Turn away bad deals or passive execute

--Financial Intermediary's role in Chinese corporate takeover

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Abstract

Our paper analyzes the role that financial intermediaries (Financial Advisor and Accounting Firms) play in the Chinese M&A market, with the approach of Heckman two stage model. We also look into the policy effect of the "Amendment to regulations of the acquisition of public company" in 2014 with DID method. We find that the financial advisor and accounting firms can enhance the efficiency of the takeover, reduce the chance that M&A occur after the order is received, implying the trustworthiness of the financial intermediary, thus they can turn the bad deals down rather than passive execute. Furthermore, the financial intermediaries generate lower value for acquiring shareholders compared with the "in-house" deals. The channel of causes can be attributed to the selfishness of the professional institutes. Nevertheless, once the endogenous problem is taking into acount, the negative impact of the financial advisor on M&A can be explained by the limited capacity of the financial agency. Considering the acquisition premium, accounting firms performs better than financial advisors in the role of matching transaction through monitoring and screening. The information advantage fails to emerge in the financial intermediary due to the concern of the bidder firms' competence.

I. Introduction

1. Background

The highly regulated security market and growing M&A business in China can create an ideal trail site for corporate takeover ,where a series of emerging policies will be issued and pose exogenous shock to the M&A market. This paper use the Chinese M&A market data to examine the role of financial intermediary in creating value in the corporate takeover, compared with the management team of the acquiring firms. We further test whether the reputable financial intermediary can do better.

The characteristics of the Chinese securities can be summarized as follows:

(1) Chinese corporations have higher free cash flow compared to the other counties(Bi, Boateng,2014). Therefore, Chinese acquiring firms are provided with more chance to choose whether draw support from their own management team in the takeover transaction.

(2) The developing history of Chinese M&A market differs a lot from that in the U.S. and the Europe. Initially, the corporate takeover transactions only occur in the state-own enterprises in China, with the aid of government. Consequently, the enterprises tend to be dependent on the government, leading to the incapacity of selecting takeover target by their own, and the inexperience of the inner management team in M&A. All of these can account for the crucial role of financial intermediary in takeover transaction.

(3) Distinct from the U.S and Europe, the underlying reason for the successful takeover

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transaction of public firm is not only selecting the right target, but approval from the CSRC(Chinese Securities Regulatory Commission). The procedure of obtaining the approval consists of tedious process and transaction friction, which calls for a professional agency who are familiar with the practice and experienced in interacting with CSRC.

(4) CRSC have introduced a series of policy concerning with M&A: "Regulations of major assets restructuring " on May,18, 2008; "Regulations of financial advisors in M&A of public firms " on August ,4, 2008; "Amendment of the Article 62 and 63 regulations of the acquisition of public company" On March,15, 2012 ; "Amendment of the regulations of the acquisition of public company" and "Amendment of the Regulations of major assets restructuring "on November 23,2014. Among all the regulation, the importance of hiring the financial advisors is emphasized and the duty of FA is clearly restricted, which pose a new challenge to the financial advisor in M&A. We wonder, under the new circumstance, can the capacity of financial intermediary meet the requirement of regulation institution; furthermore, whether the acquiring firms hire FA more after the CRSC's insistence of consulting the FA; lastly, can FA improve the bidder firms achieve better performance and efficiency.

2. Theory

Financial intermediary(Financial Advisor) is playing an obscure role when it involve in the takeover activity, according to the existing literature. The "skilled-advice " hypothesis claims the positive impact of financial advisor on the M&A transactions, whereas the "passive execution" hypothesis argues the negative effect. The specific channel of the negative impact of FA on takeover can be interpreted by "limited-capacity" hypothesis and "selfish professional institution" hypothesis. This paper examines the hypothesis from the impact of FA on both the performance and efficiency to contrast the "skilled-advice" hypothesis and "passive execution" hypothesis. Besides from the channel hypotheses of negative influence of the FA, we also put forward the "information advantage" hypothesis and "matching transaction" hypothesis to explain the enhancement on efficiency.

The acquisition transaction can be separated into three categories according to initiator (Bao,Edman,2011):

(1) The Bank-initiated deal: the financial advisor will impact on the selection of the bids and negotiation of terms, and thus will influence the acquisition's CAR.

(2) The Standard client-initiated deal: the client proposes the transaction but lacks the ability to identify good targets, which renders the dependence of the advice from financial intermediary. The financial advisors can turn away the bad deal, therefore they not only negotiate the term ,but have the responsibility to select the deal as well, finally alter CAR. Not all the banks can reject the deal, but the failure to reject is for reasons within their responsibility. Some lack the ability to identify bad deals; others undertake the value-destroying transactions to maximize their own fee income instead of defending the interests of clients.

(3) The fixed client deal: the acquirer has already decided on the target and does not seek advice on its appropriateness. The financial advisor is used only for executing the transaction on the best terms. There are two cases for this to occur. First, the client is skilled enough in identifying the targets and has no need for the suggestion from FA. Another case is that the client is hubristic and wishes to pursue a bad deal even if the FA prohibit. By accepting the mandate, the financial advisor can add value or make no difference. The FA is not responsible for the

component of CAR that can only be attributed to the acquirer's skill or other latent factors.

We can comprehend the effect of financial intermediary from the performance side and efficiency side. Firstly, the performance side represent the financial institution should have the capacity to accept the mandates, the purpose of pursing the interests of clients, trustworthiness in addition to the ability. The professional financial intermediaries can identify the benign deal or the target suitable for acquiring firms, thus are able to assist the bidder to attain the large CAR and synergies effect.

Capable as financial institution may have been, the size of the intermediary can determine the capacity to accept the mandates, which is analyzed in the "Limited capacity" hypothesis.

Secondly, high performance requires the acquiring firms' purpose is not maximize their own income from service, but pursue benefit for the clients, which is considered in the "selfish professional institution" hypothesis.

Third, the trustworthiness implies the institution can persuade the bidder to accept the advice in an open mind and turn down the bad target. This is the core disparity between "skilled-advice" hypothesis and "passive-execution" hypothesis.

On the contrary, from the perspective of efficiency, firstly, the financial intermediary can ensure the term negotiation and transaction target to accelerate the M&A. Besides, the financial advisor is familiar with the regulation of CSRC and the relevant requirements, thus better designing the plan of acquisition to shorten the time of schedule accomplishment. The efficiency concern is in accord with the "skilled-advice" and "passive-execution" hypothesis. Furthermore, the difference between the two hypotheses lies on the trustworthiness which can be represented by the possibility of the success of occurrence of acquisition after the mandate is entrusted. In addition, deficit of information of market can be compensated by the financial intermediary, especially the information asymmetry of cross-industry merges, which is emphasized by the "information advantage" hypothesis. Eventually, the efficacy of acquisition implies the higher value to be attained at lower cost when the transaction occurs, illustrated by the "transaction matching" hypothesis.

The hypotheses will be discussed in detail as follows.

First of all, we focus on the two hypotheses concerning the positive and negative effect of financial advisor on the acquisition.

"Skilled-advice" hypothesis (Kale,Kin,and Ryan,2003) regard the role of the financial advisor as selection of the deal for the clients and term negotiation. Apart from that, the disparity of ability of financial advisor lies in the competence to turn the bad deal down, which requires the capacity of discrimination and reliability for the clients to adopt the advice. Three pivot property is demanded for the advisory role: identification of fine target, term negotiation and trustworthiness. The hypothesis illustrates the possibility for the improvement of takeovers' performance due to financial advisors, together with the advance in efficiency and shortening of time it consumes and rise in the chance of accomplishment. Moreover, the potential to successful occurrence of takeover can be reduced after the mandate is entrusted.

"passive execution" hypothesis(Rau,2000) points out the inability of financial advisor to pick up the right target and negotiate in transaction. Instead, the variation in returns arises because the investment bank is systematically mandated by skilled clients. In reality, the financial intermediaries exert substantial effort in pitching deals to clients rather than deal execution. It seems unlikely that fixated client deals are sufficiently prevalent to explain

differences in average returns. The passive execution hypothesis would be supported if the chance of accomplishing the deal can be raised and time-consuming is shortened, whereas the possibility of occurrence after mandating also improves.

The causes of the failure for the financial advisor in assisting M&A can be attributed to the following two channel hypotheses.

"limited-capacity " hypothesis (Maksimovic and Philips,2002) admits that financial advisors differ not in ability, but in their capacity to accept mandates. The average return of the takeover not only hinges on the ability of the institution, but the scale as well. The value of a deal can be positively correlated with the average return of the takeover. The poor performance of M&A may not be derived from the incapacity, but stems from embodying tremendous low value deals. It seems more likely the small-scaled institution can exhibit high average CAR because it only work on only the highest value-creating deals at the first place; whereas for the large-scaled ones ,low CAR may arises if the institute has the capacity to execute also mildly good deals. We can verify the hypothesis by examining whether the bidder may attain lower average CAR if financial intermediary advises on the value-destructive or modest value deals

The "selfish professional institution" hypothesis emerges from the organization theory. Traditionally, the professional institution assist the clients in solving tough problems with their specialized skills, satisfying the interests of clients. A point of view regard the institution as justicial (Dimaggio,Powell,1983) whereas another standpoint ,"selfish professional institution" hypothesis , describes them as cunning, manipulative and self-centered(Hayward,2003). The professional institution concentrates on their own income maximization, consequently, decease in CAR occurs if a portion of the acquisition deals which do harm to the bidder firms but benefit the institution will be executed. In order to prompt the merges, from Hayward's view, the financial intermediary will arrange the takeover process by financing in equity. Equity financing grants the institution to use the abstract knowledge to gain larger impact on the process of acquisition(Abbott,1988,Pfeffer,1981) , forcing the deal with poor-performance can occur by their influence to meet their own interest, at the cost of the bidder. The hypothesis implies in the transaction with financial intermediary involved, if the deal is paid by stock, it can perform not as ideal as expected.

Our paper puts forward another two efficiency-relevant hypothesis, in the perspective of the information advantage of FA in cross-industry M&A and the matching role in takeover premium.

The "information advantage" hypothesis considers the broad experience of the financial institution in tremendous industry business can prosper the advance in gathering different source of information. The information advantage of FA can be the attraction for the bidder to resort to the financial intermediary in the cross-industry acquisition.

The "matching transaction" hypothesis emphasize on the situation where numerous bidders compete to merge a promising target. Without the financial intermediary, the takeover becomes an auction which push the deal's price to be high and reduce the takeover premium. The appearance of financial advisors can avoid the cutthroat competition by matching the bidders with all the potential target it has processed according to the bidders' ability and preference. The coordination mechanism of financial intermediary can provide the acquiring firms with higher takeover premium.

3. Main findings

The result from OLS fixed effect model seems to support the "skill-advice" hypothesis from the efficiency side, where the financial intermediary in China can raise the possibility of takeover accomplishment, but reduce the chance of deal successful happening, implying the high trustworthiness of financial intermediaries. They have the capacity to turn down the bad deal mandates rather than passively execute the transaction. However, the performance of M&A is negatively impacted by the financial intermediary, which contradicts the "skilled-advise" hypothesis.

Meanwhile, the mechanism channel of the failure of financial intermediary cannot be supported by the "limited-capacity" hypothesis. It seems likely that Chinses takeover market is immature , inducing the advice of FA can hardly ever be followed by the clients. The effect is amplified when the bidder who can transact larger deal tend to be huge in scale, aggressive and hubris since they disregard the warning from the financial advisors even the deal is detrimental. On the contrary, the channel of "selfish professional institution" has been supported.

As for the other two hypothesis concerning with efficiency , the "matching transaction" hypothesis is affirmed, while the "information advantage " hypothesis is refuted due to the bidder firms' competence factors. Lack of competitive ability for acquiring firms induces the financial intermediary to be unwilling to accept the mandate of diversified business acquisition.

Considering the endogeneity problem, to be exactly, the selection bias that occur when the bidder choose FA or not, we resort to the Heckman two stage regression and DID method. Combining these two method's result, we draw the conclusion that the performance is weakened when financial intermediary is included, whereas the efficiency can be improved. One reason for the failure in performance is the ignorance of the strength of the bidder firm. On one hand, the deficiency of the bidder can negatively affect the role of the financial advisors. On the other hand, it reveals the truth that the institution is icing on the cake, who only adds brilliance to the present splendor; rather than offering help from natives.

The channel of the downside of financial intermediary's role, taking endogeneity problem into account, has an opposite result to the prior outcome. The "limited capacity" hypothesis can be verified and the "selfish professional institution" is falsified. The hypotheses relating to efficiency, "information advantage" and "matching transaction" find no support. The underlying cause for the failure of "matching transaction" can be attributed to that if we consider the case when the firms can independently choose the FA to follow, they are more likely to follow their management team's advise. As the non-collaboration of firm increase, the takeover premium show the negative relationship with financial advisor's engagement.

When it is related to the accounting firms' role, our paper confirm the accounting firm's role of auditing and monitoring , which gives rise to the longer consuming time of acquisition process, increasing the chance of accomplishment, and no effect of enhancing the performance

Accounting firms can behave better than the financial advisor in M&A performance, after taking account of the endogeneity problem. This can be illustrated by the function of reducing the risk of the bidders after carefully auditing and monitoring. The accounting firm can do good to the matching transaction, thus improving the takeover premium, which is consistent with the outcome in OLS model. The monitoring process can also, to some extent, contribute to the screening of targets.

Financial Advisor			
	OLS	**Heckman**	**DID**
Skilled-advice	Support in efficiency,oppose in performance	Nonsupport in efficiency	Support in efficiency
Passive-execution	Oppose in efficiency, support in performance	Support in performance	Support in performance
Limited-capacity	Oppose		support
Selfish Instituion	support		oppose
Information advantage	oppose	oppose	oppose
Matching transaction	support	oppose	oppose

Accounting Firms			
	OLS	**Heckman**	**DID**
Skilled-advice	Support in efficiency, support in performance	Support in efficiency , support in performance	Oppose in efficiency, oppose in performance
Passive-execution	oppose	oppose	oppose
Information advantage	oppose	support	oppose
Matching transaction	support	oppose	support

4. Literature Review

The role of financial advisors can be illustrated from the picture of product market that claims high quality comes with good price, to capital raising market in which bankers play as information producers or middlemen (Kale et al., 2003). The discussion of this topic could be seen from the theoretical models in the earlier studies. Shapiro (1983) argues that the reputation of firms is built up through repeatedly selling their products to the customers in product markets. Similarly, other theorists (Klein and Leffler, 1981; Allen, 1984) claim that the firms have highly incentives to offer high-level product or service in order to generate future cash flows by modelling

the product markets. Apparently, this model can be applied to the financial service offered by investment banks (Chemmanur and Fulghieri, 1994). Since the information asymmetry exists in the equity market, reputation acquisition of investment banks is obtained through the advisory service they provided with clients.

A number of studies claim the reason that top-tier investment banks are chosen as advisors in M&A is because they have the ability to identify better deals thus increase the returns of their clients (Michel, Shaked and Lee, 1991; Bowers and Miller, 1990; Rau, 2000). Therefore,

several hypotheses are proposed in order to study whether the prestige reputation of top-tier advisors would have a positive impact on the transactions. Superior deal hypothesis (or skilled advice hypothesis), for instance, is posited and accepted by a number of studies (Schiereck et al., 2009; Ismail, 2010; Bao and Edmans, 2011) which state that top-tier advisors could help bidders get better proposals with less completion time. Similarly, the evidence from the work of Kale et al. (2003) suggests that higher-level reputation is positively related to the probability of deal success. On the other hand, by modifying the model of Chemmanur and Fulghieri's work (1994), they find out the advisors with prestige end to choose the most suitable client firms, while other firms have to employ less eputed advisors. The similar statement can be found in Fernando et al. (2005) who laim that mutual choice exists between the client companies and their financial ervice providers. The work of Kale et al. (2003) suggests that higher-level reputation is positively related to the probability of deal success.

In sum, the already research about the role of financial advisor has been sufficient, but less focus is on the role of whole financial intermediary including FA and accounting firm. scarce is the research about the underlying mechanism of the channel. Our paper will verify the specific channel through the existing literature and solve the endogenous problem with Heckman model and DID method to make the result more convincing.

The paper is organized as follows. Section II will define the variable and do summary statistics. The hypothesis testing and empirical design is put forward in the section III. We present the result in Section IV. Section V delivers the conclusion.

II. variable definition and summary statistics

1. Data source

Our paper use the CSMAR M&A database from 2009 to 2016, we focus on the financial advisor's impact on the bidder.

We use the data beginning from 2009 for the following reasons.

1. firstly, China's "regulation of the financial advisor in Merges and acquisition in public firm "was issued on July 10,2007 by CRSC and put into force on August 4, 2008. The importance of hiring financial advisors is emphasized a lot by the regulation institution after the regulation is issued. Moreover, the independence of the financial advisor is required in order to avoid the interest connection between agency and firms. In order to eliminate the event's effect, we choose the M&A event from 2009.
2. The financial crisis in 2008 impact the operation of M&A firms negatively. We want to overcome the effect of the disaster.

The CSMAR M&A database 's original data includes the bidders' and targets' effective sample, totaling 29534 after screening and clearing. Here, a transaction sample can involve in more than one target. Thus, the total M&A observation can be larger than the transaction number. The effective sample number of the bidder is 5628. Our paper focus on the bidders' sample.

The definition of M&A in our paper is in the generalized sense, including the equity transfer, consolidation by merger, tender offer, asset transaction(equity transfer, asset stripping, asset exchange,) and debt restructuring event.

The 5628 bidder sample includes 5497 asset transafer, 3 asset stripping, 74 asset exchange,

14 consolidation by merger, 35 debt restructuring, 5 tender offer. From the side of development of takeover, there are 8 in 2009, 11 in 2010, 18 in 2011, 70 in 2012, 87 in 2013, 1445 in 2014, 2133 in 2015, 1856 in 2016.

2. variable description

Our variables are defined as follows:

Dependent Variables	**Meaning**	**Definition**
cumulative_abnormal_return	CAR（-5，5）	Cumulative abnormal return of the bidding firm's stock in the 5-day event window (−5, +5) where 0 is the announcement day. The returns are calculated using the market model with the market model parameters estimated over the period starting 60 days and ending 6 days prior to the announcement. We use the daily index return as the market daily return in SH,SZ stock market; and the daily market return without the cash dividend(equal weighted) for the market of growth enterprise and small and medium enterprise board.
Bidder_Synergies_gain	The bidder gain from the synergies	the market value of bidder equity 4 weeks prior to the announcement from CSMAR times CAR (-5,+5)
Succeed	Whether the takeover can successfully occur after the mandate of client	After the first announcement of the M&A, if it further announces unsuccessful, assign the variable 0, otherwise 1.
time_to_resolution	The time consumed for the completion of M&A	The time consumed from the first announcement of M&A to the completion of the acquisition.
Finish	whether the M&A can be finished	When the takeover transaction disclose the announcement of completion or transfer of asset, assign the variable 1, otherwise 0.
diversifying_deal	Whether the M&A is cross-industry	When the takeover transaction target's industry is different from the bidders' industry, we assign the variable 1, otherwise 0.

premium_to_buyer	The takeover premium to the bidder	The sum of the targets' value and payment,divided by the value of the target. The data is from the CSMAR M&A
Independent variables		
fa_or_not	Whether hire the financial advisor	If the M&A event announce the financial advisor's name, the variable is assigned to be 1, otherwise 0
acca_or_not	Whether hire the accounting firm	If the M&A event announces the name of the accounting firm, assign the variable 1, otherwise 0.
lawa_or_not	Whether hire the legal advisors	If the M&A event announces the name of the legal advisor, assign the variable 1, otherwise 0.
assessa_or_not	Whether hire the asset assessment agency	If the M&A event announces the name of the asset assessment agency, assign the variable 1, otherwise 0.
income_ma	The first measure for reputation of financial advisor	Annual income from M&A business of the financial advisor. Collected from the institution's financial statements.
sales_ma	The second measure for the reputation of financial advisor.	Annual total income of the financial advisor. Collected from the institution's financial statements.
income_acc	The reputation of accounting firm	Annual income from M&A business of the accounting firm. Collected from the institution's financial statements.
scope_fa	Whether the financial Advisor is the same as that in IPO	When the financial advisor in M&A is the same as that in IPO, assign the variable 1, otherwise 0
scope_acc	Whether the accounting firm is the same as that in IPO	When the accounting firm in M&A is the same as that in IPO, assign the variable 1, otherwise 0
scope_lawfirm	Whether the legal Advisor is the same as that in IPO	When the legal advisor in M&A is the same as that in IPO, assign the variable 1, otherwise 0
scope_total	The number of the financial intermediary that is same as the ones in IPO	The sum of scope_fa， scope_acc_, or add scope_lawfirm
Control variable: the characteristics of takeover		
related_transaction	Whether the deal is	If the deal is related transaction ,assign

	related transaction\	the variable 1, otherwise 0
cash_pay	Whether the deal is paid by cash	If the deal is paid by cash ,assign the variable 1; otherwise 0.
stock_pay	Whether the deal is paid by stock	If the deal is paid by the stock, assign the variable 1, otherwise 0.
cashstock_pay	Whether the deal is paid by both the cansh and stock.	If the deal is paid by the stock and cash,assign the variable 1, otherwise 0.
Deal_value	The value of M&A transaction	It is measured by the target's value, collected from CSMAR M&A database
Relative_size	Relative value of the M&A contract	It is measured by the market value of the bidder firm 4 weeks prior to the M&A event's first announcement
Control variable: the characteristics of bidder		
Leverage	The leverage ratio	The totol debt divided by the book value. The variable is measured by the value one year prior to the M&A announcement.
Size	The scale	The market value of the bidder firm 4 weeks prior to the M&A announcement
Book_to_Market	The ratio of book value to market value	The equity book value one year prior to the M&A announcement divided by the market value of equity 4 weeks prior to the M&A announcement
Cashflow_to_Equity	The ratio of the cash to the equity	The EBITDA divided by the multiple of the total number of outstanding stock and the yearend closing price one prior the M&A announcement
BHR	Buy and holding to maturity return	The buy and hold return from the 205 days to the 6 days prior to the M&A announcement. The formula uses the continuous compound interest to calculate
sigma	The volatility of the buy and hold return	The standard deviation of the daily return ranging from the 205 to the 6 days prior to the M&A announcement.

3. summary statistics

The summary statistics of the dependent variables, independent variables and control variables is calculated as follows. Meanwhile, we also present the result separated by the key variable "financial advisor" .

3.1 total sample summary statistics

VARIABLES	(1) N	(2) mean	(3) sd	(4) min	(5) max
Dependent variables					
cumulative_abnormal_return	1,764	0.000492	0.101	-0.707	0.538
Bidder_Synergies_gain	1,764	10,667	2.305e+06	-1.572e+07	3.444e+07
Succeed	5,628	0.944	0.229	0	1
time_to_resolution	2,233	150.4	127.5	0	835
Finish	5,628	0.397	0.489	0	1
diversifying_deal	5,628	0.198	0.399	0	1
premium_to_buyer	3,473	10,822	5.127e+06	-1.425e+08	2.478e+08
Independent variables					
fa_or_not	5,628	0.278	0.448	0	1
acca_or_not	5,628	0.438	0.496	0	1
lawa_or_not	5,628	0.260	0.438	0	1
assessa_or_not	5,628	0.451	0.498	0	1
income_ma	842	12,817	12,134	10	43,964
sales_ma	1,034	991,939	1.008e+06	7,116	3.409e+06
income_acc	1,539	152,229	105,230	10,089	372,348
scope_fa	5,628	0.00302	0.0549	0	1
scope_acc	5,628	0.0951	0.293	0	1
Scope_lawfirm	5,628	0.0981	0.305	0	2
scope_total	5628	0.1638	0.4487	0	3
Control variables: the characteristics of the M&A contract					
related_transaction	5,264	0.353	0.478	0	1
cash_pay	5,628	0.733	0.442	0	1
stock_pay	5,628	0.0986	0.298	0	1
cashstock_pay	5,628	0.145	0.352	0	1
Deal_value	3,554	1.049e+09	7.748e+09	-2.324e+08	3.417e+11
Relative_size	1,392	48.53	397.3	-45.27	12,062
Control Variables: the characteristics of bidder					
Leverage	4,903	0.452	0.944	0.01000	63.97
Size	2,655	1.111e+07	2.584e+07	-7.413e+06	9.102e+08
Book_to_Market	2,443	532.7	1,000	-691.4	22,433
Cashflow_to_Equity	4,888	0.0913	0.146	-0.888	5.105
Sigma	188	0.0370	0.0141	0.0151	0.0868
BHR	188	0.322	0.499	-0.522	2.235

3.2 summary statistics separated by whether hire the financial advisor

	(1) fa_or_not 0	(2)	(3)	(4)	(5)	(6) fa_or_not 1	(7)	(8)	(9)	(10)
VARIABLES	N	mean	sd	min	max	N	mean	sd	min	max
Dependent variables										
succeed	4,062	0.969	0.172	0	1	1,566	0.879	0.326	0	1

time_to_resolution	1,195	104.3	125.4	0	781	1,038	203.4	107.8	0	835
finish	4,062	0.294	0.456	0	1	1,566	0.663	0.473	0	1
diversifying_deal	4,062	0.141	0.348	0	1	1,566	0.346	0.476	0	1
premium_to_buyer	2,134	17,613	6.542e+06	-1.425e+08	2.478e+08	1,339	0.339	6.832	-0.932	204.8
cumulative_abnormal_return	1,750	0.000612	0.101	-0.707	0.538	14	-0.0144	0.120	-0.374	0.156
Bidder_Synergies_gain	1,750	12,933	2.312e+06	-1.572e+07	3.444e+07	14	-272,580	1.034e+06	-3.414e+06	696,142
Independent variables										
acca_or_not	4,062	0.241	0.428	0	1	1,566	0.950	0.219	0	1
lawa_or_not	4,062	0.00419	0.0646	0	1	1,566	0.922	0.268	0	1
assessa_or_not	4,062	0.261	0.439	0	1	1,566	0.943	0.232	0	1
income_ma						842	12,817	12,134	10	43,964
sales_ma						1,034	991,939	1.008e+06	7,116	3.409e+06
income_acc	539	145,626	102,511	10,089	372,348	1,000	155,788	106,548	10,089	372,348
scope_fa	4,062	0	0	0	0	1,566	0.0109	0.104	0	1
scope_acc	4,062	0.0507	0.219	0	1	1,566	0.210	0.408	0	1
scope_total	4,062	0.0507	0.219	0	1	1,566	0.221	0.435	0	2
Control variables: the characteristics of the M&A contract										
related_transaction	3,748	0.263	0.440	0	1	1,516	0.577	0.494	0	1
cash_pay	4,062	0.966	0.182	0	1	1,566	0.130	0.336	0	1
stock_pay	4,062	0.00714	0.0842	0	1	1,566	0.336	0.472	0	1
cashstock_pay	4,062	0.0108	0.104	0	1	1,566	0.493	0.500	0	1
Deal_value	2,211	4.076e+08	5.260e+09	-2.324e+08	2.358e+11	1,343	2.106e+09	1.056e+10	3,505	3.417e+11
Relative_size	1,356	44.49	398.2	-45.27	12,062	36	200.6	330.4	0.0133	1,447
Control Variables: the characteristics of bidder										
Leverage	3,690	0.468	1.080	0.01000	63.97	1,213	0.403	0.229	0.0200	2.390
Size	2,615	1.105e+07	2.551e+07	-7.413e+06	9.102e+08	40	1.540e+07	4.253e+07	264,010	2.543e+08
Book_to_Market	2,411	534.3	1,006	-691.4	22,433	32	412.1	415.1	21.06	2,248
Cashflow_to_Equity	3,675	0.0972	0.144	-0.888	5.105	1,213	0.0732	0.151	-0.575	1.571
Sigma	185	0.0371	0.0143	0.0151	0.0868	3	0.0349	0.00229	0.0322	0.0362

BHR	185	0.328	0.501	-0.522	2.235	3	-0.0498	0.00659	-0.0536	-0.0422

III. Hypothesis testing and empirical design

1. Hypothesis testing

Our paper examines Chinese financial intermediary's impact on the performance of the takeover activities according to the prior theory and the hypothesis.

(1) Test 1: skilled-advice hypothesis

Hiring financial intermediary is negatively related with the succeed, positively related with finish, negatively related with time_to_resolution, positively related with CAR, positively related with Bidder Synergies gain.

(2)Test 2: passive execution hypothesis

Hiring financial intermediary is positively related with the succeed, positively related with finish, negatively related with time_to_resolution, negatively with CAR, negatively related with Bidder Synergies gain.

(3) Test3: limited capacity hypothesis

CAR is negatively related with hiring financial intermediary, positively related with the the interaction of Deal_value and hiring financial intermediary.

Bidder Synergies gain is negatively related with hiring financial intermediary, positively related with the the interaction of Deal_value and hiring financial intermediary.

(4)Test 4: selfish professional institution hypothesis

CAR is negatively related with the interaction of stock_pay and financial intermediary

Bidder Synergies gain is negatively related with the interaction of stock_pay and financial intermediary

(5) Test 5: information advantage hypothesis

Diversifying_deal is positively related with hiring financial intermediary.

(6)Test6: matching transaction hypothesis

Premium_to_buyer is positively related with hiring financial intermediary

2. Empirical design

Our empirical work consists of three parts, the first one is the OLS fixed effect model, the second one is the Heckman two stage model and switching regression model to do counterfactual examination. Specifically, the Heckman two stage model aims to solve the endogeneity problem driven by the selection bias when the firm choose the financial intermediary; the switching mode aims to observe the impact of choosing financial intermediary for the firms who initially doesn't choose the FA, or vice verse.The third one is the policy evaluation, by DID method on the November 23, 2014 of "Amendment of the regulation of the corporate takeover "

2.1 OLS fixed effect model

The dependent variable includes the measure for efficiency and performance outcome. The measures for efficiency consist of the possibility of the successful occurrence of takeover, the chance of finishing, time consumed to complete, whether the M&A is for business diversification and takeover premium. The measures for the performance contains the CAR(-5,5) bidder synergies' gain.

$$Y_{i,t} = \alpha + \beta_1 FA_{i,t} + \beta_2 ACCA_{i,t} + \gamma\, Controls_{it} + \mu_i + \eta_t + \varepsilon_{it} \quad (1)$$

We control the time and firm fixed effect. Due to the equal impact of the macroeconomic factors at the same time and the existence of auto-correlation of the outcome of takeover for different firm and the same year, we only cluster by year to calculate the robust standard error. The dependent variable Y means seven variables: CAR, Bidder_synergies, succeed, time to resolution, finish, diversifying_deal, premium_to_buyer.

The independent variables is whether hire financial intermediary(financial advisor, accounting firm). we first consider fa_or_not and acca_or_not. For the impact on the performance , apart from the whether use FA, we also take the reputation of financial institution into account . The reputation of FA is measured by either the income from takeover (income_ma,)and total income(sales_ma), while the reputation of accounting firm is represented by the income from takeover(income_acc)

The control variables include the characteristics of bidder and the takeover contract.

2.2 Heckman two stage model and switching regression model

(1) Heckman two stage model

We show the principle of the model by only considering the cross-section variable, rather than the panel data version for convenience.

First stage:

$$FA_i = Z_i'\,\beta + \varepsilon_i \quad (2)$$

where vector Z_i' contains a series of factors that will influence the choice of financial advisor. When the error term ε_{it} in equation (1) is correlated with ε_i in equation (2), which indicates the OLS regression in (1) is biased, equation (1) can be written as:

The second stage:

$$Y_i = w\frac{\varphi(Z_i'\,\beta)}{\phi(Z_i'\,\beta)} \times FA_i + w\frac{-\varphi(Z_i'\,\beta)}{1-\boldsymbol{\phi}(Z_i'\,\beta)} \times (1 - FA_i) + X_i'\gamma + v_i \quad (3)$$

where, $\varphi(\cdot), \phi(\cdot)$ means the normal distribution density function and cumulative distribution function. Coefficient w illustrates the impact of whether chooses financial advisors FA_i on the dependent variable Y_{it}. $\frac{\varphi(Z_i'\,\beta)}{\phi(Z_i'\,\beta)}$ means IMR, is added to the second stage equation as the explanation variable. X_i' are the control variables.

In the empirical process, we use the probit regression in the first stage

$$fa\ or\ not_{it} = \text{probit}(\alpha + \beta_1 \text{Scope} + \gamma\, \text{controls}_{it} + \varepsilon_{it}) \quad (4)$$

Inverse Mills ratio(IMR) is predicted , which is assumed to be Mills for incorporating into the second stage model.

$$Y_{it} = \alpha + w \times Mills + \gamma\, Controls_{it} + \eta_t + \varepsilon_{it} \quad (5)$$

We focus on the significance of the coefficient of Mills (w)

According to Li, Prabhala(2017), we are supposed to add a self selection variable only in the first stage model. The variable should only impact the choice of whether hire financial advisor, with no effect on the dependent variables in the second stage equiation..

Our paper use Scope _total as the self-selection variable, which means "whether the financial intermediary is the same as that in IPO" when a public firm choose to hire financial intermediary in M&A, if the institution is the same as that in the process of IPO, scope_total is larger than 0, otherwise is 0. When either FA or the accounting firm is same as that in IPO, scope_total=1. When both the FA and the accounting are same as that in IPO, scope_total=2. For the sake of the effectiveness of the variable, when the selection equation will remove the self-selection variable for multi-linear problem, we will change the definition moderately by considering the legal advisor, which can also be explained by the same economics intuition.

$$\text{Scope total} = \text{Scope fa} + \text{Scope acc} + \text{scope law}$$

The intuition of choosing the self-selection variable is : when a firm choose the same financial intermediary in M&A as that in IPO, on one hand, the firm is familiar with the agency; on the other hand, the agency has helped the firm a lot at the IPO, leading to more trust on this institution. Thus, the firm choose to resort to this financial agency. "whether the financial intermediary is the same as that in IPO" addresses the extent of trust of financial intermediary for the firm. If a firm find the same institution (either the FA, accounting firm or the legal advisor), the firm seems more likely to trust the financial intermediary. The extent of the trust will impact whether the firm choose FA. Therefore, "whether the financial intermediary is the same as that in IPO" can be related with the dependent variable in the first stage(selection model).

In addition, "whether the financial intermediary is the same as that in IPO" has no relation to the M&A efficiency and performance because the variable only represent how the firm believe in the intermediary, which is only the selection of the firm and will not affect the outcome of the M&A. The ability of the financial intermediary will not be related with the trust of the firms.

Since the self selection variable has no relevance to the event of M&A in the probit regression, we can assume there is no auto-correlation between the firms in a given year. We can use the simple standard error rather than clustering by year. We still control the year and firm fixed effect. Owing to the self-selection variable's property of remaining constant with time, we can ignore the firm fixed effect, only control time fixed effect.

(2) switching regression model

Heckman model's outcome equation(second stage, equation (3)) can be extended to two outcome equation with and without FA, we can call it endogenous switching regression model.

$$y_{1i} = X_i'\gamma_1 + \mu_{1i} \quad (6)$$

$$y_{2i} = X_i'\gamma_2 + \mu_{2i} \quad (7)$$

equation(6) is the sample with FA, (7) is the same transaction but assume them fail to use FA. Since we can only see one outcome, there exist a counterfactual case.

Now we consider the case: for the takeover transaction with FA, suppose it fail to use FA,the potential impact of the counterfactual of this casecan be shown by the following equation:

$$E(y2i|FA_i = 1) = E[X_i'\gamma_2 + \mu_{2i}|Z_i'\beta + \varepsilon_i > 0\ ]$$

$$= E[X_i'\gamma_2 + \mu_{2i} + \text{cov}(\mu_{2i}, \varepsilon_i)\frac{\varphi(Z_i'\beta)}{\phi(Z_i'\beta)}\ ]$$

The difference between the hypothetical outcome and the real outcome is

$$E[y_{2i}|FA_i = 1] - y_{1i}$$

$$E[y_{1i}|FA_i = 0] - y_{2i}$$

2.3 DID method

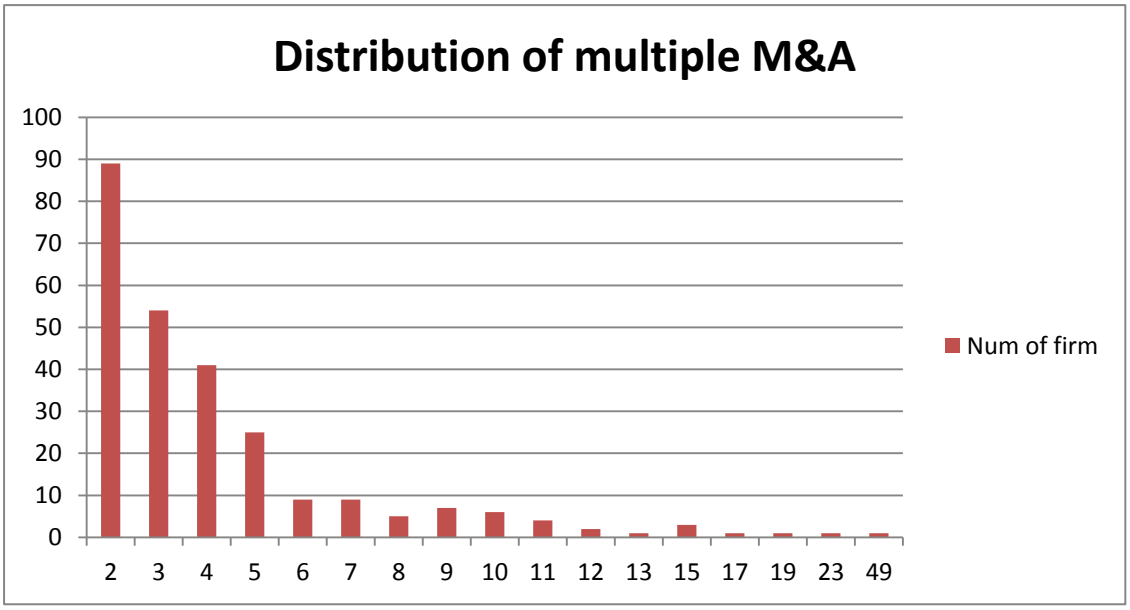
From 2007 to 2016, CRSC issued and amended 5 regulation concerning the large asset restricting and corporate takeover. The regulation on November 23, 2014 is the our focus since there are two policy: "Amendment of the regulations of the acquisition of public company" and "Amendment of the Regulations of major assets restructuring " .It required the firm to hire FA in some circumstance and the duty of FA is clearly restricted, which pose a new challenge to the financial advisor in M&A. For the FA with misconduct and malpractice will be punished harshly. Under the policy background, importance of hiring the financial advisors is emphasized. We can use the event on November 23,2014 as the exogenous shock to examine the role that financial intermediary play in corporate takeover. The identification of empirical study is as follows:

We separate the firms with multiple M&A events during 2009 and 2016 period into two groups. The samples in treatment group always choose FA in all the M&A it engages（$Treated_i = 1$）, while the firms in control groups always choose not to hire FA in all the M&A it engages（$Treated_i = 0$）.we define $Policy_t = 1$ when the event date is after November 23, 2014, otherwise $Policy_t = 0$. Our identification model is :

$$Y_{i,t} = \alpha + \beta_1 Treated_i + \beta_2 Policy_t + \beta_3 Policy_t \times Treated_i + Controls_{it} + \varepsilon_{it}$$

In our sample, there are 1143 transactions satisfy our requirement. There are 68 firms always choose FA while 1075 firms always choose not to hire FA.

The distribution of the acquisition number per firm is shown in the figure: the horizontal coordinate means the number of the occurrence of M&A per firm, the vertical coordinate means the frequency.



IV. Empirical Result

1. OLS fixed effect model result: compare the "skilled advice" and "passive execution"hypothesis

From the OLS regression result, we can see the impact of FA on takeover performance

Result (1): the probability of successful occurrence of M&A is negatively related with the FA and has no relation with accounting firm.

Result(2): the time consumed in the completion is will be enlarged when the FA is concerned, but the accounting firm has no impact.

Result(3) : the chance of finishing deal is postivily related with FA and acounting firm.

Result (4): the business diversifcation has no relation with FA and accounting firm.

Result (5): The takeover premium has positive relation with A and accouing firm.

	(1) succeed	(2) time_to_resolution_w	(3) finish	(4) diversifying_deal	(5) premium_to_buyer_w
fa_or_not	-0.0478***	54.57**	0.172***	0.00339	0.0546**
	(0.00358)	(19.93)	(0.0407)	(0.0122)	(0.0177)
acca_or_not	0.0108	7.057	0.0744*	-0.0144	0.0434*
	(0.00731)	(11.63)	(0.0359)	(0.0106)	(0.0184)
Leverage	0.0657	70.97	-0.389	0.00220	-0.140**
	(0.0646)	(66.31)	(0.266)	(0.0741)	(0.0534)
Cashflow_to_Equity	-0.125**	-327.1*	-0.0592	-0.0746**	-0.515***
	(0.0467)	(131.5)	(0.154)	(0.0270)	(0.144)
Deal_value	2.00e-13	7.62e-09*	-5.58e-14	-1.80e-14	3.69e-11**
	(2.47e-13)	(3.71e-09)	(2.57e-13)	(2.17e-14)	(1.09e-11)
cash_pay	-0.0622**	-29.02	-0.108	-0.0797	0.0420**
	(0.0197)	(15.00)	(0.0982)	(0.0465)	(0.0135)
stock_pay	-0.0997**	0	0.0563	-0.0698	0
	(0.0319)	(.)	(0.0639)	(0.0523)	(.)
cashstock_pay	-0.125***	9.122	-0.00775	-0.0709	0.0272*
	(0.0239)	(12.17)	(0.0724)	(0.0520)	(0.0121)
related_transaction	0.0115	17.00**	-0.0380**	-0.00139	0.0245***
	(0.0168)	(4.254)	(0.0159)	(0.0107)	(0.00518)

_cons	0.956***	210.4***	-0.138	-0.858***	0.271***
	(0.0428)	(31.48)	(0.171)	(0.0188)	(0.0363)
N	2924	1356	2924	2924	2856
R^2	0.669	0.892	0.733	0.962	0.642
Year Fixed	Y	Y	Y	Y	Y
Firm Fixed	Y	Y	Y	Y	Y

Standard errors in parentheses ; cluster by year
* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Result (6): choosing FA and accounting firm have no impact on the CAR and bidder synergies. Considering the reputation of the financial intermediary, the reputation of financial advisor can negatively affect the CAR and synergies, while the reputation of accounting firm can significantly raise the synergies.

	(1) cumulative_abnormal_return	(2) Bidder_Synergies_gain	(3) cumulative_abnormal_return	(4) Bidder_Synergies_gain	(5) cumulative_abnormal_return	(6) Bidder_Synergies_gain
fa_or_not	-0.0372	-630360.0				
	(0.0527)	(465915.5)				
acca_or_not	0.00574	138187.2				
	(0.00742)	(77236.6)				
income_ma			-0.0000788**	-719.0***		
			(0.0000247)	(180.5)		
income_acc			-3.97e-08	0.871***	-8.17e-08	0.485
			(4.56e-08)	(0.161)	(6.94e-08)	(0.395)
sales_ma					-9.15e-08	-1.290
					(0.000000132)	(1.103)
Size	-2.67e-09***	0.0130	-2.56e-09***	0.0150	-2.72e-09***	0.0136
	(3.81e-10)	(0.0120)	(3.84e-10)	(0.0123)	(3.63e-10)	(0.0115)
Book_to_Market	0.0000250*	159.5	0.0000322	244.9	0.0000224	166.7
	(0.0000120)	(162.9)	(0.0000200)	(195.8)	(0.0000116)	(152.3)
Leverage	-0.207	-4933901.9	-0.199	-4735833.8	-0.220	-4924542.8
	(0.114)	(3390473.8)	(0.121)	(3433828.8)	(0.120)	(3401564.7)

Cashflow_to_Equity	-0.226***	-616809.3	-0.250***	-792678.5	-0.221***	-571948.9
	(0.0219)	(908781.4)	(0.0467)	(950109.9)	(0.0241)	(920480.1)
Deal_value	-1.69e-11*	-0.0000675	-1.43e-11	-0.0000391	-1.74e-11*	-0.0000634
	(8.68e-12)	(0.0000399)	(7.89e-12)	(0.0000314)	(8.34e-12)	(0.0000437)
Relative_size	0.000176	588.7	0.000167	541.3	0.000175	614.4
	(0.000129)	(564.6)	(0.000119)	(540.7)	(0.000121)	(571.6)
cash_pay	0.0596	294216.0	0.0656	241269.6	0.0680	264023.4
	(0.133)	(1209025.3)	(0.125)	(1209186.3)	(0.122)	(1187490.3)
stock_pay	0.117	188551.7	0.143	287368.7	0.127	169145.7
	(0.0991)	(764516.1)	(0.100)	(832339.6)	(0.103)	(790298.8)
related_transaction	0.0215	99757.9	0.0209	100361.6	0.0211	102213.6
	(0.0148)	(106307.2)	(0.0139)	(107644.8)	(0.0137)	(106916.8)
_cons	-0.00830	1087489.7	-0.00586	1053311.2	0.00379	1139570.7
	(0.187)	(2530329.2)	(0.189)	(2617144.3)	(0.180)	(2516363.3)
N	810	810	810	810	810	810
R^2	0.669	0.507	0.682	0.511	0.669	0.507

From the table's column(1)-(3), we find the efficiency role of intermediary can be supported. The result is in favor of "skilled-advice" hypothesis, the financial advisor can better design the whole M&A procedure and use the professional knowledge to make the deal easily finished. The successful occurrence is low due to he ability of turn down the bad deal, which indicates the high trustworthiness of FA. However, we cannot find the performance role of intermediary.

From column(4)-(5), we can see the result support "matching transaction" hypothesis and oppose the "information advantage" hypothesis.

We need to analyze the cause of failure of performance role the information advantage of financial intermediary.

2. Channel examination: test the "limited capacity" and "selfish professional institution" hypothesis to look into the cause of failure of the performance role of FA

(1) "selfish professional institution" hypothesis

We still control the time and firm fixed effect and cluster by year to calculate the standard error. We construct the interaction term stockpay_fa by multiplying the fa_or_not and stock_pay, moreover, the same way is applied to the FA's reputation to get the interaction term

stockpay_incomema and stockpay_salesma.

We find the performance is negatively related to the interaction of FA and paid by stock transaction, meanwhile the reputation of FA(measured by total income) is also negatively related with the interaction term. This can explained the "selfish professional institution" hypothesis since the M&A transaction with stock paid will perform worse when the FA is involved. The financial institution can use the equity finance to impose its influence on the firms to make the value-destroying deal to happen, for the sake of the interest of the intermediary.

	(1) cumulative_abnormal_return	(2) Bidder_Synergies_gain	(3) cumulative_abnormal_return	(4) Bidder_Synergies_gain	(5) cumulative_abnormal_return	(6) Bidder_Synergies_gain
fa_or_not	0.00845	-299175.7				
	(0.0412)	(448987.9)				
stock_pay	0.229*	1069007.2	0.169*	427733.4	0.223*	1000360.3
	(0.0949)	(951164.9)	(0.0798)	(706655.7)	(0.0914)	(893808.4)
stockpay_fa	-0.273**	-2004417.1**				
	(0.0795)	(810803.8)				
stockpay_incomema			-0.00000496	-9.343		
			(0.00000451)	(42.12)		
income_ma			-0.0000812**	-685.9***		
			(0.0000239)	(169.4)		
stockpay_salesma					-0.000000750**	-5.534*
					(0.000000222)	(2.346)
sales_ma					-3.23e-08	-0.888
					(8.32e-08)	(0.803)
Size	-2.68e-09***	0.0132	-2.54e-09**	0.0142	-2.67e-09***	0.0132
	(3.39e-10)	(0.0113)	(3.77e-10)	(0.0121)	(3.22e-10)	(0.0112)
Book_to_Market	0.0000207	124.4	0.0000340	213.6	0.0000222*	132.2
	(0.0000113)	(135.7)	(0.0000205)	(211.6)	(0.0000114)	(152.3)

Leverage	-0.207	-4959199.3	-0.193	-4847302.7	-0.207	-4963951.0
	(0.115)	(3435217.8)	(0.120)	(3489485.7)	(0.115)	(3440926.5)
Cashflow_to_Equity	-0.216***	-506440.5	-0.252***	-737122.0	-0.221***	-525444.7
	(0.0235)	(871199.0)	(0.0492)	(992564.5)	(0.0234)	(931872.9)
Deal_value	-1.30e-11*	-0.0000341	-1.47e-11*	-0.0000482	-1.34e-11*	-0.0000411
	(6.02e-12)	(0.0000519)	(7.49e-12)	(0.0000300)	(5.87e-12)	(0.0000561)
Relative_size	0.000175	589.6	0.000167	526.9	0.000175	590.8
	(0.000127)	(508.4)	(0.000122)	(464.2)	(0.000127)	(508.8)
cash_pay	0.0638	338687.1	0.0616	322563.5	0.0633	332781.3
	(0.128)	(1109376.6)	(0.127)	(1105333.5)	(0.128)	(1108440.2)
related_transaction	0.0197	85485.6	0.0206	95397.9	0.0197	86656.6
	(0.0140)	(104142.8)	(0.0139)	(98395.1)	(0.0140)	(103255.4)
_cons	-0.00478	1179607.3	-0.0100	1140572.0	-0.00493	1181183.8
	(0.186)	(2492585.1)	(0.192)	(2560334.2)	(0.186)	(2495552.9)
N	810	810	810	810	810	810
R^2	0.673	0.508	0.682	0.511	0.673	0.508
Year Fixed	Y	Y	Y	Y	Y	Y
Firm Fixed	Y	Y	Y	Y	Y	Y

Standard errors in parentheses

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

(2) “limited capacity”hypothesis

We still control the time and firm fixed effect and cluster by year to calculate the standard error. We construct the interaction term Dealvalue_fa by multiplying the fa_or_not and Deal_value, moreover, the same way is applied to the FA’s reputation to get the interaction term Dealvalue_incomema and Dealvalue_salesma.

We find that when FA engage in the deal , the target with higher value can perform worse since both the CAR and bidder synergies are negatively related with interaction term, which contradict the “limited capacity”hypothesis.

The result can be explained by the “skilled advice ”hypothesis. Only when the financial

institution involves in the lower value target's M&A can it impact positively to the performance. Thus if the trustworthiness is not so high in the view of bidder firms. It seems likely that Chinses takeover market is immature , inducing the advice of FA can hardly ever be followed by the clients. The effect is amplified when the bidder who can transact larger deal tend to be huge in scale, aggressive and hubris since they disregard the warning from the financial advisors even the deal is detrimental.

	(1) cumulative_abnormal_return	(2) Bidder_Synergies_gain	(3) cumulative_abnormal_return	(4) Bidder_Synergies_gain	(5) cumulative_abnormal_return	(6) Bidder_Synergies_gain
dealvalue_fa	-5.43e-11**	-0.000544***				
	(1.64e-11)	(0.0000627)				
fa_or_not	0.0449	189741.3				
	(0.0264)	(232876.4)				
Deal_value	-9.81e-12	0.00000761	-7.53e-12	0.0000218	-8.29e-12	0.0000196
	(6.35e-12)	(0.0000347)	(5.74e-12)	(0.0000451)	(5.53e-12)	(0.0000446)
dealvalue_incomema			-2.62e-14*	-0.000000279***		
			(1.14e-14)	(5.02e-08)		
income_ma			-0.0000690**	-563.2**		
			(0.0000253)	(180.3)		
dealvalue_salesma					-1.87e-16**	-1.88e-09***
					(6.15e-17)	(2.47e-10)
sales_ma					4.79e-08	0.0699
					(7.52e-08)	(0.661)
Size	-2.65e-09***	0.0134	-2.51e-09***	0.0144	-2.63e-09***	0.0135
	(3.68e-10)	(0.0116)	(3.74e-10)	(0.0120)	(3.58e-10)	(0.0116)
Book_to_Market	0.0000176	82.20	0.0000299	173.3	0.0000186	88.03
	(0.00000958)	(168.6)	(0.0000200)	(225.0)	(0.0000102)	(178.0)
Leverage	-0.208	-4967056.6	-0.194	-4851706.1	-0.207	-4961313.5
	(0.112)	(3393715.6)	(0.115)	(3439822.8)	(0.111)	(3390566.8)

Cashflow_to_Equity	-0.211***	-433735.3	-0.251***	-725246.8	-0.216***	-474675.6
	(0.0221)	(938069.6)	(0.0455)	(1017588.1)	(0.0236)	(966995.6)
Relative_size	0.000175	590.8	0.000167	520.9	0.000175	584.1
	(0.000128)	(529.6)	(0.000123)	(484.0)	(0.000128)	(533.2)
stock_pay	0.174	807179.9	0.201*	1034159.2	0.185	896374.2
	(0.101)	(887791.8)	(0.0989)	(952747.4)	(0.110)	(963706.9)
cash_pay	0.0657	366862.4	0.0664	371005.9	0.0666	373559.6
	(0.129)	(1121037.4)	(0.127)	(1110742.2)	(0.129)	(1122523.8)
related_transaction	0.0205	89534.6	0.0200	84814.5	0.0203	87872.8
	(0.0143)	(105330.7)	(0.0138)	(102304.3)	(0.0143)	(104695.5)
_cons	-0.00415	1184698.4	-0.00991	1140287.9	-0.00482	1180146.7
	(0.185)	(2482632.3)	(0.190)	(2545147.2)	(0.185)	(2486846.3)
N	810	810	810	810	810	810
R^2	0.672	0.509	0.685	0.512	0.674	0.509
Year Fixed	Y	Y	Y	Y	Y	Y
Firm Fixed	Y	Y	Y	Y	Y	Y

Standard errors in parentheses

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

(3) The impact of the bidders' own competitive capacity

The failure of he information advantage can be attribute to the ignorance of the fact that the experience FA seems unlikely to help an arbitrary firm to undertake the cross-industry takeover. Owing to the FA's advisory role, it will evaluate whether the firm is capable enough to compete in the new industry. We define the competiveness of the firm by its historical performance, according to Golubov，Petmezas,Travlos(2012), the historical performance is represented by the firm's buy and hold return, which is the buy and hold return from 205 to 6 days prio to the M&A event. We also use the volatility of the historical return to measure the stability, which is the daily return's standard deviation during (-205,-6)

Besides, we also consider how the historical return will affect the role of FA in the M&A performance, we also consider the interaction term between the buy and hold return with CAR and Bidder Synergies gains

Moreover, we also consider the effect of the competitive capacity of the current industy, measure by the size of the firm.

We only control the time fixed effect and use the simple standard error.

3.1 use the buy and hold return to measure the historical performance

We find the FA and BHR's interaction is positively related with Diversifying business

takeover, which means the intermediary are more likely to help the firm with high historical performance to undertake cross-industry takeover.

The interaction term is not significantly related with the performance, implying the financial intermediary's concern about the firm's competitive capacity is not from the historical return. The performance of the takeover may be influenced by other factors such as scale of the firm.

	(1) diversifying_deal	(2) cumulative_abnormal_return	(3) Bidder_Synergies_gain
fa_or_not	4.682***	-0.523	62844.0
	(1.371)	(0.669)	(9032207.2)
fa_BHR	87.99***	-10.16	2715613.6
	(27.47)	(13.41)	(181519643.9)
BHR	0.00619	-0.0203	-884043.1***
	(0.0451)	(0.0220)	(306154.9)
sigma	0.964	-1.395	-17916938.6
	(2.345)	(1.145)	(12691991.1)
Size	1.33e-09	-3.80e-09***	-0.103***
	(2.78e-09)	(1.36e-09)	(0.0189)
Book_to_Market	0.0000382	0.00000953	-426.6
	(0.0000869)	(0.0000424)	(498.1)
Leverage	0.209	-0.0205	-930531.5
	(0.145)	(0.0708)	(943400.7)
Cashflow_to_Equity	-0.164	-0.0824	177773.0
	(0.382)	(0.187)	(2530395.1)
Deal_value	-4.46e-11	1.59e-11	0.00162
	(1.47e-10)	(7.18e-11)	(0.000985)
Relative_size	0.000156	0.000103	-3575.5
	(0.000602)	(0.000294)	(3914.0)
cash_pay	0.0632	0.399***	2551559.9*

	(0.221)	(0.108)	(1527159.8)
stock_pay	0.0209	0.410***	3363000.1*
	(0.286)	(0.140)	(1973690.7)
related_transaction	-0.0689	-0.0517*	-323878.7
	(0.0590)	(0.0288)	(395591.5)
_cons	-0.158	-0.452***	-603402.4
	(0.332)	(0.162)	(1742190.8)
N	118	118	118
R^2	0.217	0.270	0.386
Year Fixed	Y	Y	Y

3,2 use the firm size as the measure for current business' competitive capacity

	(1) diversifying_deal	(2) premium_to_buyer_w	(3) cumulative_abnormal_return	(4) Bidder_Synergies_gain
fa_Size	1.13e-08	-3.80e-08*	-5.82e-08**	-0.500***
	(4.98e-08)	(1.50e-08)	(1.71e-08)	(0.0958)
fa_or_not	0.172	0.317	0.279**	2081391.1**
	(0.380)	(0.164)	(0.0858)	(630840.4)
Size	3.95e-10	8.78e-10	-2.68e-09***	0.0131
	(3.53e-10)	(9.48e-10)	(3.33e-10)	(0.0111)
N	810	782	810	810
R^2	0.948	0.741	0.686	0.512
Year Fixed	Y	Y	Y	Y
Firm Fixed	Y	Y	Y	Y
Controls	Y	Y	Y	Y

Standard errors in parentheses

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

	(1) diversifying_deal	(2) cumulative_abnormal_return	(3) Bidder_Synergies_gain
incomema_Size	-1.35e-11***	-1.78e-11***	-0.000142***
	(3.19e-12)	(2.20e-12)	(0.0000215)
income_ma	0.000307***	0.0000520**	372.9*

	(0.0000143)	(0.0000195)	(156.8)
Size	5.80e-11	-2.63e-09***	0.0134
	(1.43e-10)	(3.45e-10)	(0.0115)
N	810	810	810
R^2	0.963	0.691	0.513
Year Fixed	Y	Y	Y
Firm Fixed	Y	Y	Y
Controls	Y	Y	Y

Standard errors in parentheses

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

	(1) diversifying_deal	(2) cumulative_abnormal_return	(3) Bidder_Synergies_gain
salesma_Size	-1.46e-13*	-1.25e-13**	-0.00000114***
	(7.30e-14)	(4.40e-14)	(0.000000273)
sales_ma	0.00000129*	0.000000496**	4.037*
	(0.000000557)	(0.000000185)	(1.719)
Size	3.36e-10	-2.70e-09***	0.0129
	(2.68e-10)	(3.27e-10)	(0.0110)
N	810	810	810
R^2	0.951	0.676	0.509
Year Fixed	Y	Y	Y
Firm Fixed	Y	Y	Y
Controls	Y	Y	Y

Standard errors in parentheses

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

From the result of the size's impact on the role that financial advisor play in the performance of takeover ,the cross industry M&A occurrence and the takeover premium, we find that the takeover premium still has nothing to do with the financial advisor. The business diversification takeover, performance are negatively related to the interaction of the reputation of the FA and size of firm. It suggests that only when the small-scale firms mandate the high reputational FA to do the cross industry takeover can the FA with high reputation accept the mandate, further achieve higher CAR and synergies. The small size implies the firm cannot perform well in the initial industry, which leads to the FA assisting the firms undertake the cross industry M&A.

The result of premium can futher explained the following problem endogeneity when we use the Heckman two stage model. Why the premium become negatively correlated with the FA in Heckman model while positive correlation in the OLS model. This can be explained by the "skilled advice "hypothesis, the large firm are more likely to have stronger ability. When they

can independently choose the FA in the Heckman model, as is the case when we consider endogeneity problem, the large firm will not follow the advice of FA even FA want to turn down the bad deal. More often than not, when the sample of large firm is big, who will ignore the suggestion of FA, the performance of takeover can more frequently be negative related to the FA

4. Heckman two stage model: when the impact of FA on performance has selection bias

Financial intermediary's influence on performance of M&A will be biases if we use OLS regression. We resort to the Heckman two stage model to solve the selection bias problem .In the selection equation,we use the self selection variable "Scope_total", which remains constant through time, thus we only control the time fixed effect. The outcome equation controls the time and firm fixed effect and simple standard error.

4.1 Result of efficiency of takeover

Firstly, in the selection equation, the self selection variable is positively related with the FA's choice, which can verify our guess. In the outcome equation, we can see the impact of FA by the coefficient of "mills" and let go of the sign of the acc_or_not, which is only the control variable now. We find the FA can reduce the time consumed and improve the probability of finishing, while the possibility of successful occurrence of M&A is insignificant. Now we cannot say that the "skilled advice" hypothesis is absolutely right in the view of effectiveness. This is due to the endogeneity problem, when the firm can independently choose the FA, it can choose the intermediary which can benefit them more, which may weaken the trustworthiness of the financial intermediary. Then it is hard to distinguish the two hypothesis.

	(1)	(2)	(3)	(4)	(7)	(8)
	fa_or_not	succeed	time_to_resolution	finish	diversifying_deal	premium_to_buyer_w
main						
mills		-0.0478	-129.6**	0.638***	0.0350	-0.123**
		(0.0584)	(56.76)	(0.141)	(0.0307)	(0.0511)
acca_or_not		-0.00264	25.61**	0.135***	-0.0123**	0.0560***
		(0.0117)	(12.86)	(0.0282)	(0.00617)	(0.0104)
scope_total	0.341***					
	(0.109)					
Leverage	-0.732***	0.0697	248.9***	-0.645***	-0.0678*	-0.104
	(0.184)	(0.0751)	(87.34)	(0.181)	(0.0395)	(0.0657)
Cashflow_to_Equity	-0.887***	-0.0745	-257.0**	-0.585***	-0.0932**	-0.0305
	(0.295)	(0.0895	(126.3)	(0.216)	(0.0471)	(0.0808)

		)				
related_transaction	0.244***	0.00381	6.619	0.0695**	0.00532	0.0114
	(0.0793)	(0.0142)	(12.33)	(0.0341)	(0.00744)	(0.0124)
cash_pay	-2.933***	0.170*	137.9	-1.331***	-0.0765	0.175**
	(0.0950)	(0.102)	(95.94)	(0.245)	(0.0536)	(0.0891)
Deal_value	7.22e-12	1.12e-13	4.92e-09**	1.44e-12	7.44e-14	-5.32e-14
	(4.78e-12)	(5.04e-13)	(2.29e-09)	(1.21e-12)	(2.65e-13)	(4.37e-13)
stock_pay	0.181	0.0136	-24.99*	0.0820*	-0.00316	-0.0240
	(0.151)	(0.0184)	(14.92)	(0.0444)	(0.00969)	(0.0161)
_cons	1.532***	0.957**	389.0***	-0.00831	-0.833***	0.210
	(0.131)	(0.218)	(58.53)	(0.525)	(0.115)	(0.189)
N	2914	2917	1355	2917	2917	2849
R^2		0.666	0.878	0.735	0.962	0.635
Year Fixed	Y	Y	Y	Y	Y	Y
Firm Fixed	N	Y	Y	Y	Y	Y

Standard errors in parentheses

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Furthermore, to consider the role of the accounting firm, we change the dependent variable in the selection equation to be acc_or_not, then put the calculated IMR in to the outcome equation. The coefficient of IMR can measure the role of the accounting firm.

The result shows that accounting firm can have positive effect on the finishing of M&A and increase the business diversification takeover. The information advantage hypothsis can be applied in the accounting firm.

	(1) acca_or_not	(2) succeed	(3) time_to_resolution	(4) finish	(5) diversifying_deal	(6) premium_to_buyer_w
main						
mills		-0.0323*	-3.649	-0.0869***	0.0152**	-0.0475***
		(0.0167)	(12.82)	(0.0333)	(0.00730)	(0.0148)
fa_or_not		-0.0681***	68.88***	0.248***	0.00567	0.0793***
		(0.0188)	(16.31)	(0.0375)	(0.00823)	(0.0171)

scope_total	3.150***					
	(0.291)					
Leverage	-0.243**	0.00883	-67.10	-0.230*	0.0521*	-0.114*
	(0.0955)	(0.0616)	(55.42)	(0.123)	(0.0270)	(0.0602)
Cashflow_to_Equity	0.894***	-0.212***	-431.8***	-0.0933	-0.152***	-0.118*
	(0.191)	(0.0786)	(113.2)	(0.157)	(0.0344)	(0.0717)
related_transaction	0.438***	-0.00447	12.63	-0.0353	0.00544	0.0167*
	(0.0487)	(0.0110)	(9.335)	(0.0219)	(0.00481)	(0.0101)
cash_pay	-1.656***	0.0865***	-27.45	-0.0188	-0.0227**	0.0454**
	(0.0633)	(0.0227)	(18.72)	(0.0454)	(0.00996)	(0.0199)
_cons	0.800***	1.050***	814.8***	0.0615	-0.0748	0.220
	(0.0747)	(0.145)	(102.1)	(0.290)	(0.0636)	(0.189)
N	4564	4564	1736	4564	4564	2856
R^2		0.556	0.823	0.634	0.942	0.634
Year Fixed	Y	Y	Y	Y	Y	Y
Firm Fixed	N	Y	Y	Y	Y	Y

Standard errors in parentheses

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

4.2 The result of acquisition performance

We consider the case with historical return :BHR and its volatility sigma as the controls or not

(1)Result that without BHR

The FA is positively related to the CAR and does not affect the synergies, whereas the accounting firm also have negative effect on CAR and positive effect on synergies.

The result is consistent with the OLS result that they fail to improve performance of takeover. The accounting firm can have better effect than FA in the performance, which can be owing to the auditing and monitoring role of accounting firm in reducing bidders' risk.

	(1) fa_or_not	(2) cumulative_abnormal_return	(3) Bidder_Synergies_gain	(4) acca_or_not	(5) cumulative_abnormal_return	(6) Bidder_Synergies_gain
main						
mills		-0.109*	-516904.1		0.393	38876252.3***
		(0.0633)	(1330462.0)		(0.528)	(11249160.9)
acca_or_not		0.000287	21473.1			

		(0.00673)	(141477.6)			
fa_or_not					-0.0389	-711872.4
					(0.0408)	(870218.3)
scope_total	0.223			0		
	(0.459)			(.)		
Leverage	-1.053	0.0881	77977.6	0.0544	0.00183	1393111.5**
	(0.846)	(0.0640)	(1344581.3)	(0.197)	(0.0283)	(602571.5)
Cashflow_to_Equity	-1.031	0.0611	-529996.7	0.992**	0.248	27190651.2***
	(2.257)	(0.0681)	(1431486.0)	(0.403)	(0.385)	(8196244.6)
Size	3.49e-09	2.73e-11	0.0455***	-4.14e-09	-8.96e-10	-0.0770**
	(1.36e-08)	(2.81e-10)	(0.00591)	(3.16e-09)	(1.72e-09)	(0.0366)
Book_to_Market	0.000385	-0.0000203	35.03	0.00000181	0.0000191**	420.7**
	(0.000360)	(0.0000240)	(504.3)	(0.000117)	(0.00000921)	(196.3)
related_transaction	-0.241	0.0358**	210144.4	0.206**	0.0727	6364497.7***
	(0.446)	(0.0157)	(330317.6)	(0.0899)	(0.0855)	(1822302.1)
cash_pay	-1.664***	0.182*	915086.6	-0.189	-0.0298	-5524949.7***
	(0.453)	(0.0962)	(2022534.0)	(0.306)	(0.0800)	(1706155.0)
_cons	-0.804	0.101	-1277074.8	-0.855***	-0.607	-56861658.3***
	(0.587)	(0.105)	(2210940.7)	(0.323)	(0.748)	(15947002.2)
N	1516	1516	1516	1442	1442	1442
R^2		0.018	0.090		0.018	0.099
Year Fixed	N	Y	Y	N	Y	Y

Standard errors in parentheses

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

(2) result with BHR and sigma

The buy and hold return can measure the companies' total competitive ability, which may help explain the inability of FA to improve the takeover performance.

We find that after including the BHR and sigma as controls, FA can improve the CAR while the accounting firm has no effect on the performance.

More importantly, we find the BHR and sigma is negatively related to CAR. This can illustrate the reason of inability of the FA on takeover performance can be attributed to the low ability of bidder firms. The real effect of the FA in China is only the icing on the cake, rather

than offer help to the natives.

From the outcome equation of accounting firms, after considering the BHR, the positive effect of accounting firm on synergies disappear. This can be explained in two ways. On the one hand, the role of accounting firm lies only on the auditing and monitoring, they can do no improvement to the performance of firms with low ability. On the other hand, when the FA cannot exert on effect, the accounting firm can help find the bad deal through the monitoring, which can help prohibit the bad deal if the FA lack such ability in the case of endogeneity problem exists

	(1) fa_or_not	(2) cumulative_abnormal_return	(3) Bidder_Synergies_gain	(4) acca_or_not	(5) cumulative_abnormal_return	(6) Bidder_Synergies_gain
main						
mills		0.440*	4411445.1		-0.735	-10357986.1
		(0.223)	(3992320.9)		(0.470)	(8498419.6)
acca_or_not		0.00345	497636.3			
		(0.0267)	(477587.8)			
fa_or_not					0.0138	82035.4
					(0.107)	(1926539.1)
BHR	-1.313	-0.599**	-6914260.9	0.0759	-0.0863**	-2054672.5***
	(1.753)	(0.278)	(4980297.1)	(0.267)	(0.0378)	(683075.8)
sigma	-38.56	-16.92**	-179066365.5	-35.22***	19.36	263976760.7
	(46.84)	(8.130)	(145498535.1)	(11.47)	(13.14)	(237330932.4)
Leverage	2.957	1.171*	10914503.2	0.502	-0.336*	-5369237.3
	(3.625)	(0.621)	(11106070.4)	(0.798)	(0.197)	(3556299.4)
Cashflow_to_Equity	-17.02	-6.971**	-68507218.0	-4.110*	2.167	32530958.8
	(12.12)	(3.516)	(62916207.0)	(2.209)	(1.470)	(26564294.4)
Size	1.79e-08	5.71e-09	0.0197	8.05e-10	-1.98e-09**	-0.0603***
	(3.95e-08)	(3.80e-09)	(0.0680)	(1.25e-08)	(9.46e-10)	(0.0171)
Book_to_Market	0.00217*	0.000871*	7904.7	0.000856**	-0.000414	-6652.3
	(0.00131)	(0.000444)	(7952.0)	(0.000434)	(0.000293)	(5294.6)

related_transaction	0	0	0	-0.172	0.0580	931455.5
	(.)	(.)	(.)	(0.389)	(0.0725)	(1308923.0)
cash_pay	-2.444*	-0.654	-6866148.0	0	0	0
	(1.354)	(0.440)	(7879931.7)	(.)	(.)	(.)
_cons	0.340	-0.399**	-2192521.8	0.345	0.340	6406724.7
	(2.872)	(0.189)	(3381193.8)	(0.556)	(0.234)	(4230959.2)
N	120	120	120	136	136	136
R^2		0.193	0.233		0.150	0.253
Year Fixed	N	Y	Y	N	Y	Y

Standard errors in parentheses

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

5. Switching Regression Model: further examine the role of FA

We are still uncover the relation of the FA with the succeed, premium and CAR due to the inconsistency of the result of OLS and Heckman two stage model.

We can use the switching model to do counterfactual analysis. the selection equation is the same as that in Heckman two stage model, where the explanatory variable includes scope_total, bidder characteristics and M&A transaction characteristics to predict IMR, then the IMR can be put into the switching model. One equation is the sample without FA, while another equation is the sample with FA, we can calculate r0 and r1 of the two equation.

$$r1 = E[y_{2i}|FA_i = 1] - y_{1i}$$
$$r0 = E[y_{1i}|FA_i = 0] - y_{2i}$$

r0 means the samples who don't choose the FA, and if they chose FA now, how it will influence the dependent variable.

r1 means the samples who have chosen the FA, and if they didn't choose FA now, how it will influence the dependent variable.

	(1) succeed0	(2) premium_to_buyer_w0
main		
mills	0.0144	-0.195***
	(0.0307)	(0.0438)
Leverage	-0.00905	0.167***
	(0.0241)	(0.0354)
Cashflow_to_Equity	-0.00693	0.181***
	(0.0272)	(0.0390)

related_transaction	0.0114	0.0307**
	(0.00971)	(0.0139)
cash_pay	-0.0145	0.361***
	(0.0599)	(0.0847)
_cons	0.972***	-0.157***
	(0.0308)	(0.0484)
	succeed1	premium_to_buyer_w1
mills	0.0144	0.0148
	(0.0880)	(0.0194)
Leverage	0.0451	0.0209*
	(0.0442)	(0.0120)
Cashflow_to_Equity	0.0152	-0.00242
	(0.0528)	(0.0150)
related_transaction	0.0140	0.112***
	(0.0177)	(0.0346)
cash_pay	-0.0445	-0.0101**
	(0.160)	(0.00493)
_cons	0.884***	0.000837
	(0.0185)	(0.00519)
select		
Leverage	-0.872***	-0.552***
	(0.174)	(0.156)
Cashflow_to_Equity	-0.494**	-0.490**
	(0.251)	(0.224)
related_transaction	0.254***	0.207***
	(0.0768)	(0.0703)
cash_pay	-3.030***	-2.352***
	(0.0817)	(0.0750)

scope_total		0.156*
		(0.0836)
_cons	1.860***	1.104***
	(0.108)	(0.0946)
lns0		
_cons	-2.121***	-1.766***
	(0.0162)	(0.0169)
lns1		
_cons	-1.339***	-2.518***
	(0.0231)	(0.0245)
r0		
_cons	-0.0212	-0.0888
	(0.106)	(0.162)
r1		
_cons	0.161	-1.910***
	(0.119)	(0.0946)
N	2924	2856
R^2		

Standard errors in parentheses

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

	(1) cumulative_abnormal_return0
cumulative_abnormal_return0	
mills	-0.0240
	(0.0186)
Size	7.30e-10
	(9.66e-10)
Deal_value	7.85e-12
	(9.76e-12)
_cons	0.0622
	(0.0452)
cumulative_abnormal_return1	

mills	-0.00463
	(0.196)
Size	-8.35e-09
	(1.71e-08)
Deal_value	-5.25e-12
	(5.75e-11)
_cons	0.0318
	(0.289)
select	
scope_total	0.767***
	(0.251)
Size	-5.06e-08*
	(2.86e-08)
Deal_value	4.02e-10**
	(1.59e-10)
_cons	-2.137***
	(0.208)
lns0	
_cons	-2.290***
	(0.0246)
lns1	
_cons	-2.246***
	(0.189)
r0	
_cons	0.340
	(0.319)
r1	
_cons	0.000779
	(1.178)
N	911
R^2	

Standard errors in parentheses

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

The result of counterfactual examination is as follows

what-if anaylsis

	Y=succeed		Y=Premium		Y=CAR	
	FA=0	FA=1	FA=0	FA=1	FA=0	FA=1
Actual Y	0.98537 ***	0.9256***	-0.0749***	-0.0034***	0.00219***	-0.014***

Hypothetical Y	0.887***	0.0976***	0.1583***	-0.0845***	-0.0617***	-0.089***
Improvement	-0.09834***	0.051***	0.233***	-0.081***	-0.0638***	0.1035***

We can see from the result that if the firms without FA initially(FA=0) chose FA, the probability of successful occurrence of takeover can reduce 0.098, the premium can rise 0.233, the CAR can decease 0.0638.

For the firm with FA initially(FA=1), if they failed to choose FA, the chance of successful occurrence can rise 0.051, the takeover premium will lower 0.081. and the CAR can improve 0.1035.The result means the FA is negatively related with successful occurrence in China and positively related to the premium and have negative relation with CAR. “skilled advice” hypothesis cannot be explained in the performance side, but in the efficiency side. The “matching transaction” hypothesis is proved to be right.

6. DID result

Firstly, we use the propensity score matching method before we use DID. We use he probit model to predict the propensity score and match the sample with and without FA.

	(1) fa_or_not
fa_or_not	
scope_total	0.382***
	(0.109)
Leverage	-0.802***
	(0.184)
Cashflow_to_Equity	-0.728**
	(0.292)
premium_to_buyer	-1.18e-09
	(7.53e-09)
diversifying_deal	0.651***
	(0.124)
succeed	-0.496**
	(0.227)
Deal_value	7.88e-12*
	(4.78e-12)

cash_pay	-2.884***
	(0.0953)
stock_pay	0.229
	(0.152)
related_transaction	0.274***
	(0.0810)
_cons	2.073***
	(0.244)
N	2856
R^2	

Standard errors in parentheses

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Further, after DID regression, we find the result is similar to the OLS. The probability of successful occurrence is negatively related with the treatment effect while the change of finishing is positively related with the treatment effect. “skilled advice”hypothesis is more reasonable

	(1) succeed	(2) time_to_resolution	(3) finish	(4) diversifying_deal	(5) premium_to_buyer_w
treated_policy	-0.0826*	98.89	0.292*	-0.0990	0.102
	(0.0461)	(63.45)	(0.161)	(0.0829)	(0.0873)
treated	0.0148	-121.7	-0.146	0.234**	0.0174
	(0.0535)	(142.6)	(0.186)	(0.0961)	(0.101)
policy	0.00230	-77.64***	-0.0735*	-0.0500**	-0.0806***
	(0.0127)	(23.05)	(0.0441)	(0.0227)	(0.0239)
related_transaction	-0.0205*	44.33**	-0.0195	-0.00943	0.1000***
	(0.0122)	(21.68)	(0.0424)	(0.0219)	(0.0231)
cash_pay	0.0630	-145.4	-0.173	0.0365	-0.0200
	(0.0426)	(132.9)	(0.148)	(0.0765)	(0.0806)
Leverage	0.0367	101.3*	-0.526***	0.0199	0.0518
	(0.0284)	(53.54)	(0.0989)	(0.0510)	(0.0537)
Cashflow_to_	0.0228	-371.3***	-0.255*	-0.159**	0.0801

Equity					
	(0.0410)	(138.7)	(0.143)	(0.0736)	(0.0775)
_cons	0.913***	284.6**	0.804***	0.0563	-0.0944
	(0.0462)	(136.4)	(0.161)	(0.0830)	(0.0874)
N	519	170	519	519	519
R^2	0.058	0.163	0.117	0.049	0.085

Standard errors in parentheses

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

We use the total sample to do the DID regression of the performance due to the small sample of CAR and Bidder synergies gain.we find the performance is negatively related with FA's treatment effect, indicating the limitation of the ability of selecting the fine target. we use the regression by subsample method to examine the "limited capacity" and "selfish professional institution"hypotheses

	(1) cumulative_abnormal_return	(2) Bidder_Synergies_gain
treated_policy	-0.140*	-1702228.1
	(0.0767)	(1939841.8)
treated	0.0249	45493.1
	(0.0385)	(974969.0)
policy	0.00808	337423.1**
	(0.00614)	(155263.1)
related_transaction	0.00793	58467.5
	(0.00742)	(187720.8)
cash_pay	0.0257	235672.5
	(0.0355)	(898440.7)
_cons	-0.0277	-275132.9
	(0.0356)	(899835.4)
N	975	975
R^2	0.007	0.006

Standard errors in parentheses

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Separating the sample by deal value to be high and low, the threshold is set at 75% of the target's value. The treated variable in high value sample is removed due to multi-linearity problem. when the lower deal value group is contrasted to the total sample group, we find the

lower deal value has more significant treatment effect and larger coefficient. This indicates that when the target value is low, the FA can hardly ever create value, leading to low return, which is consistent with the “limited capacity ”hypothesis.

	(low) cumulative_abnormal_return	(high) cumulative_abnormal_return	(low) Bidder_Synergies_gain	(high) Bidder_Synergies_gain
treated_policy	-0.401***	0.144	-3472882.4**	140999.5
	(0.0958)	(0.0959)	(1412833.7)	(2855653.5)
treated	0.0299	0	129390.7	0
	(0.0368)	(.)	(543460.9)	(.)
policy	0.00412	0.0110	53162.8	540151.6**
	(0.00936)	(0.00800)	(138002.8)	(238358.8)
related_transaction	0.0200*	0.000125	284022.1*	-83304.1
	(0.0112)	(0.00974)	(164594.0)	(290097.6)
cash_pay	0	0.0294	0	385715.8
	(.)	(0.0364)	(.)	(1084148.4)
_cons	-0.00700	-0.0282	-123358.1	-370724.8
	(0.00770)	(0.0365)	(113637.0)	(1086821.7)
N	388	587	388	587
R^2	0.054	0.008	0.025	0.009

Standard errors in parentheses

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

When we consider to use the stock_pay as the group separation criteria for DID, we compare the sample without stock_pay with the total sample.

	(stock pay=0) cumulative_abnormal_return	(stock pay=0) Bidder_Synergies_gain
treated_policy	-0.141*	-1536129.4
	(0.0777)	(1151334.4)
treated	0.0264	117261.9
	(0.0393)	(582195.7)
policy	0.00631	156990.0
	(0.00869)	(128738.7)

related_transaction	0.00876	160384.0
	(0.00976)	(144464.2)
Deal_value	8.99e-12	0.0000453
	(9.12e-12)	(0.000135)
_cons	-0.00354	-111230.6
	(0.00744)	(110243.7)
N	514	514
R^2	0.011	0.010

Standard errors in parentheses

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

The result shows the sample without stock_pay has no difference from the total sample result.whether use the stock pay has nothing to do with the financial advisors' role in performace. The selfish professor institution may not be right.

We further consider the effect that accounting firm exert on we redefined the treated to be acc_or_not. After the probit regression to get the propensity score.

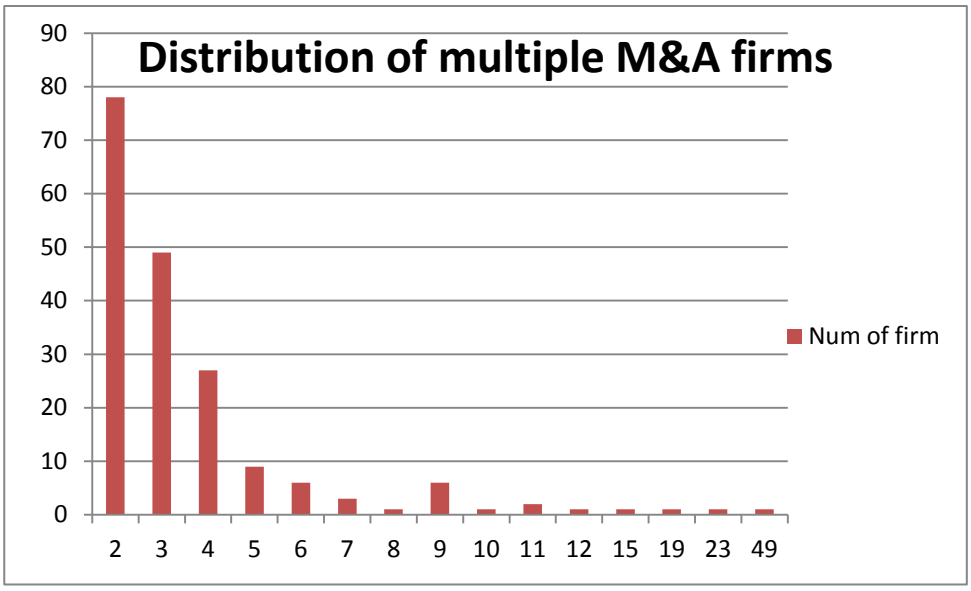
	(1) treated
treated	
Leverage	-1.723***
	(0.451)
Cashflow_to_Equity	1.031
	(0.661)
Deal_value	3.02e-10
	(2.12e-10)
cash_pay	-1.992***
	(0.393)
related_transaction	0.440**
	(0.192)
premium_to_buyer	-0.000000962
	(0.0000151)
diversifying_d	0.837***

eal	
	(0.266)
succeed	-0.505
	(0.843)
_cons	2.390***
	(0.920)
N	274
R^2	

Standard errors in parentheses

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

The matched sample have 725 firms with multiple merges and satisfy our requirement, where 219 firms always hire accounting firm, 506 firms never find accounting firm in our sample



The result of DID for the accounting firm can be shown as follows:
We find the hiring accounting firm can positively affect the time consumed to accomplish, implying the inability to improve efficiency owning to the auditing and monitoring can retard the process. However, the accounting firm can do good to the takeover premium. It can exert the effect of matching transaction when the FA cannot do it.

	(1) succeed	(2) time_to_resolution	(3) finish	(4) diversifying_deal	(5) premium_to_buyer_w
treated_policy	0.0324	131.0**	0.0763	0.0931	0.117*
	(0.0487)	(51.64)	(0.116)	(0.0955)	(0.0615)

treated	-0.0328	-153.0***	0.0634	0.0871	0.0277
	(0.0411)	(47.35)	(0.0983)	(0.0806)	(0.0519)
policy	-0.0120	-141.5***	-0.0469	-0.134*	-0.107**
	(0.0357)	(42.94)	(0.0854)	(0.0701)	(0.0451)
Leverage	-0.0258	45.21	-0.519***	0.183	-0.0770
	(0.0577)	(66.54)	(0.138)	(0.113)	(0.0729)
Cashflow_to_Equity	0.0254	101.3	0.546**	-0.560***	0.229*
	(0.0978)	(96.99)	(0.234)	(0.192)	(0.124)
related_transaction	-0.00554	25.61	-0.0206	-0.104**	0.102***
	(0.0234)	(23.05)	(0.0560)	(0.0460)	(0.0296)
cash_pay	0.113***	-166.3***	-0.344***	-0.0463	-0.0672*
	(0.0316)	(30.63)	(0.0757)	(0.0620)	(0.0400)
_cons	0.902***	363.1***	0.819***	0.237**	-0.0705
	(0.0486)	(50.07)	(0.116)	(0.0954)	(0.0614)
N	274	110	274	274	274
R^2	0.074	0.317	0.224	0.103	0.192

Standard errors in parentheses

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

From the perspective of performance, accounting firm cannot enhance the CAR or synergies, which can be on account of the role of audit having nothing to do with selection of fine target. It is the ability to screen the right target that can raise the performance.

	(1) cumulative_abnormal_return	(2) Bidder_Synergies_gain
treated_policy	0.00942	-629784.0
	(0.0368)	(1172354.3)
treated	-0.0227	-105481.7
	(0.0242)	(770012.9)
policy	0.00289	421241.8
	(0.00969)	(308673.4)
Leverage	0.000232	759808.3
	(0.0210)	(670197.9)

Cashflow_to_Equity	-0.00477	136752.6
	(0.0362)	(1152655.6)
related_transaction	0.0156	86828.8
	(0.0112)	(357250.3)
cash_pay	0.0661	588504.4
	(0.0491)	(1562881.0)
_cons	-0.0721	-1000197.6
	(0.0497)	(1583293.6)
N	490	490
R^2	0.011	0.009

Standard errors in parentheses

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

V. Conclustion

We find that the financial advisor and accounting firms can enhance the efficiency of the takeover, reduce the chance that M&A occur after the order is received, implying the trustworthiness of the financial intermediary, thus they can turn the bad deals down rather than passive execute. Furthermore, the financial intermediaries generate lower value for acquiring shareholders compared with the "in-house" deals. The channel of causes can be attributed to the selfishness of the professional institutes. Nevertheless, once the endogenous problem is taking into account, the negative impact of the financial advisor on M&A can be explained by the limited capacity of the financial agency. It seems likely that Chinses takeover market is immature , inducing the advice of FA can hardly ever be followed by the clients. The effect is amplified when the bidder who can transact larger deal tend to be huge in scale, aggressive and hubris since they disregard the warning from the financial advisors even the deal is detrimental.

Considering the acquisition premium, accounting firms performs better than financial advisors in the role of matching transaction through monitoring and screening. The information advantage fails to emerge in the financial intermediary due to the concern of the bidder firms' competence. It seems likely that Chinses takeover market is immature , inducing the advice of FA can hardly ever be followed by the clients. The effect is amplified when the bidder who can transact larger deal tend to be huge in scale, aggressive and hubris since they disregard the warning from the financial advisors even the deal is detrimental.

Considering the endogeneity problem, to be exactly, the selection bias that occur when the bidder choose FA or not, we resort to the Heckman two stage regression and DID method. Combining these two method's result, we draw the conclusion that the performance is weakened when financial intermediary is included, whereas the efficiency can be improved. One reason for the failure in performance is the ignorance of the strength of the bidder firm. On one hand, the deficiency of the bidder can negatively affect the role of the financial advisors.

On the other hand, it reveals the truth that the institution is icing on the cake, who only adds brilliance to the present splendor; rather than offering help from natives.

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