takeovers with and without possible offers respectively. Each model also includes Industry Classification Benchmark industry. Target and deal characteristics and offer premiums are defined in Appendix. Standard errors are adjusted for heteroscedasticity. ***, **, * indicate significance of coefficients and F statistics at the one, five and ten percent levels respectively.

Panel A: First Premium Regressions						
Dependent Variables	Model 1		Model 2		Model 3 (PSM)	
	Coef.	Std. Err.	Coef.	Std. Err.	Coef.	Std. Err.
POST	0.1767*	0.1065	0.1828*	0.1104	0.0573	0.0949
POSS_OFFER			0.0465	0.0895	-0.0551	0.0841
POST*POSS_OFFER					-0.1588	0.1785
TARGET_SIZE	-0.0243	0.0307	-0.0268	0.0313	-0.0290	0.0306
LVG	-0.0417	0.0759	-0.0402	0.0763	-0.2554	0.2235
LIQ	-0.4821	0.3199	-0.4714	0.3177	0.1890	0.2479
RUNUP	1.0481***	0.2584	1.0299***	0.2629	0.9107***	0.1830
TOEHOLD	-0.0088	0.0055	-0.0087	0.0054	-0.0003	0.0033
UD	-0.0889**	0.0383	-0.0876**	0.0379	-0.0666	0.0417
DOMESTIC	0.2174**	0.0929	0.2178**	0.0929	0.1300*	0.0754
SHARE_DEAL	-0.2036	0.1462	-0.2088	0.1467	-0.1581	0.1471
PRI_PUB	-0.1709	0.1298	-0.1740	0.1306	-0.1792	0.1295
HOSTILE	-0.2342	0.3648	-0.2337	0.3637	0.0332	0.2453
BREAKFEE	0.1893**	0.0919	0.1916**	0.0923	-0.0179	0.0932
THREAT_TAKEOVER	-0.0882	0.0947	-0.0925	0.0959	-0.0461	0.0818
CONS	-0.1248	0.3473	-0.1284	0.3472	-0.1692	0.3579
Industry Fixed-Effect	Yes		Yes		Yes	
Observations	640		640		511	
F-stat.	2.6		2.47		3.15	
P-Value	0.0002		0.0003		0.0000	
Adj. R ²	0.1321		0.1324		0.1547	
Panel B: Final Premium Regressions						
Dependent Variables	Model 1		Model 2		Model 3 (PSM)	
	Coef.	Std. Err.	Coef.	Std. Err.	Coef.	Std. Err.
POST	0.1812*	0.1032	0.1894*	0.1071	0.1228**	0.0625
POSS_OFFER			0.0624	0.0868	-0.0446	0.0832
POST*POSS_OFFER					-0.2448	0.1640
TARGET_SIZE	-0.0015	0.0298	-0.0049	0.0304	0.0046	0.0272
LVG	-0.0430	0.0762	-0.0410	0.0765	-0.2220	0.2120
LIQ	-0.4356	0.3106	-0.4212	0.3063	0.2388	0.2077
RUNUP	1.0045***	0.2546	0.9800***	0.2591	0.8242***	0.1599
TOEHOLD	-0.0099*	0.0055	-0.0097*	0.0054	-0.0021	0.0032
UD	-0.0912**	0.0371	-0.0895**	0.0367	-0.0542	0.0365
DOMESTIC	0.2313**	0.0902	0.2319**	0.0902	0.1294*	0.0675
SHARE_DEAL	-0.1933	0.1440	-0.2003	0.1441	-0.1662	0.1371

Table 4 (continued)

PRI_PUB	-0.1627	0.1292	-0.1669	0.1300	-0.1696	0.1264		
HOSTILE	-0.0364	0.3301	-0.0357	0.3287	0.2547*	0.1363		
BREAKFEE	0.1763*	0.0912	0.1793*	0.0916	-0.0353	0.0924		
AUCTION	0.0372	0.1384	0.0389	0.1376	-0.0209	0.1165		
THREAT_TAKEOVER	-0.0491	0.0916	-0.0549	0.0926	0.0141	0.0753		
CONS	-0.2098	0.3353	-0.2145	0.3349	-0.1654	0.3021		
Industry Fixed-Effect	Yes		Yes		Yes			
Observations	640		640		511			
F-stat.	2.40		2.29		3.50			
P-Value	0.0005		0.0007		0.0000			
Adj. R ²	0.1283		0.1289		0.1453			
Panel C: Possible Offer and Final Offer	Model 1(first, possible)		Model 2 (first, final)		Model 3 (final, possible)		Model 4 (final, final)	
Premium Regression								
Dependent Variables	Coef.	Std. Err.	Coef.	Std. Err.	Coef.	Std. Err.	Coef.	Std. Err.
POST	-0.0767	0.1598	0.4019**	0.1798	-0.0998	0.1501	0.4231**	0.1804
TARGET_SIZE	-0.0009	0.0367	-0.0604	0.0561	0.0334	0.0311	-0.0516	0.0566
LVG	-0.1877	0.3161	-0.0529	0.0718	-0.2798	0.3079	-0.0508	0.0673
LIQ	-0.0424	0.4107	-0.7369*	0.4122	0.1483	0.3182	-0.7579*	0.4100
RUNUP	0.9198***	0.2568	1.2835***	0.4918	0.9314***	0.2318	1.1817**	0.4953
TOEHOLD	-0.0008	0.0058	-0.0133*	0.0078	-0.0027	0.0058	-0.0137*	0.0079
UD	-0.0897*	0.0499	-0.0993	0.0688	-0.1116**	0.0496	-0.0918	0.0655
DOMESTIC	0.0909	0.1114	0.2649*	0.1495	0.1568	0.0982	0.2350	0.1470
SHARE_DEAL	-0.2155	0.2354	-0.1668	0.1991	-0.1581	0.2219	-0.1926	0.1987
PRI_PUB	-0.0406	0.1185	-0.3156	0.2183	-0.0187	0.1085	-0.3227	0.2201
HOSTILE	-0.1507	0.3664	-0.1866	0.6558	0.2271	0.1718	-0.1787	0.6611
BREAKFEE	0.0992	0.1083	0.3431**	0.1503	0.0711	0.1043	0.3444**	0.1493
AUCTION					0.0972	0.1490	0.0619	0.2299
THREAT_TAKEOVER	-0.0760	0.1228	-0.1457	0.1348	-0.0115	0.1087	-0.1279	0.1315
CONS	-0.4509	0.4696	0.1917	0.5544	-0.7543*	0.4296	0.2631	0.5534
Industry Fixed-Effect	Yes		Yes		Yes		Yes	
Observations	296		344		296		344	
F-stat.	2.38		1.69		2.57		1.70	
P-Value	0.001		0.0332		0.0003		0.0312	
Adj. R ²	0.1625		0.1590		0.1784		0.1549	

Table 5: Effect of the reform on the CARs of target shareholders

This table presents the estimates for target and deal characteristics on target cumulative abnormal returns (CARs) for all takeover samples. In Panel A and Panel B, the dependent variable is standard CARs and non-standard CARs respectively. Model 1 presents the estimates the effect of the reform on standard CARs. Model 2 additionally control for the group of deals with possible offers. Model 3 presents the difference-in-difference (DiD) regression estimates after matching the takeovers approached by possible offers with other takeovers approached by formal offers only. Models 1 to 4 in Panel C presents the estimates for target and deal characteristics on standard CARs of takeovers with and without possible offers and non-standard CARs of takeovers with and without possible offers respectively. Each model also includes Industry Classification Benchmark industry. Target and deal characteristics and standard and non-standard CARs are defined in Appendix. Standard errors are adjusted for heteroscedasticity. ***, **, * indicate significance of coefficients and F statistics at the one, five and ten percent levels respectively.

Panel A: Standard CARs						
Regressions	Model 1		Model 2		Model 3 (PSM)	
Dependent Variables	Coef.	Std. Err.	Coef.	Std. Err.	Coef.	Std. Err.
POST	0.0432**	0.0206	0.0426**	0.0205	0.1382***	0.0390
POSS_OFFER			-0.0107	0.0203	-0.0261	0.0277
POST*POSS_OFFER					-0.1419***	0.0463
TARGET_SIZE	-0.0133**	0.0053	-0.0133**	0.0053	-0.0152*	0.0082
LVG	-0.0378	0.0581	-0.0378	0.0581	0.0275	0.0770
LIQ	0.0594	0.0632	0.0580	0.0629	0.0981	0.0830
ROA	0.0381	0.0525	0.0384	0.0526	-0.0283	0.0748
Q	-0.0172**	0.0076	-0.0173**	0.0076	-0.0299**	0.0123
HHI	-0.0173	0.0364	-0.0166	0.0366	0.0212	0.0446
TOEHOLD	-0.0016**	0.0008	-0.0016**	0.0008	-0.0018**	0.0009
CASH_DEAL	0.1208***	0.0221	0.1217***	0.0224	0.0156	0.0299
SHARE_DEAL	-0.0466*	0.0263	-0.0452*	0.0266	-0.1045***	0.0387
PUB_PUB	-0.0306	0.0281	-0.0297	0.0282	-0.0534*	0.0292
PRI_PUB	-0.0857***	0.0279	-0.0852***	0.0280	-0.0644*	0.0361
DOMESTIC	-0.0332*	0.0195	-0.0333*	0.0195	-0.0664***	0.0232
BREAKFEE	0.0562**	0.0269	0.0559**	0.0270	0.0804***	0.0307
HOSTILE	0.0413	0.0448	0.0409	0.0451	0.0289	0.0508
AUCTION	0.0044	0.0260	0.0052	0.0260	0.0202	0.0287
HORIZONTAL	-0.0079	0.0204	-0.0079	0.0204	0.0041	0.0237
RUMOR	-0.0089	0.0191	-0.0037	0.0209	0.0146	0.0250
THREAT_	-0.0351*	0.0189	-0.0338*	0.0191	-0.0281	0.0212
TAKEOVER						
CONS	0.3834***	0.0679	0.3844***	0.0677	0.4782***	0.0988
Industry Fixed-Effect	Yes		Yes		Yes	
Observations	830		830		511	
F-stat.	6.87		6.62		3.15	
P-Value	0.0000		0.0000		0.0000	
Adj. R ²	0.1644		0.1647		0.1547	

Table 5 (continued)

Panel B: Non-standard CARs Regressions						
Dependent Variables	Model 1		Model 2		Model 3 (PSM)	
	Coef.	Std. Err.	Coef.	Std. Err.	Coef.	Std. Err.
POST	0.0466**	0.0202	0.0457**	0.0201	0.1278***	0.0390
POSS_OFFER			-0.0092	0.0180	-0.0333	0.0266
POST*POSS_OFFER					-0.1092**	0.0454
TARGET_SIZE	-0.0141***	0.0052	-0.0140***	0.0052	-0.0138*	0.0080
LVG	-0.0448	0.0577	-0.0448	0.0577	0.0273	0.0768
LIQ	0.0438	0.0633	0.0422	0.0630	0.1156	0.0826
ROA	0.0287	0.0509	0.0294	0.0511	-0.0505	0.0715
Q	-0.0124*	0.0075	-0.0125*	0.0075	-0.0266**	0.0118
HHI	-0.0044	0.0356	-0.0038	0.0358	0.0203	0.0441
TOEHOLD	-0.0016**	0.0007	-0.0016**	0.0008	-0.0017*	0.0009
CASH_DEAL	0.1238***	0.0220	0.1245***	0.0222	0.0167	0.0289
SHARE_DEAL	-0.0285	0.0257	-0.0276	0.0259	-0.1004***	0.0374
PUB_PUB	-0.0313	0.0274	-0.0305	0.0275	-0.0447	0.0275
PRI_PUB	-0.0835***	0.0278	-0.0833***	0.0278	-0.0557	0.0355
DOMESTIC	-0.0314	0.0191	-0.0313	0.0191	-0.0479**	0.0226
BREAKFEE	0.0323	0.0261	0.0324	0.0260	0.0581**	0.0289
HOSTILE	0.0396	0.0432	0.0394	0.0434	0.0240	0.0489
AUCTION	-0.0055	0.0240	-0.0046	0.0241	-0.0003	0.0262
HORIZONTAL	-0.0074	0.0200	-0.0073	0.0200	0.0037	0.0231
THREAT_ TAKEOVER	-0.0260	0.0185	-0.0251	0.0186	-0.0188	0.0207
CONS	0.3579***	0.0665	0.3598***	0.0664	0.4480***	0.0953
Industry Fixed-Effect	Yes		Yes		Yes	
Observations	830		830		579	
F-stat.	7.11		6.86		4.58	
P-Value	0.0000		0.0000		0.0000	
Adj. R ²	0.1585		0.1588		0.1624	

Table 5 (continued)

Panel C: Possible Offer and Final Offer CARs Regression Dependent Variables	Model 1(stdd, possible)		Model 2 (stdd, final)		Model 3 (non-stdd, possible)		Model 4 (non-stdd, final)	
	Coef.	Std. Err.	Coef.	Std. Err.	Coef.	Std. Err.	Coef.	Std. Err.
POST	-0.0058	0.0268	0.0525*	0.0299	0.0153	0.0263	0.0556**	0.0275
TARGET_SIZE	-0.0186*	0.0095	-0.0080	0.0058	-0.0159*	0.0093	-0.0109*	0.0057
LVG	-0.0245	0.0907	-0.0096	0.0775	-0.0360	0.0902	-0.0176	0.0762
LIQ	0.0039	0.0854	0.0509	0.0832	0.0470	0.0807	-0.0049	0.0832
ROA	-0.0020	0.0922	0.0385	0.0623	-0.0260	0.0874	0.0381	0.0610
Q	-0.0258**	0.0113	-0.0064	0.0096	-0.0223**	0.0102	-0.0010	0.0098
HHI	-0.0887	0.0577	0.0138	0.0494	-0.0807	0.0561	0.0387	0.0480
TOEHOLD	-0.0017	0.0013	-0.0021	0.0010	-0.0014	0.0013	-0.0022	0.0010
CASH_DEAL	0.0064	0.0337	0.2202***	0.0321	0.0118	0.0321	0.2161***	0.0322
SHARE_DEAL	-0.0690	0.0440	-0.0301	0.0361	-0.0615	0.0418	-0.0037	0.0355
PUB_PUB	-0.0245	0.0407	-0.0144	0.0393	-0.0134	0.0375	-0.0218	0.0398
PRI_PUB	-0.0306	0.0466	-0.0899**	0.0365	-0.0195	0.0445	-0.0960***	0.0367
DOMESTIC	-0.0590**	0.0297	-0.0321	0.0274	-0.0394	0.0281	-0.0363	0.0273
BREAKFEE	0.0697*	0.0395	0.0501	0.0372	0.0370	0.0362	0.0444	0.0375
HOSTILE	0.0947	0.0729	0.0110	0.0474	0.1001	0.0660	0.0154	0.0463
AUCTION	0.0267	0.0382	-0.0363	0.0345	0.0082	0.0337	-0.0505	0.0333
HORIZONTAL	-0.0243	0.0313	-0.0121	0.0259	-0.0283	0.0303	-0.0099	0.0258
RUMOR	0.0321	0.0300	-0.0458	0.0306				
THREAT_	-0.0129	0.0269	-0.0313	0.0274	-0.0066	0.0259	-0.0274	0.0271
TAKEOVER								
CONS	0.5428***	0.1270	0.2602***	0.0812	0.5084***	0.1175	0.2544***	0.0802
Industry Fixed-Effect	Yes		Yes		Yes		Yes	
Observations	361		469		361		469	
F-stat.	2.09		7.36		2.07		7.72	
P-Value	0.0018		0.0000		0.0022		0.0000	
Adj. R ²	0.1380		0.2771		0.1300		0.2753	

Table 6: Effect of the reform on offer price change and competition at the deal level

This table presents the estimates for target and deal characteristics on the final and first premiums difference. Model 1 presents the estimates of the effect of the possible offers on offer premiums difference. Model 2 presents the estimates of the incremental effect of the possible offers after the reform. Model 3 presents the estimates of the incremental effect of the competition at the deal level for takeovers with possible offers after the reform. Each model also includes Industry Classification Benchmark industry. Target and deal characteristics and offer premiums are defined in Appendix. Standard errors are adjusted for heteroscedasticity. ***, **, * indicate significance of coefficients and F statistics at the one, five and ten percent levels respectively.

Premium Difference Regressions Independent Variables	Model 1		Model 2		Model 3	
	Coef.	Std. Err.	Coef.	Std. Err.	Coef.	Std. Err.
POST	0.0083	0.0089	0.0145	0.0103	0.0072	0.0093
POSS_OFFER	0.0179**	0.0070	0.0224***	0.0072	0.0172**	0.0069
POST*POSS_OFFER			-0.0142	0.0131		
AUCTION	0.0894***	0.0226	0.0900***	0.0227	0.0855***	0.0255
POST*POSS_OFFER*AUCTION					0.0194	0.0542
TARGET_SIZE	0.0030	0.0020	0.0030	0.0020	0.0031	0.0020
LVG	-0.0067	0.0064	-0.0061	0.0063	-0.0068	0.0064
LIQ	-0.0022	0.0163	-0.0010	0.0159	-0.0024	0.0164
RUNUP	-0.0341	0.0259	-0.0337	0.0259	-0.0344	0.0258
TOEHOLD	-0.0001	0.0002	-0.0001	0.0002	-0.0001	0.0002
UD	-0.0060	0.0062	-0.0060	0.0062	-0.0060	0.0062
DOMESTIC	0.0067	0.0069	0.0062	0.0070	0.0067	0.0069
SHARE_DEAL	-0.0046	0.0102	-0.0045	0.0102	-0.0045	0.0102
PRI_PUB	0.0124	0.0079	0.0123	0.0080	0.0123	0.0079
HOSTILE	0.0485*	0.0277	0.0488*	0.0275	0.0489*	0.0276
BREAKFEE	0.0019	0.0074	0.0022	0.0075	0.0017	0.0076
THREAT_TAKEOVER	-0.0041	0.0071	-0.0041	0.0070	-0.0045	0.0069
CONS	-0.0081	0.0202	-0.0112	0.0193	-0.0073	0.0205
Industry Fixed-Effect	Yes		Yes		Yes	
Observations	640		640		640	
F-stat.	2.18		2.15		2.09	
P-Value	0.0015		0.0015		0.0022	
Adj. R ²	0.1464		0.1479		0.1471	

Table 7: Effect of the Scheme of Arrangement on CARs for takeovers with possible offers

This table presents the estimates for target and deal characteristics on the target cumulative abnormal returns (CARs) for takeovers with possible offers. Model 1 presents the estimates of the effect of the scheme on standard CARs and its incremental effect after the reform. Model 2 presents the estimates of the effect of the scheme on standard CARs and its incremental effect after the reform. Each model also includes Industry Classification Benchmark industry. Target and deal characteristics and standard and non-standard CARs are defined in Appendix. Standard errors are adjusted for heteroscedasticity. ***, **, * indicate significance of coefficients and F statistics at the one, five and ten percent levels respectively.

CARs Regressions Dependent Variables	Model 1(Stdd)		Model 2 (Non-stdd)	
	Coef.	Std. Err.	Coef.	Std. Err.
POST	0.0283	0.0295	0.0402	0.0296
SCHEME	0.1101**	0.0520	0.0943**	0.0479
POST*SCHEME	-0.1480**	0.0663	-0.1151*	0.0643
TARGET_SIZE	-0.0208**	0.0094	-0.0178*	0.0092
LVG	-0.0156	0.0886	-0.0291	0.0888
LIQ	-0.0044	0.0866	0.0394	0.0822
ROA	0.0011	0.0890	-0.0226	0.0848
Q	-0.0268**	0.0108	-0.0232**	0.0099
HHI	-0.0915	0.0569	-0.0841	0.0557
TOEHOLD	-0.0013	0.0013	-0.0011	0.0013
CASH_DEAL	0.0001	0.0331	0.0058	0.0318
SHARE_DEAL	-0.0814*	0.0445	-0.0734*	0.0423
PUB_PUB	-0.0230	0.0408	-0.0110	0.0382
PRI_PUB	-0.0275	0.0491	-0.0152	0.0471
DOMESTIC	-0.0641**	0.0300	-0.0438	0.0284
BREAKFEE	0.0322	0.0419	0.0050	0.0366
HOSTILE	0.0869	0.0724	0.0944	0.0665
AUCTION	0.0400	0.0383	0.0191	0.0342
HORIZONTAL	-0.0287	0.0312	-0.0315	0.0303
RUMOR	0.0331	0.0302		
THREAT_ TAKEOVER	-0.0143	0.0264	-0.0076	0.0255
CONS	0.5352***	0.1254	0.5044***	0.1168
Industry Fixed-Effect	Yes		Yes	
Observations	361		830	
F-stat.	2.09		6.62	
P-Value	0.0013		0.0000	
Adj. R ²	0.1568		0.1647	

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