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Investment bank market share, contingent fee payments, and the performance of acquiring firms[☆]

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Abstract

This paper investigates the determinants of the market share of investment banks acting as advisors in mergers and tender offers. In both mergers and tender offers, bank market share is positively related to the contingent fee payments charged by the bank and to the percentage of deals completed in the past by the bank. It is unrelated to the performance of the acquirors advised by the bank in the past. In tender offers, the post-acquisition performance of the acquiror is negatively related to the contingent fee payments charged by the bank, suggesting that the contingent fee structure in tender

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offers ensures that investment banks focus on completing the deal. \odot 2000 Elsevier Science S.A. All rights reserved.

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1. Introduction

In this paper, I investigate the determinants of market share for investment banks advising acquirors in mergers and tender offers. I also examine the relation between the market share of an investment bank and the fee incentive structure it faces. Finally, I examine the consequences of this relation for the performance of the acquirors advised by these investment banks in mergers and tender offers.

I investigate two contrasting hypotheses on the determinants of the market share of an investment bank acting as an advisor to acquirors involved in mergers or tender offers. The superior deal hypothesis argues that the performance of the acquiror in the mergers and tender offers advised by the investment bank is an important determinant of the bank's market share. It predicts that acquirors advised by top-tier investment banks (with a high market share) should earn higher announcement-period excess returns on average than acquirors advised by lower-tier investment banks. The deal completion hypothesis, on the other hand, argues that the valuation of the deal is of secondary importance. Because investment banks advising acquirors in mergers and tender offers face strong deal completion incentives in their fee structure, their role is simply to complete the deal, in which case the market share of the investment bank will depend on the number of deals it completes. This hypothesis further predicts that there should be no positive relation between the excess returns earned by the acquiror and the market share of the investment bank advising the deal. Note that this hypothesis does not have any implications about whether investment banks are chosen by acquirors to complete deals for targets already selected by the acquirors or whether the banks self-select to choose targets that have a better chance of being completed.

I measure the average market share of each investment bank as a fraction of the total value of transactions advised by investment banks in any single year. This measure yields a stable ranking across the years 1980–1994. Classifying the top five banks every year as 'bulge bracket' or first-tier banks shows that these banks remain in the bulge bracket for a majority of the years the study covers. They are also almost never out of the takeover market in any year. Similarly, the next 15 banks, classified as 'major bracket' or second-tier banks, are hardly ever classified as bulge bracket. The remaining banks, the third-tier banks, also

remain classified as third-tier banks (or do not participate in the market) in all but a small fraction of the years 1980–1994.

The market share of the bank is significantly related to its fee structure. Bulge bracket banks charge a significantly higher proportion of their fees as contingent fees than do either major bracket or third-tier banks. In mergers, first-tier banks charge, on average, 55% of their total fees as contingent fees, while second- and third-tier banks charge only 36% and 32%, respectively. In tender offers, first-tier banks charge 61% of their fees as contingent fees while second- and third-tier banks charge 61% and 64%, respectively. This is consistent with both the superior deal hypothesis (with top-tier investment banks signaling their quality by charging a higher proportion of their fees as contingent fees) and with the deal completion hypothesis (since the fees are contingent on the acquisition being completed).

I investigate the determinants of investment bank market share by directly examining the explanatory power of my two alternative hypotheses. In both mergers and tender offers, the percentage of deals completed by the investment bank in previous years is consistently positively and significantly related to the bank's market share in subsequent years, even after controlling for other variables that proxy for the complexity of the transaction. There is no relation between the post-acquisition performance of the acquirors the bank has advised in the past and the bank's subsequent market share. This suggests that investment banks focus on completing the deal, rather than on preventing poor deals. This conclusion holds when I extend the horizon over which I measure performance from one year to ten years, or when I use annual rather than semiannual cumulative abnormal returns (CARs) as explanatory variables. In almost every case, the percentage of completed deals is significant at the 5% level. In addition, the regression have reasonable explanatory power, with the adjusted R^2 for the regression ranging up to 63% for mergers and up to 16% for tender offers.

To test the predictions of the two hypotheses, I examine the proportion of completed acquisitions advised by the three categories of investment banks. Consistent with the deal completion hypothesis, first-tier banks complete a significantly greater proportion (86%) of the tender offers they advise than do either second- or third-tier banks (75% and 74%, respectively). In mergers, when I adjust for the advisor of the target bank, first-tier banks also complete a higher proportion of their deals against target advisors of any category than do third-tier advisors, though the difference is not statistically significant.

Second, I examine the excess returns earned by acquirors advised by different categories of investment banks. The superior deal hypothesis predicts that acquirors advised by top-tier investment banks should earn higher excess returns than acquirors advised by lower-tier investment banks. It also predicts that deals with positive excess returns are more likely to be completed by first-tier banks than deals with negative excess returns. The deal completion hypothesis predicts no positive relation. In fact, bidders in mergers advised by first-tier investment banks earn significantly *lower* announcement abnormal

returns than do bidders advised by either second- or third-tier banks. In tender offers, while bidders in tender offers advised by first-tier banks earn significantly higher abnormal returns in the announcement period than bidders in deals advised by either second- or third-tier banks, there is no positive relation between these announcement-period excess returns and deal completion rates. Acquirors advised by first-tier banks in mergers or tender offers complete a similar proportion of deals whether the announcement-period excess return is negative or positive. These results are inconsistent with the superior deal hypothesis.

Third, I investigate the acquisition premiums paid in acquisitions involving first-, second-, and third-tier banks. One way to make sure that a deal is completed is for the acquiror to pay higher acquisition premiums. If first-tier banks encourage their clients to make higher bids, this might explain both the higher completion rates and the poor relative performance of bidders advised by first-tier banks in tender offers. Consistent with the deal completion hypothesis, acquirors in tender offers advised by third-tier investment banks pay a median premium of 38% as opposed to 56% and 58% for acquisitions advised by first-tier or second-tier banks, respectively. This is also consistent with evidence reported by McLaughlin (1992), who documents that in tender offers, bidders using low-quality investment bankers offer significantly lower premiums than high-quality investment banks. The acquisition premiums paid in acquisitions advised by the different categories of investment banks in mergers are indistinguishable from one another.

Finally, the deal completion hypothesis implies that if the deal completion incentives in the contingent fee payments to the investment bank cause it to focus only on completing acquisitions, then the post-acquisition abnormal return earned by acquirors will not be positively related to the proportion of fees paid to the bank as contingent fees. Also, since investment banks charge a much lower proportion of their fees as contingent fees in mergers than in tender offers, this hypothesis also predicts that the deal completion incentives faced by investment banks are stronger in tender offers than in mergers. Consistent with this hypothesis, there is no positive relation in mergers between the postacquisition abnormal returns to the bidders and the average proportion of contingent fees paid to the advisor. In tender offers, a strong negative relation exists between the average contingent fee paid to the acquiror and the postacquisition abnormal return earned by the acquiror. Even after controlling for other variables that have been shown to affect post-acquisition abnormal returns, the higher the average contingent fees paid to investment banks in tender offers, the worse is the post-acquisition performance of the acquiror over a 12-month period after the completion of the acquisition.

There is evidence that the market shares of investment banks in both mergers and tender offers are positively related to their ability to complete the deal. However, deal completion incentives in mergers are weaker than in tender offers; investment banks in mergers charge a much lower proportion of their fees as contingent fees than do investment banks in tender offers. In mergers, while first-tier investment banks do not advise deals that are consistently superior to those advised by lower-tier banks, they are also not associated with higher acquisition premiums nor do they complete significantly more deals than lower-tier banks. Moreover, the proportion of contingent fees paid in an acquisition does not have any explanatory power in measuring the postacquisition performance of acquiring firms. Therefore, though investment banks have some incentives in mergers to complete the deal, these incentives do not necessarily result in value-destroying deals for acquirors. In tender offers, however, there is strong evidence that the market share of an investment bank is related to its ability to complete a deal, irrespective of whether the deal actually adds value to the acquiror.

The remainder of the paper is structured as follows. Section 2 surveys the literature. Section 3 describes the data. Section 4 discusses the methodology and results. The last section concludes.

2. Review of the literature

Extant literature finds mixed empirical evidence on the degree to which the market share for a financial intermediary is correlated with the 'success' of the transactions it advises. Nanda and Yun (1997) show that the market value of the lead underwriter advising an initial public offering is directly related to its performance in the IPO. On the other hand, Sirri and Tufano (1998) find that while mutual fund consumers base their fund purchase decisions on prior fund performance, these decisions are asymmetrical in that consumers invest more in funds that have performed well in the past but do not flee poorly performing funds. According to Mikhail et al. (1998), analyst turnover from one brokerage house to another is unrelated to the absolute forecast accuracy of the analysts and is only dependent on their accuracy relative to their peers.

Literature on the relation between investment bank market share and the returns earned by acquirors in mergers and tender offers is relatively sparse. Bowers and Miller (1990) examine the relation between the stock returns accruing to the acquiror and the choice of investment bank. Specifically, they investigate whether first-tier investment banks act as brokers in better acquisitions in terms of value creation. They find that the total wealth gains to both acquiror and target shareholders are larger when either the target or the bidder use a first-tier investment bank. However, acquiror shareholders alone do not perform better if they employ the services of a first-tier investment bank. They also find no evidence that first-tier banks bring superior bargaining expertise to acquisition negotiations. Michel et al. (1991) study the performance of specific investment banks in providing acquisition advice. They examine the CARs in the period around the acquisition announcement for acquirors and targets using

six specific investment bank advisors and find that the degree of prestige of an investment bank does not vary directly with its performance, with Drexel Burnham Lambert, a relatively less prestigious investment banking firm, providing better advice than all the other banks in the sample. Similarly, Servaes and Zenner (1996), using a binary classification of first-tier and second-tier investment banks, do not find any relation between the abnormal returns to the bidder in the announcement period and the tier of its advisor.

In contrast, there is some evidence that the fee structure faced by investment banks acting as advisors in mergers and tender offers biases them towards completing the deal. McLaughlin (1990) investigates the fee structure in investment bank contracts in a sample of 195 tender offers. He reports that only 6% of the bidding firms in his sample use fixed fees, while 94% use fees related to either the number of shares purchased or the offer value. In addition, McLaughlin finds that over 80% of the fee in an average contract is paid only if the acquisition is completed. He documents the potential for significant conflicts of interest between banker and client and suggests alternative contract forms that would help minimize these conflicts, although he notes that these are not typically used in practice and suggests that investment bank reputation is playing an important role in mitigating these conflicts of interest (the superior deal hypothesis). McLaughlin also notes that a possible explanation for the contingency fee contracts is that they are simply used to control effort and that client firms do not really use banks' offer evaluations (essentially the deal completion hypothesis). He dismisses this hypothesis, however, citing anecdotal evidence that client firms strongly rely on their banker's advice when bidding. For example, Robert Campeau, CEO of Campeau Corp, attributed his decision to raise his bid for Federated Department Stores by \$500 million in part to the advice of Campeau's investment bankers. (p. 231).

3. The data

The investment bank sample is drawn from the Securities Data Corporation (SDC) on-line Mergers and Corporate Transactions database. SDC regularly publishes widely used¹ league tables, ranking investment advisors in mergers and acquisitions on the value of the target companies in all deals they advised that became effective during a given quarter. Deals include acquisitions of at least 50% of the target company, repurchases, self-tender offers, exchange offers for equity and/or securities convertible into equity, and leveraged recapitalizations. They exclude purchases of less than 50% of the target, any ownership

¹ See, for example, the *Wall Street Journal*, February 25, 1998, p. C1. Similarly, Merrill Lynch uses SDC data in its advertisements to support its claim to bulge bracket status in U.S. M&A advisory activities in 1997 (see the *Economist*, February 7–13, 1998, pp. 32–33).

interest valued at less than \$1 million, and splitoffs. Advisors are given full credit for each deal on which they provided advisory services, whether they provided advice to the target or the acquiror. SDC classifies a firm as a financial advisor if it performs any of the following assignments in the merger or tender offer: acts as dealer manager, lead or other underwriter or an equity participant, provides financial advice, provides a fairness opinion, initiates the deal or represents shareholders, board of directors, seller, major holder or claimants. If a firm merely acts as an equity participant and/or arranges or provides financing, it is not considered an advisor.

I modify these SDC rankings to create a measure of average market share for the investment bank over the period. First, if a bank is known for advising only 'good' acquisitions, it will have a larger share of clients in the number of deals announced. If it does not recommend the completion of poor acquisitions, then its market share in the number of deals *completed* in any year might be lower. I therefore download annual rankings from SDC (on the basis of the value of transactions advised) of all the investment banks providing advisory services in all mergers and tender offers announced during the period between 1980–1994, regardless of whether these acquisitions are completed or not. Second, I create separate tables for mergers and tender offers, since these two transactions have very different characteristics. Third, since I would like to isolate the effect of investment bank reputation on *acquiror* performance, credit for any transaction in these tables is allocated to the acquiror investment bank only. Lastly, I assign credit to the specific subsidiary of the investment bank that actually made the transaction, rather than to the ultimate parent of the investment bank, to avoid misclassifications (e.g., credit for transactions advised by First Boston before its takeover by Credit Suisse would have gone to the merged entity Credit Suisse First Boston). This results in a list of 919 separate investment banks (including subsidiaries) who have acted as advisors in mergers and 219 investment banks acting as advisors in tender offers.

I rank each investment bank *every year* on the basis of the value of transactions advised during the year. If a bank is not listed as having advised any acquisitions during the year, I assign it a rank one higher than the number of investment banks that participated in the market that year. For example, if 25 banks advised acquisitions in a particular year, all other banks in that year are assigned a rank of 26. The banks are then ranked according to the average of their yearly ranking across the years 1980–1994.

Table 1 lists the top 30 investment banks involved in mergers and tender offers, respectively. There is a close correspondence between these rankings and measures of reputation computed for investment banks acting as underwriters in IPOs (e.g., Johnson and Miller, 1988). The first-tier 'bulge bracket' firms are practically identical, comprising Morgan Stanley, Goldman Sachs, Salomon Brothers, Lazard Frères, and First Boston. There is also a reasonably close correspondence between the rankings for the second tier 'major bracket' firms.

each of	them is assigned every year between	1980-199	94 for ad	vising me	ergers and	tender offers respectively.)	•)
Average	Mergers	% of	time clas	sified as		Tender offers	% of	time clas	sified as	
yearly rank		Bulge	Major	Third- tier	Not ranked		Bulge	Major	Third- tier	Not ranked
	Bulge bracket banks					Bulge bracket banks				
1	Morgan Stanley	80	20	0	0	Morgan Stanley	47	47	0	7
7	Salomon Brothers	53	47	0	0	First Boston	53	40	0	7
3	Goldman, Sachs & Co.	53	47	0	0	Goldman, Sachs & Co.	40	40	0	20
4	Lazard Freres & Co.	47	53	0	0	Lazard Freres & Co.	47	40	7	7
5	First Boston	67	27	٢	0	Salomon Brothers	33	53	٢	٢
	Major bracket banks					Major bracket banks				
9	Kidder, Peabody	7	87	0	7	Merrill Lynch Capital Markets	33	33	0	33
7	Donaldson, Lufkin & Jenrette	7	80	7	7	Drexel Burnham Lambert	40	13	0	47
8	Dillon, Read	0	60	33	7	Kidder, Peabody	13	47	20	20
6	Bear, Stearns	13	67	20	0	Dillon, Read	13	60	7	20
10	PaineWebber	7	67	27	0	Shearson Lehman Hutton	27	33	0	40
11	Bankers Trust	0	20	73	7	Bear, Stearns	13	53	13	20
12	Smith Barney, Harris Upham	0	40	53	7	Donaldson, Lufkin & Jenrette	7	40	13	40
13	Merrill Lynch Capital Markets	33	33	7	27	PaineWebber	7	40	27	27
14	Alex. Brown & Sons	0	13	87	0	Smith Barney, Harris Upham	0	47	27	27
15	Morgan Guaranty Trust	0	53	27	20	Kohlberg, Kravis, Roberts & Co	20	20	7	53
	Company									
16	The Blackstone Group	0	27	33	40	Morgan Guaranty Trust Company	0	27	20	53

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17	The Chase Manhattan Bank, N.A.	0	0	80	20	The Blackstone Group	0	27	0	73	
18	Allen & Co	0	33	53	13	Rothschild Inc.	0	27	13	09	
19	Wertheim Schroder	0	27	33	40	Shearson Lehman Brothers	٢	20	٢	67	
20	Kohlberg, Kravis,	0	67	13	20	Allen & Co	20	20	13	47	
	Roberts & Co										
	Third-tier banks					Third-tier banks					
21	James D. Wolfensohn Inc.	0	20	47	33	Wasserstein, Perella	13	0	٢	80	
22	Rothschild Inc.	0	27	47	27	E.F. Hutton	٢	27	٢	60	
23	Wasserstein, Perella	13	13	20	53	Samuel Montagu & Co. Ltd.	0	7	13	80	
24	Keefe, Bruyette & Woods	0	7	87	٢	Wertheim Schroder	0	20	0	80	
25	Drexel Burnham Lambert	40	13	٢	40	SG Warburg & Co. Ltd.	0	٢	13	80	
26	SG Warburg & Co. Ltd.	0	7	53	40	County NatWest Limited	0	٢	13	80	
27	Shearson Lehman Hutton	33	20	٢	40	Oppenheimer	0	7	20	73	
28	Morgan Grenfell & Co. Ltd.	0	7	73	20	Alex. Brown & Sons	0	٢	33	09	
29	Stephens	0	7	60	33	Bankers Trust	0	7	27	67	
30	Dean Witter Reynolds	0	٢	67	27	Morgan Schiff	0	٢	13	80	

Similarly, McLaughlin (1992) finds that when banker reputation is measured either by a tombstone classification scheme based on underwriter reputation in IPOs or by the number of representations in his tender offer sample, the Spearman rank correlation between the two is high (0.74 for bidders). Megginson and Weiss (1991) show that underwriter market share in IPOs tends to be highly correlated with measures of underwriter reputation ranks as measured by Carter and Manaster (1990).

The ranking is also stable across the years. Table 1 shows the percentage of years (in the 15-year period 1980–1994) when a bank is classified as a bulge bracket (if its rank that year is 1–5), major bracket (if its rank is 6–20), or third-tier bank (if its rank is greater than 20). Bulge bracket banks are almost invariably classified as either bulge or major bracket banks, and a majority of the time they are classified as bulge bracket banks. They are never out of the market in any year from 1980 to 1994 in mergers and only rarely out of the market in tender offers. Similarly, major bracket banks are likely to be ranked 6–20 for most of the years between 1980 and 1994, while third-tier banks either are not in the market in any given year or advise fewer transactions than do either bulge or major bracket banks.

Table 2 summarizes the sample screening process for the analyses. The annual rankings downloaded from SDC are based on a sample of 58,187 mergers and 1750 tender offers announced between January 1980 and December 1994. Since

Sample criteria	Number of	acquisitions
	Mergers	Tender offers
League tables:		
I. Number of acquisition transactions listed by SDC as having been announced between January 1980 and December 1994	58187	1750
Abnormal performance:		
II. Number of transactions in I with data on investment bank advisors	7717	1103
III. Number of transactions in II listed on CRSP NYSE/AMEX/ Nasdaq daily tapes	2683	438
Relation between contingent fee payments and post-acquisition performance	of the acquir	or:
IA. Number of acquisitions listed by SDC as having been announced and completed between January 1980 and December 1991	19850	784
IIA. Number of transactions in IA with data on investment bank advisors	2796	552
IIIA. Number of transactions in IIA with data on breakdown of fee payments to investment banks	372	388

The number of acquisitions analyzed in the various tests based on different sample selection criteria

Table 2

these represent transactions, not firms, the number of firms announcing mergers and tender offers in the period will be lower. Because I use data on acquiror advisors, the first screen restricts the sample to acquisitions for which SDC lists at least one advisor advising the acquiror in a transaction. This screen reduces the sample to 7717 mergers and 1103 tender offers. To measure the short-term performance of these acquirors around the announcement date, I further require that the acquirors be listed on the Center for Research in Security Prices (CRSP) NYSE/AMEX/Nasdaq daily tapes. This results in a sample of 2683 mergers and 438 tender offers.

To analyze the proportion of fees charged by the bank as contingent fees, I use data on the breakdown of fee payments to the investment banks. Since detailed fee breakdown data are available only for acquisitions that have been completed before 1991, the sample is restricted to transactions reported on SDC that are announced and completed between January 1980 and December 1991, for which the acquiring firms are listed both on CRSP and COMPUSTAT and there are reported data on fee breakdowns. The sample size here consists of 372 mergers and 388 tender offers.

Each investment bank listed as having advised the acquiror in the transaction receives credit for the deal, giving a total of 125 separate advisors in mergers and 66 advisors in tender offers. Table 3 lists the top 25 advisors for mergers and tender offers completed during 1980–1994 in the sample. The sample of deals is not predominantly biased towards any particular investment bank; these advisors retain roughly the same rankings as in the complete annual rankings.

Several acquisitions in the sample are advised by more than one investment bank. In such cases, I classify an acquisition as having been advised by a bank of a particular tier if this bank is the most senior bank providing advisory services to the acquiror in the acquisition. If, for example, both (bulge bracket) Goldman Sachs and (major bracket) Allen & Co. are listed as advisors to a particular acquisition, I classify the acquisition as having been advised by a bulge-bracket bank. If the two banks are of the same tier, this problem does not arise.

4. Methodology and results

4.1. Descriptive statistics

Table 4 reports descriptive statistics for the three types of acquirors advised by first-tier, second-tier, and third-tier investment banks over the period 1980–1991. The table shows the distribution of the merger and tender announcements by year, the exchange listings of the acquirors, and the distribution of sizes of the acquiring firms relative to the universe of firms listed on the NYSE/ AMEX and Nasdaq exchanges covered by both CRSP and COMPUSTAT.

The number of deals advised by the top 25 investment banks in the sample of deals for mergers and tender offers completed between 1980–1991

Mergers		Tender offers	
Investment bank	Number	Investment bank	Number
Goldman, Sachs & Co.	55	Morgan Stanley	27
First Boston	48	Goldman, Sachs & Co.	23
Morgan Stanley	42	First Boston	20
Merrill Lynch Capital Markets	36	Bear, Stearns	19
Kidder, Peabody	32	Shearson Lehman Hutton	19
Shearson Lehman Hutton	29	Salomon Brothers	17
Salomon Brothers	25	Drexel Burnham Lambert	16
Lazard Frères & Co.	21	Lazard Frères & Co.	11
Donaldson, Lufkin & Jenrette	19	Merrill Lynch Capital Markets	11
PaineWebber	18	Kidder, Peabody	10
Drexel Burnham Lambert	14	Shearson Lehman Brothers	8
Keefe, Bruyette & Woods	13	Smith Barney, Harris Upham	8
Shearson Lehman Brothers	13	Dillon, Read	7
Alex. Brown & Sons	11	Morgan Guaranty Trust Company	6
Smith Barney, Harris Upham	11	PaineWebber	5
Bear, Stearns	8	Donaldson, Lufkin & Jenrette	3
Dean Witter Reynolds	8	Individual (s)	3
Dillon, Read	7	Morgan Lewis Githens & Ahn	3
Financo	7	Prudential Bache Capital Fndg	3
Bankers Trust	6	Allen & Co	2
Lehman Brothers	5	E.F. Hutton	2
MA Schapiro & Co, Inc.	5	Financo	2
Morgan Lewis Githens & Ahn	5	Stephens	2
Robertson Stephens	5	Wasserstein, Perella	2
Robinson-Humphrey (Old)	5	William Blair	2

Consistent with patterns reported elsewhere in the literature. (e.g., Gaughan, 1996, Table 2.7), Panel A shows that mergers seem to be broadly concentrated in the 1984–1987 period while tender offers seem to be broadly concentrated in the 1986–1989 period. This pattern is preserved across acquirors advised by any of the three categories of investment banks. There is no evidence that any single type of acquiror contributes predominantly to any of these waves. Panel B reports the exchanges on which the acquiring firms were trading at the time of acquisition completion. Most of the acquirors trade on the NYSE, though some acquirors trade on the Nasdaq exchange as well. Third-tier banks advise a greater proportion of Nasdaq-listed acquirors (over 36% in both mergers and tender offers) than do either first-tier (21% and 8% in mergers and tender offers, respectively) or second-tier banks (25% and 16%, respectively).

Panel C ranks the firms into size quintiles measured on the basis of market equity value relative to the universe of all NYSE/AMEX and Nasdaq stocks covered by both CRSP and COMPUSTAT. Acquirors advised by first-tier banks are much larger than those advised by second- or third-tier banks. For both mergers and tender offers, a Wilcoxon rank sum test rejects the null hypothesis that the distribution across size quintiles is the same across the three

Table 4

Descriptive statistics for acquirors in mergers and tender offers advised by bulge bracket first-tier, major bracket second-tier, and third-tier investment banks

Panel A reports the number of mergers and tender offers for U.S. firms by acquirors listed on NYSE/AMEX and Nasdaq covered by both COMPUSTAT and CRSP, listed on the SDC Mergers and Corporate Transactions on-line database, with advisors classified as first-tier bulge bracket banks, second-tier major bracket banks, and third-tier banks, and acquisitions announced and completed between January 1980 and December 1991. Panel B reports the number of acquirors in mergers and tender offers, respectively, listed on NYSE, AMEX, and Nasdaq. Panel C reports the distribution of size quintile rankings. Size quintiles are computed every month for all firms in the universe of NYSE/AMEX and Nasdaq stocks. Quintile 1 is the smallest.

Year	Mergers ad	vised by		Tender off	ers advised by	
	First-tier	Second-tier	Third-tier	First-tier	Second-tier	Third-tier
1980-81	24	15	13	4	6	2
1982-83	26	30	59	8	14	4
1984-85	44	32	32	20	19	6
1986-87	48	25	39	30	31	6
1988-89	29	30	38	30	28	10
1990–91	18	20	33	5	6	8
Total	189	152	214	97	104	36

Panel A: Mergers and tender offers by year of announcement

Panel B: Stock exchange listings for acquirors advised by different categories of banks

Sample	NYSE	AMEX	Nasdaq
Mergers:			
Advised by first-tier banks	146	3	40
Advised by second-tier banks	104	10	38
Advised by third-tier banks	121	19	74
Tender offers			
First-tier banks	86	3	8
Advised by second-tier banks	78	7	19
Advised by third-tier banks	21	2	13

Table 4 (continued)

Size quintile	Mergers ^a ac	lvised by		Tender of	fers ^a advised by	7
	First-tier	Second-tier	Third-tier	First-tier	Second-tier	Third-tier
1	0	2	9	0	2	1
2	1	6	21	0	1	3
3	5	12	27	1	9	6
4	30	48	52	15	42	9
5	144	73	89	77	40	14
Total	180	141	198	93	94	33
Average ^b	\$3820	\$974	\$1230	\$4363	\$1595	\$906
(Median)	(\$1072)	(\$343)	(\$244)	(\$2156)	(\$270)	(\$215)

Panel C: Mergers and tender offers – size quintiles of acquirors advised by the three different categories of investment banks at the time of announcement of merger or tender offer

^aUsing the Wilcoxon rank-sum test, the null hypothesis that bidder sizes are distributed among the quintiles in the same proportions for the acquisitions advised by the three types of banks can be rejected at the 1% level for both mergers and tender offers. Acquirors advised by first-tier banks are larger on average than those advised by second-tier or third-tier banks.

^bIn millions of dollars.

types of acquirors at the 1% level. This is also consistent with the evidence from Panel B which shows that third-tier banks tend to advise a greater proportion of (presumably smaller) Nasdaq-listed firms than do first-tier banks.

Rau and Vermaelen (1998) show that the book-to-market ratio is a significant explanatory factor in post-acquisition returns. If investment banks advise acquisitions with significantly different average book-to-market ratios, differences in post-acquisition returns could simply be due to the book to-market effect. Similarly, Travlos (1987) and Loughran and Vijh (1997) show that the proportion of stock versus cash used in paying for an acquisition is also a significant explanatory variable in post-acquisition returns. I therefore examine the book-to-market ratios of the acquiror and the methods of payment used in the acquisition for acquirors advised by different categories of investment banks. There are no differences in either the book-to-market ratios or the methods of payment of bidders in the sample (results not reported). Similarly, there is no evidence that any particular category of bank is overwhelmingly used when the acquisition is hostile as opposed to friendly.

These results are also consistent with results reported by Servaes and Zenner (1996), whose logistic regression analysis shows that first-tier banks are more likely to be used than second-tier banks in large acquisitions completed by acquirors with little experience. They find that the choice of the investment bank is unrelated to the method of payment of the acquisition, the number of

industries in which the target operates, insider ownership, whether the bid was challenged or not, and board composition.

4.2. Proportions of contingent fees charged by investment banks

Table 5 reports the average percentage fee breakdown for fees paid by acquirors to investment banks in mergers and tender offers announced and completed between January 1980 and December 1991 (sample IIIA in Table 2). Since SDC reporting of fee breakdowns is relatively less comprehensive when the deal is not completed as opposed to when it is completed,² I do not analyze the fee breakdown in the sample of acquisitions announced between 1980 and 1994 (sample II in Table 2). The pattern of high contingent fee payments to advisors reported by McLaughlin (1990) for tender offers is prevalent in this sample as well: acquirors pay around 66% of the total fees to investment banks as contingent fees in tender offers and around 39% in mergers.

The table also breaks down the sample into deals advised by first-tier, second-tier, and third-tier banks. If investment banks signal their quality through the kind of fees they charge, we would expect top-tier investment banks to be more likely than second- or third-tier banks to use contingent fee payments. Consistent with this hypothesis, first-tier investment banks charge a much higher proportion of their fees in the form of contingent fees (55% in mergers and 73% in tender offers) than do either second- or third-tier banks (who charge 36% and 32% respectively in mergers and 61% and 64% respectively in tender offers). The fact that investment banks charge a much lower proportion of their fees as contingent fees in mergers than in tender offers suggests that the deal completion incentives faced by investment banks are stronger in tender offers than in mergers.

4.3. Does the post-acquisition performance of acquirors in acquisitions advised by an investment bank determine the bank's market share in the future?

I examine the explanatory power of my two contrasting hypotheses by investigating whether the market share of an investment bank in any year is

 $^{^2}$ For example, in reporting the takeover (subsequently withdrawn) of Stanadyne Inc by Emhart Corp, SDC reports that Emhart agreed to pay Shearson Lehman an initial fee of \$650,000 plus an additional \$2.85 million upon the completion of the acquisition. If the consideration paid in a Stanadyne-Emhart merger were over \$40 per share, Shearson's contingency fee would be increased by 0.6% of the consideration over \$40. However, since the deal was not completed, SDC reports that only \$2.85 million was the fee contingent on the completion of the acquisition, an underestimate of the true amount. In other cases, the percentage of fees contingent on the completed, these fees are not reported.

Breakdown of average fee payments in contracts with investment banks in mergers and acquisitions^a

Panels A and B report separate breakdowns for mergers and tender offers. Acquisitions are announced and completed between January 1980 and December 1991. Numbers reported are the percentage of total fees paid in each of nine categories. The advice/opinion category is used when the fees could not be separated for advisory services and fairness opinions, respectively. Banks are classified as first-, second-, or third-tier based on their average yearly ranking (on the value of transactions advised) in the league tables for each year between 1980 and 1994.

Advised by			
First-tier	Second-tier	Third-tier	All three types
investment	investment	investment	of investment
banks	banks	banks	banks

Panel A: Percentage breakdown of average fee payments to acquiror investment bank advisors in mergers

	N	92	96	184	372
Advice/Opinion		18.05	23.72	25.77	23.32
Advisory		13.15	13.57	12.83	13.10
Bust-up		0.40	0.00	0.32	0.26
Contingency		55.18	36.02	31.56	38.57
Dealer manager		0.00	0.00	0.00	0.00
Financing		0.00	0.49	0.44	0.34
Initiation		0.00	0.00	0.00	0.00
Opinion		5.72	22.33	25.62	19.83
Retainer		1.96	2.32	2.72	2.42
Not classified		5.54	1.56	0.75	2.15

Panel B: Percentage breakdown of average fee payments to acquiror investment bank advisors in tender offers

	N 127	157	104	388
Advice/Opinion	0.98	0.88	3.33	1.57
Advisory	15.02	13.37	19.28	15.49
Bust-up	0.82	1.65	1.41	1.32
Contingency	73.33	61.38	64.22	66.06
Dealer manager	4.84	11.50	5.63	7.75
Financing	0.91	5.65	2.89	3.36
Initiation	0.00	0.07	0.00	0.03
Opinion	0.79	0.94	0.96	0.90
Retainer	0.33	2.33	1.16	1.36
Not classified	2.98	2.21	1.11	2.17

^aUsing the Wilcoxon rank-sum test, the null hypothesis that contingent fees are distributed in the same proportions among the three types of investment banks can be rejected at the 1% level.

related to the post-acquisition performance of acquirors in deals advised by the bank in the past or to the percentage of deals completed in the past. Each year from 1981, the dependent variable is the market share of the bank in that year. The independent variables are the average semiannual or annual CARs for the acquirors advised by each investment bank in the last year and the percentage of deals completed by the bank of all deals for which it was announced as being an acquiror advisor in the past year. The CARs are calculated with respect to the CRSP NYSE, AMEX, and Nasdaq value-weighted index, in preference to size-and book-to-market-adjusted CARs because the latter are biased (see Rau and Vermaelen, 1998, for details).

It is plausible that the investment bank's reputation and its market share will be more affected by the performance of large acquirors. The CARs are therefore further value-weighted by the market capitalization of the acquiror relative to the universe of NYSE, AMEX, and Nasdaq firms. I also control for other variables that proxy for the complexity of the transaction, such as the percentage of bids that are at least partly stock-financed, the percentage of challenged bids (where there is more than one bidder), and the proportion of hostile bids advised by the bank in the past year. Changes in market share also have different implications for an investment bank depending on its current market share. For example, while a first- and a third-tier bank might each increase its market share by one percentage point, a first-tier investment bank might be changing its market share from 1% to 2%. I therefore also use the one-year lagged investment bank market share and the tier of the bank as explanatory variables.

I then pool all these data into a single cross-sectional and time-series regression. I repeat this analysis varying the horizon over which the independent variables are measured. For example, starting in 1985 and continuing till 1994, the independent variables are the percentage of deals completed by the bank, the average semiannual or annual CARs for three years after the completion of the acquisition, the percentage of stock-financed deals, the percentage of challenged deals, and the percentage of hostile deals for acquisitions advised by the investment bank in the last five years. The dependent variable continues to be the market share of the bank each year between 1985 and 1994. Since horizons longer than one year involve overlapping periods over which the independent variables are computed, an ordinary least squares regression will produce biased *t*-statistics. I therefore estimate parameters using the generalized method of moments, which has the advantage of controlling for both contemporaneous and time-series correlations in the independent variables. Results are reported in Table 6.

In both mergers and tender offers, there is a strong positive relation between the market share of an investment bank in any one year and the percentage of deals it has completed in the past. In addition, both the one-year lagged market

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Generalized method of moments parameter estimates of a cross-sectional regression of investment bank market share against post-acquisition CARs for acquirors advised by the investment bank and the percentage of deals completed in the n years before the market share ranking.

rank advise an acquisition, credit for the deal is given to both banks. CARs are computed with respect to the CRSP value-weighted index. These are further value-weighted with the market capitalization of the acquiror relative to the universe of NYSE, AMEX, and Nasdaq firms. Market shares are (defined from the SDC variables VCOM and VAL), percentage of challenged bids (defined from the SDC variable CHA), and the percentage of friendly oids (defined from the SDC variable ATTC) in the past n years; n is the number of years over which market share is assumed to be determined. P-values are An acquiror is listed as being advised by a particular investment bank if it is the most senior bank advising the deal. If two or more banks with the same calculated from (1980 + n) years to 1994. Controlling variables used in the regression are the percentage of deals financed at least partly by common stock renorted in narenthese

tepotica in parentaces.										
	1 year		3 years		5 years		7 years		10 years	
Panel A: Mergers										
Panel A. I: Regression against	semiannual C	4Rs and % c	completed dea	ls						
Number of observations	252		327		304		273		188	
Adj R^2	0.463		0.455		0.494		0.573		0.548	
Bank tier	-1.09	(0.00)	-0.75	(0.02)	-0.59	(0.00)	-0.81	(0.00)	-0.98	(0.00)
Lagged market share	0.54	(0.00)	0.58	(0.00)	0.62	(0.00)	0.63	(0.00)	0.58	(0.00)
CAR month 1–6	0.05	(0.63)	0.15	(0.28)	0.05	(0.70)	-0.08	(0.58)	-0.16	(0.40)
CAR month 7–12	0.17	(0.29)	0.12	(0.45)	0.07	(0.65)	0.09	(0.53)	0.14	(0.58)
% completed deals	0.04	(0.00)	0.03	(0.00)	0.02	(0.00)	0.03	(0.00)	0.04	(0.00)
Panel A.2: Regression against	t semiannual C.	4Rs and % c	completed dea	els, controlli	ng for other 1	variables				
Number of observations	212		215		230		204		144	
Adj R^2	0.496		0.476		0.486		0.574		0.584	
Bank tier	-1.38	(0.00)	-0.90	(0.03)	-0.92	(0.01)	-1.13	(0.00)	-1.60	(0.00)
Lagged market share	0.51	(0.00)	0.55	(0.00)	0.54	(0.00)	0.54	(0.00)	0.44	(0.00)
CAR month 1–6	0.26	(0.05)	0.29	(0.08)	0.16	(0.35)	-0.03	(0.88)	0.09	(0.81)
CAR month 7–12	0.31	(0.07)	0.33	(0.18)	0.11	(0.62)	0.13	(0.56)	0.24	(0.48)
CAR month 13–18			-0.21	(0.07)	-0.02	(0.83)	-0.06	(0.52)	-0.18	(0.10)

CAR month 19–24			-0.13	(0.11)	-0.08	(0.41)	-0.17	(0.17)	-0.62	(0.11)
% completed deals	0.04	(0.00)	0.02	(0.11)	0.02	(0.04)	0.03	(0.00)	0.04	(0.00)
% hostile deals	0.03	(0.12)	0.08	(0.13)	0.09	(0.11)	0.02	(0.33)	0.05	(0.05)
% challenged deals	0.06	(0.01)	0.07	(0.08)	0.05	(0.16)	0.07	(0.04)	0.04	(0.21)
% stock financed deals	0.01	(0.16)	0.02	(0.06)	0.01	(0.06)	0.02	(0.04)	0.02	(0.01)
Panel A.3: Regression against c	annual CARs o	and % comp	leted deals, c	ontrolling fc	or other varia	bles				
Number of observations	212		215		200		177		125	
$\operatorname{Adj} R^2$	0.498		0.481		0.54		0.604		0.626	
Bank tier	-1.37	(0.00)	-0.89	(0.03)	-1.19	(0.00)	-0.90	(0.01)	-1.50	(0.00)
Lagged market share	0.51	(0.00)	0.55	(0.00)	0.45	(0.00)	0.53	(0.00)	0.38	(0.00)
Annual CAR month 1–12	0.28	(0.01)	0.32	(0.05)	0.17	(0.35)	0.18	(0.32)	0.53	(0.21)
Annual CAR month 13-24			-0.17	(0.02)	-0.07	(0.42)	-0.28	(0.01)	-0.71	(0.00)
Annual CAR month 25-36					0.20	(0.15)	0.42	(0.01)	0.32	(0.05)
% completed deals	0.04	(0.00)	0.02	(0.11)	0.03	(0.00)	0.02	(0.07)	0.03	(0.00)
% hostile deals	0.03	(0.12)	0.08	(0.12)	0.04	(0.18)	0.02	(0.49)	0.06	(0.09)
% challenged deals	0.06	(0.01)	0.07	(0.08)	0.10	(0.02)	0.10	(0.01)	0.07	(0.16)
% stock financed deals	0.01	(0.16)	0.02	(0.06)	0.01	(0.05)	0.02	(0.01)	0.03	(0.00)
Panel B: Tender offers										
Panel B.1: Regression against s	semiannual C	4Rs and % c	ompleted dec	ıls						
Number of observations	95		118		116		91		35	
Adj R^2	-0.95		0.002		0.066		0.113		0.12	
Bank tier	-0.79	(0.50)	-1.13	(0.20)	-0.73	(0.37)	-1.46	(0.05)	-2.17	(0.05)
Lagged market share	0.018	(0.05)	0.22	(0.03)	0.25	(0.02)	0.18	(0.19)	0.02	(0.86)
CAR month 1–6	0.29	(0.16)	0.09	(0.75)	0.88	(0.10)	1.30	(0.13)	2.18	(0.24)
CAR month 7–12	0.04	(0.82)	-0.29	(0.41)	-0.83	(0.0)	-0.66	(0.13)	-3.24	(0.08)
% completed deals	0.07	(0.01)	0.07	(0.00)	0.06	(0.00)	0.07	(0.00)	0.10	(0.00)

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	1 year		3 years		5 years		7 years		10 years	
Panel B.2: Regression against s	emiannual C	4Rs and % co	mpleted dea	ls, controllin	g for other t	variables				
Number of observations	94		92		98		81		29	
$\operatorname{Adj} R^2$	-0.01		0.103		0.148		0.146		-0.069	
Bank tier	-2.33	(0.02)	-2.70	(0.00)	-2.71	(0.00)	-2.65	(0.00)	0.64	(0.85)
Lagged market share	0.10	(0.24)	0.30	(0.01)	0.22	(0.03)	0.16	(0.30)	0.02	(0.95)
CAR month 1–6	0.25	(0.33)	-0.01	(76.0)	0.80	(0.16)	1.56	(0.13)	3.79	(0.18)
CAR month 7–12	0.11	(0.57)	0.10	(0.83)	-0.43	(0.46)	-0.13	(0.88)	-2.55	(0.46)
CAR month 13–18			-0.15	(0.63)	0.06	(0.89)	0.81	(0.12)	0.55	(0.81)
CAR month 19–24			0.09	(0.62)	0.01	(0.98)	-0.17	(0.72)	-0.66	(0.53)
% completed deals	0.07	(0.02)	0.06	(0.00)	0.06	(0.00)	0.07	(0.00)	-0.06	(0.64)
% hostile deals	0.08	(0.16)	0.06	(0.15)	0.08	(0.02)	0.08	(0.18)	-0.23	(0.37)
% challenged deals	0.05	(0.28)	0.06	(0.26)	0.05	(0.17)	0.08	(0.11)	0.38	(0.29)
% stock financed deals	0.00	(0.87)	0.02	(0.58)	0.00	(0.84)	-0.03	(0.37)	0.20	(0.25)
Panel B.3: Regression against a	nnual CARs	and % compl	eted deals, co	ontrolling for	· other varia	bles				
Number of observations	94		92		83		73		27	
Adj R^2	0.002		0.122		0.128		0.163		-0.18	
Bank tier	-2.32	(0.02)	-2.65	(0.00)	-3.19	(0.01)	-3.27	(0.01)	-7.97	(0.24)
Lagged market share	0.10	(0.24)	0.30	(0.01)	0.18	(0.11)	0.08	(0.60)	0.07	(0.83)
Annual CAR month 1–12	0.17	(0.00)	0.04	(0.86)	0.25	(0.58)	0.49	(0.36)	0.56	(0.77)
Annual CAR month 13-24			0.01	(0.82)	0.10	(0.62)	0.20	(0.46)	0.30	(0.55)
Annual CAR month 25-36					-0.50	(0.20)	-0.90	(0.07)	-0.59	(0.80)
% completed deals	0.07	(0.01)	0.06	(0.00)	0.06	(0.01)	0.07	(0.02)	0.03	(0.78)
% hostile deals	0.08	(0.16)	0.06	(0.17)	0.08	(0.15)	0.06	(0.41)	0.19	(0.59)
% challenged deals	0.05	(0.24)	0.06	(0.26)	0.10	(0.06)	0.16	(0.02)	0.30	(0.43)
% stock financed deals	0.00	(0.84)	0.02	(0.57)	0.01	(0.79)	-0.01	(0.85)	0.14	(0.39)

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Table 6 (continued)

share of the bank and its tier are significantly related to its current market share, something which can also be predicted based on the stability of the ranking methodology. There is no relation between the post-acquisition performance of the acquirors and future market share of the bank. This conclusion holds even after controlling for the complexity of the deal, extending the performance measurement horizon from one year to ten years, or using annual CARs rather than semiannual CARs as explanatory variables. In almost every case, the percentage of completed deals is significant at the 5% level. In addition, the regressions have reasonable explanatory power; the adjusted R^2 for the regression for mergers using a five-year horizon, semiannual CARs, and various controls for the complexity of the transaction is 0.49, while for tender offers it is 0.15.

Using size- and book-to-market adjusted returns in place of market-adjusted CARs gives qualitatively similar results. In both tender offers and mergers, the market share of an investment bank in any year is strongly positively related to the percentage of deals the bank has completed in the past. For example, the GMM estimates for a regression on market share of investment banks advising acquirors in tender offers are 0.065 (*p*-value 0.00) for the percentage of deals completed in the past five years and -2.73 (*p*-value 0.00) for the tier of the bank in the year and 0.23 (*p*-value 0.02) for the lagged market share of the bank one year before. GMM estimates for semiannual size- and book-to-market-adjusted CARs for acquirors the bank has advised in the past five years are statistically insignificant. The adjusted R^2 is 0.13.

4.4. Do top-tier investment banks complete more deals?

According to the deal completion hypothesis, the market share of the investment bank is determined by the number of deals the bank has completed in the past. I examine the actual completion rates for all acquisitions announced between 1980 and 1994 for which there are data on the investment bank advisor (sample II in Table 2). Results are reported in Table 7. In mergers, third-tier investment banks actually complete more acquisitions than first-tier banks (90% versus 88%), with the difference significant at the 1% level using a chisquare test. However, when I further break down the sample on the basis of target bank advisors, first-tier investment banks complete roughly the same proportion of acquisitions regardless of the target advisor. Third-tier banks complete significantly more acquisitions when the target is also advised by a third-tier bank than when the target is advised by a first-tier bank. When I control for the target advisor, the difference between the three categories of banks becomes statistically insignificant.

Consistent with the deal completion hypothesis, first-tier investment banks in tender offers complete a significantly greater proportion (86%) of their deals than second- or third-tier investment banks (75% and 74%, respectively). The difference is significant at the 1% level and this result holds even after controlling

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The number of completed and withdrawn acquisitions in the total number of acquisitions announced between January 1980 and December 1994 for acquisitions advised by different categories of investment banks

Acquisitions are classified as having been advised by a bank of a particular tier on the basis of the most senior bank advising the transaction. The status of the acquisition is obtained from the STATC variable in the SDC database. The chi-square statistic tests the hypothesis that the three types of investment banks advise the same proportion of completed and withdrawn acquisitions.

Samples analyzed	Completed	Withdrawn	Other	χ^2 (<i>p</i> -value)
1. Mergers				
First-tier investment banks	1675 (88%)	192 (10%)	33 (2%)	25.74 (0.001)
Second-tier investment banks	1685 (87%)	229 (12%)	22 (1%)	
Third-tier investment banks	3466 (90%)	298 (8%)	93 (2%)	
2. Tender offers				
First-tier investment banks	357 (86%)	56 (14%)	1 (0%)	22.62 (0.001)
Second-tier investment banks	326 (75%)	109 (25%)	1 (0%)	
Third-tier investment banks	186 (74%)	67 (26%)	0 (0%)	
3. First-tier acquiror banks in mergers				
First-tier target investment bank advisors	438 (86%)	63 (12%)	7 (2%)	5.5 (0.06)
Second-tier target investment bank advisors	382 (88%)	50 (11%)	3 (1%)	
Third-tier target investment bank advisors	374 (92%)	32 (8%)	2 (0%)	
4. Third-tier acquiror banks in mergers				
First-tier target investment bank advisors	435 (85%)	69 (14%)	7 (1%)	8.65 (0.01)
Second-tier target investment bank advisors	466 (86%)	74 (14%)	1 (0%)	. ,
Third-tier target investment bank advisors	718 (88%)	73 (9%)	21 (3%)	

for the target advisor bank. First-tier banks complete 81%, 85%, and 95% of their acquisitions of targets advised by first-tier, second-tier, and third-tier banks, respectively; second-tier banks complete 70%, 77%, and 78% of their transactions and third-tier banks complete 79%, 81%, and 65% of their deals against the three types of banks, respectively.

4.5. Do top-tier investment banks complete superior deals?

The superior deal hypothesis predicts a positive relation between the postacquisition performance of the acquirors in mergers and tender offers advised by the investment bank and the market share of the investment bank. If the market recognizes this relation between market share and performance, it should capitalize this information into stock prices on the announcement date. I therefore investigate the announcement-period abnormal returns earned by acquirors advised by the different categories of investment banks. Table 8 reports short-term cumulative market-adjusted abnormal returns, using the CRSP equally weighted index, for a number of different periods around the announcement date. Acquisitions are announced between January 1980 and December 1994 (sample III in Table 2).

In mergers, the predictions of the superior deal hypothesis are not confirmed. Acquirors advised by first-tier investment banks earn consistently lower announcement-period returns than those advised by either second- or third-tier

Table 8

Short-run performance for acquirors in mergers and tender offers, classifying acquirors as advised by first-tier, second-tier, or third-tier investment banks

Panel A reports announcement-period cumulative abnormal returns (in percent) for acquirors advised by first-tier bulge bracket investment banks, second-tier major-bracket banks, and third-tier banks in mergers. Panel B reports the same statistics for acquirors in tender offers. Acquisitions are announced between January 1980 and December 1994. Banks are classified as first-, second-, or third-tier on the basis of their average yearly ranking (on the value of all transactions advised) every year between 1980–1994. Acquisitions are classified as having been advised by a bank of a particular tier on the basis of the most senior bank advising the transaction. Abnormal returns are market adjusted, with the CRSP equally weighted index as a benchmark. T-statistics are reported in parentheses, computed using a hold-out period 255 days in length, ending 46 days before the announcement date.

Period (days)	First-tier banks $(N = 857)$	Second-tier banks $(N = 677)$	Third-tier banks $(N = 1149)$
-1, +1	0.37 (1.76*)	0.81 (4.39***)	1.01 (5.81***)
0, +1	0.45 (2.63***)	0.64 (4.30***)	0.87 (6.15***)
0, +2	0.41 (1.97**)	0.64 (3.50***)	0.90 (5.21***)

Panel A: CARs for acquiring firms in mergers advised by different categories of investment banks (in %)

A Wilcoxon rank-sum test rejects the null hypothesis that the cumulative abnormal returns are identically distributed across the three categories of acquirors are at the 1% level for the (-1, +1) period, the 2% level for the (0, +1) period, and the 10% level for the (0, +2) period.

Panel B: CARs for acquiring firms in tender offers advised by different categories of investment banks (in %)

Period (days)	First-tier banks $(N = 191)$	Second-tier banks $(N = 168)$	Third-tier banks $(N = 79)$
-1, +1	3.05 (3.95***)	0.32 (1.06)	0.06 (0.13)
0, +1	3.56 (5.63***)	0.18 (0.75)	0.31 (0.77)
0, +2	3.51 (4.55***)	0.34 (1.11)	0.16 (0.33)

A Wilcoxon rank-sum test rejects the null hypothesis that the cumulative abnormal returns are identically distributed across the three categories of acquirors at the 2% level for the (-1, +1) and the (0, +1) periods and the 1% level for the (0, +2) period.

*Significant at the 10% level.

**Significant at the 5% level.

***Significant at the 1% level.

banks, earning a cumulative abnormal market-adjusted return of 0.37% (significant at the 10% level) in the three days around the announcement day (-1 to +1); acquirors advised by second- and third-tier banks earn 0.81% and 1.01%, respectively. Similar patterns are seen in the other periods investigated. A Wilcoxon rank sum test rejects the hypothesis that the three CARs are identically distributed for any of these periods. This result holds true irrespective of whether I use either the market model or a comparison period model to compute normal returns.

In tender offers, however, acquirors advised by first-tier investment banks earn higher abnormal returns than those advised by second- or third-tier banks. In the two-day (0, +1) period, for example, acquirors advised by first-tier banks earn significant market-adjusted returns of 3.56%, while those advised by second- and third-tier banks earn insignificant returns of 0.18% and 0.31%, respectively. Again, a Wilcoxon rank sum test rejects the hypothesis that the three CARs are identically distributed for any of the periods. This conclusion is also robust to the choice of models. This finding is consistent with the superior deal hypothesis.

The superior deal hypothesis also implies that top-tier investment banks will be less likely to complete value-destroying deals for their clients and more likely to complete value-enhancing deals than either second- or third-tier banks. I classify all acquisitions, as either 'good' or 'bad' depending on whether the announcement-period abnormal returns to the acquiror are positive or negative. I then compute the proportion of 'good' and 'bad' deals completed by acquirors advised by the three categories of investment banks. Results are reported in Table 9. Inconsistent with the superior deal hypothesis and consistent with the deal completion hypothesis, first-tier investment banks do not advise the completion of a significantly greater proportion of value-enhancing deals as opposed to the proportion of value-destroying deals. Acquirors advised by first-tier investment banks complete 89% of 'good' mergers and 88% of 'bad' mergers. Similarly, they complete 65% of 'good' tender offers and 75% of 'bad' tender offers. In contrast, acquirors advised by second-tier banks complete 91% of 'good' tender offers as opposed to only 81% of the 'bad' tender offers, with the difference in proportion significant at the 3% level.

4.6. Do top-tier investment banks advise their clients to pay higher premiums?

One way to make sure that a deal is completed is for the acquiror to pay higher acquisition premiums. If first-tier investment banks encourage their clients to pay higher bids, this might explain both the higher completion rates and the poor relative performance of bidders in tender offers advised by first-tier investment banks. I therefore investigate the acquisition premiums paid in acquisitions completed between January 1980 and December 1991 involving first-, second-, and third- tier banks. The acquisition premium is the difference between the highest price paid per share in the transaction and the target share

Completion rates for 'good' and 'bad' mergers and tender offers, classifying acquirors as advised by first-, second-, or third-tier investment banks

This table reports the number of completed and withdrawn acquisitions in the total number of acquisitions, with available announcement-date returns, announced between January 1980 and December 1994, for acquisitions advised by different categories of investment banks. Acquisitions are classified as having been advised by a bank of a particular tier on the basis of the most senior bank advising the transaction. They are classified as 'good' or 'bad' on the basis of the three-day (-1 to +1) market-adjusted excess return earned by the acquiror around the announcement date. The status of the acquisition is obtained from the STATC variable in the SDC database. The chi-square statistic tests the hypothesis that the three types of investment banks advise the same proportion of completed and withdrawn acquisitions. Panel A reports the results for mergers while Panel B reports results for tender offers.

Samples analyzed	Completed	Withdrawn	Other	χ^2 (<i>p</i> -value)
Panel A: Completion rates for m	ergers advised by d	ifferent categories	of investment	banks (in %)
1. First-tier investment banks				
'Good' acquisitions	347 (89%)	40 (10%)	5 (1%)	0.75 (0.39)
'Bad' acquisitions	394 (88%)	55 (12%)	0 (0%)	
2. Second-tier investment banks				
'Good' acquisitions	391 (88%)	43 (10%)	9 (2%)	1.05 (0.31)
'Bad' acquisitions	386 (87%)	53 (12%)	4 (1%)	. ,
3. Third-tier investment banks				
'Good' acquisitions	456 (92%)	33 (7%)	7 (1%)	0.12 (0.73)
'Bad' acquisitions	417 (91%)	33 (7%)	7 (2%)	
Panel B: Completion rates for ter	nder offers advised	by different catego	ries of investn	uent banks (in %)
1. First-tier investment banks				
'Good' acquisitions	36 (65%)	19 (35%)	0 (0%)	1.08 (0.30)
'Bad' acquisitions	59 (74%)	21 (26%)	0 (0%)	. ,
2. Second-tier investment banks				
'Good' acquisitions	106 (91%)	10 (8%)	1 (1%)	4.98 (0.03)
'Bad' acquisitions	76 (81%)	18 (19%)	0 (0%)	. ,
3. Third-tier investment banks				
'Good' acquisitions	32 (80%)	8 (20%)	0 (0%)	0.02 (0.89)
'Bad' acquisitions	41 (79%)	11 (21%)	0 (0%)	× ,

price four weeks before the announcement of the acquisition, as a percentage of the target share price four weeks before the announcement date. Table 10 describes the results of the nonparametric tests used in testing this hypothesis.

Consistent with the deal completion hypothesis, acquirors in tender offers advised by third-tier investment banks pay a median premium of 38% as opposed to 56% and 58% for acquisitions advised by first-tier or second-tier banks, respectively. The hypothesis that acquirors in tender offers pay similar

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Nonparametric tests for differences in acquisition premiums across mergers and tender offers

This table reports Wilcoxon two-sample rank-sum z-scores (or the Kruskal-Wallis H-test χ^2 approximation for more than two samples) for comparing acquisition premiums paid by acquirors advised by different categories of investment banks, for acquisitions announced and completed between January 1980 and December 1991. Acquisition premiums are defined as the difference between the highest price paid per share and the target share price four weeks before the announcement date as a percentage of the target share price four weeks before the announcement date, measured by the PREM4WK variable in the SDC database. Acquisitions are classified as having been advised by a bank of a particular tier on the basis of the most senior bank advising the acquisition.

Samples analyzed	Mean (Median) acquisition premium (%)	Z (p-value)	χ^2 (<i>p</i> -value)
1. Mergers			
First-tier investment banks ($N = 86$)	49.17 (36.6)		0.04
Second-tier investment banks ($N = 59$)	50.28 (35.7)		(0.98)
Third-tier investment banks ($N = 87$)	136.74 (41.8)		
2. Tender offers			
First-tier investment banks ($N = 74$)	58.63 (56.3)		5.03
Second-tier investment banks $(N = 83)$	63.05 (58.1)		(0.08)
Third-tier investment banks $(N = 30)$	46.41 (38.1)		
3. Tender offers			
First-tier investment banks ($N = 74$)	58.63 (56.3)	0.13	0.02
Second-tier investment banks $(N = 83)$	63.05 (58.1)	(0.89)	(0.89)
4. Tender offers			
First-tier investment banks ($N = 74$)	58.63 (56.3)	-2.15	4.63
Third-tier investment banks $(N = 30)$	46.41 (38.1)	(0.03)	(0.03)
5. Tender offers			
Second-tier investment banks ($N = 83$)	63.05 (58.1)	-2.00	4.01
Third-tier investment banks $(N = 30)$	46.41 (38.1)	(0.05)	(0.05)

acquisition premiums can be rejected at the 8% level. McLaughlin (1992) also documents that in tender offers, bidders using low-quality investment bankers offer significantly lower premiums than high-quality investment banks. However, I find no evidence that acquisition premiums differ across the tier of the investment bank advising the acquiror in mergers.

The decision to pay a higher premium is influenced by a number of factors. Rau and Vermaelen (1998) show that bidders with high book-to-market ratios pay lower premiums than bidders with low book-to-market ratios. Similarly, the mode of payment of the acquisition (through stock or cash), whether the deal has a single or multiple bidders, and the attitude of the transaction (whether hostile or friendly) have all been shown to affect the size of the premium paid (e.g., McLaughlin, 1992). I therefore also regress the acquisition premium on the tier of the investment bank advising the acquisition after controlling for the book-to-market ratio of the acquiror, the percentage of the deal paid through common shares, an indicator for a bid involving multiple bidders, and an indicator for the attitude of the transaction. In both mergers and tender offers, bank tier has no explanatory power in this regression. However, since we only have a small number of third-tier investment banks (30) advising bidders in tender offers relative to the number of bidders being advised by first- or second-tier banks (74 and 83, respectively), it is not surprising that the bank tier is no longer a significant explanatory variable in the regression for tender offers.

4.7. Is there a relation between contingent fees paid to investment banks and the long-horizon post-acquisition returns of acquiring firms?

Lastly, I check if the deal completion incentives provided by high contingent fees actually hurt the acquiror if the investment bank advises it to undertake value-destroying deals. I investigate the relation between the abnormal returns earned by the acquiror in the post-acquisition period and the average contingent fees paid to the investment bank. I restrict my acquisition sample to cases in which the acquisition is completed between 1980 and 1991 and for which I have data on the fee breakdown structure of the deal (sample IVA in Table 2). If an acquisition is advised by more than one bank, I use the proportion of contingent fees in the total fees paid to the most senior investment bank as the relevant contingent fee proportion in this case.

Table 11 reports the results of a regression of the average contingent fee on the post-acquisition market-adjusted CARs up to two years after the completion of the acquisition, controlling for a number of factors that have been shown to affect post-acquisition CARs. (Results obtained with post-acquisition periods longer than two years are similar to those obtained at the two-year horizon and are not reported). In mergers, I find no relation between the post-acquisition abnormal returns and the average proportion of contingent fees paid to the advisor. In tender offers, on the other hand, consistent with the deal completion hypothesis, a strong negative relation exists between the average contingent fee paid to the advisor and the abnormal return earned by the acquiror over a 6-18 month period after the completion of the tender offer. For example, 12 months after the completion of the acquisition, the average percent contingent fee is significantly (at the 1% level) negatively related to the CAR earned by the acquiror in the tender offer. The adjusted R^2 for this regression is also reasonably high at 6%. At both six and 18 months after the completion of the tender offer, the average percentage contingent fee is still negatively related to the CAR earned by the acquiror but the relation is only significant at the 10% level. With size- and book-to-market-adjusted returns, qualitatively similar results are obtained. For example, one year after tender offer completion, both the tier of the advising bank and the average contingent fee paid are negatively related to

Ordinary least-square re fee paid to the most sen	gression estimate ior investment ba	s of a regression ank advising th	n of post-acquisit e transaction	ion acquiror mar	ket-adjusted CAF	ks against the a	werage percent:	age contingent
If two or more banks wi value-weighted index. At are the percentage of coi (defined by the SDC var value of the t-statistic is	th the same rank quisitions are am mmon shares use iable CHA), and reported in pare	advise an acqu nounced and cc d in the deal (d the attitude of ntheses.	isition, the avera ompleted between leftned by the rat the transaction v	ge contingent fee January 1980 and io of the SDC va whether hostile or	paid is taken. CA d December 1991. riables VCOM/V friendly (defined	ARS are computed of the second of the sec	ted with respec ariables used in he bid was cha ariable ATTC)	t to the CRSP the regression llenged or not The absolute
Number of months CARs are calculated over after acquisition completion	9		12		18		24	
Panel A: Average conting	gent fees paid in r	nergers						
V	69	79	69	79	69	70	69	62
Intercept	-1.72 (0.07)	-1.75(0.38)	-31.9(0.90)	-3.42 (0.55)	-61.52(1.30)	-3.09(0.37)	-76.64 (1.51)	-4.29 (0.48)
Bank tier	-3.81(0.94)		0.91(0.16)		4.78 (0.62)		7.67 (0.93)	
Average percent	5.17 (0.62)	6.39 (0.84)	-6.34 (0.54)	-4.50 (0.44)	3.66 (0.23)	3.42 (0.24)	-0.26 (0.02)	-0.66 (0.05)
contingent fee paid								
Percentage of deal	4.97 (0.48)		14.41 (0.98)		33.30 (1.69)*		28.66 (1.35)	
paid by issuing shares								
Challenged deal indicator	-10.3 (0.72)		-18.66 (0.92)		-14.91 (0.55)		-30.65 (1.05)	
Attitude of transaction indicator	2.09 (0.11)		21.55 (0.77)		20.03 (0.53)		33.44 (0.83)	
Adj R^2	-0.04	-0.00	-0.03	-0.01	-0.02	-0.01	0.01	-0.01

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Table 11

Ν	129	139	129	139	129	139	129	139
ntercept	-2.40 (0.29)	7.46 (1.94)*	9.62 (0.81)	$16.58 (3.06)^{***}$	2.33 (0.14)	13.92 (1.84)*	3.58 (0.19)	13.44 (1.53)
ank tier	1.89(0.69)		4.35 (1.11)		3.43(0.63)		5.92 (0.95)	
Average percent	-8.68 (1.53)	-9.70 (1.82)*	-22.25 (2.76)***	- 22.34 (2.99)*** -	-18.70 (1.66)* -	- 19.35 (1.86)* -	- 18.74 (1.45)	- 17.69 (1.46)
ontingent fee paid								
ercentage of deal	4.95 (0.58)		-11.53 (0.95)	I	-19.29 (1.14)	I	-25.58 (1.31)	
aid by issuing shares								
Challenged deal	0.26(0.06)		-7.37 (1.10)	I	-10.71 (1.14)	Ι	-11.12 (1.03)	
ndicator								
Attitude of transaction	7.27 (1.41)		2.48 (0.34)		10.42 (1.02)		5.92 (0.50)	
adicator								
ıdj R ²	0.00	0.02	0.06	0.06	0.02	0.02	0.02	0.00
* Cianifount of the 100/	10000							

Panel B: Average contingent fees paid in tender offers

*Significant at the 10% level. ***Significant at the 1% level. the size- and book-to-market-adjusted CAR of the acquiror, a relation significant at the 9% and 12% level, respectively.

5. Conclusion

I investigate the determinants of market share for investment banks advising acquirors in mergers and tender offers. I find that the incentive fee structure charged by different types of investment banks is related to their market shares, with first-tier banks charging much higher proportions of their fees contingent on the completion of the acquisition than third-tier investment banks. I also find that the market share of investment banks in both mergers and tender offers is significantly positively related to the percentage of deals completed by the bank in the past. Market share is not related to the post-acquisition performance of acquirors the bank has advised in the past.

Consistent with the deal completion hypothesis, whereby bank market share depends on the number of deals completed, I find that first-tier banks complete a significantly greater proportion of the tender offers they advise than either second- or third-tier banks, while the proportions of mergers completed is similar across the different categories of investment banks. Inconsistent with the superior deal hypothesis, whereby bank market share depends on the performance of the acquiror, I find that in mergers, clients of first-tier investment banks earn lower announcement-period excess returns than clients of secondand third-tier investment banks. Also inconsistent with the superior deal hypothesis, acquirors in tender offers advised by first-tier investment banks earn higher announcement-period excess returns than acquirors advised by secondor third-tier investment banks in tender offers, but acquirors advised by first-tier investment banks do not complete a greater proportion of deals when the announcement-period excess returns earned by the acquiror are positive, than when these returns are negative.

Acquirors in tender offers advised by third-tier banks also pay a median premium much lower than the premiums of advisors advised by first- or second-tier banks, a result consistent with evidence reported by McLaughlin (1992). The premiums paid in acquisitions advised by the different categories of investment banks in mergers are indistinguishable from one another. In tender offers, paying higher contingent fees can actually hurt the acquiror in the longer term. Bidders in tender offers display a significant negative relation between the abnormal return they earn over the 12 months following the acquisition and the average percent contingent fees they pay. No such relation is observed in mergers.

The market shares of investment banks advising acquirors in either mergers or tender offers are positively related to their ability to complete the deal. In mergers, however, deal completion incentives for investment banks are weaker than for investment banks advising acquirors in tender offers. Thus, while the announcement-period returns to acquirors advised by top-tier investment banks are significantly lower than the returns to acquirors advised by lower-tier banks, top-tier investment banks do not complete significantly more deals than lowertier banks. In addition, the proportion of contingent fees paid in an acquisition does not have any explanatory power in measuring the post-acquisition performance of acquiring firms. Therefore, though investment banks advising mergers have incentives to complete the deal, these incentives do not necessarily result in value-destroying deals for acquirors.

In tender offers, the market share of an investment bank is related to its ability to complete a deal, irrespective of whether the deal actually adds value to the acquiror. Therefore, one explanation of the contingent fee puzzle noted by McLaughlin (1992) is that these fees do not result in perverse incentives for investment banks. The data suggest that contingent fees are used by bidders in investment banks largely to ensure the completion of an acquisition, a task for which this fee structure is eminently suited. Banks respond to these incentives and the market share of an investment bank advisor in tender offers is related to its ability to complete a deal. These findings are not consistent with the hypothesis that the large conflicts of interest generated between investment banks and their clients (due to the contingent fee structure in most acquisition advisory contracts) will be mitigated by the investment bank's concern for its reputation or market share. Consequently, these findings contradict the assumption common in the literature that banks will not behave opportunistically in such transactions.

Two puzzles remain unanswered. Why is the ability to conclude a deal more important for investment banks in tender offers than in mergers? Perhaps this is because mergers are negotiated deals. Because the acquiror is more certain that the deal will be completed, the completion portion of the transaction is less important. Secondly, why does the market fail to recognize that providing incentives to complete a deal does not necessarily result in value maximization for the acquiror? Further research is needed to answer these questions.

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