



European banking M&As: The role of financial advisors

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Abstract

We investigate the puzzle of banks contracting the services of external advisors for deals they can self-manage and the role of financial advisors in mergers and acquisitions among European banking firms. We also study the determinants of the choice by bank acquirers and bank targets to either appoint external advisors or manage in-house, as well as between appointing either top or lower tier advisors. Top tier advisors are more likely to be employed in debt financed and cross-border deals. We also find that most European bank mergers are managed in-house, contrary to prior findings reporting mostly externally managed deals attributed to the certification effect. Targets fail to benefit from deals where they do not match acquirer's decision to appoint external advisors. However, there is an overall propensity to match the counter party's tier of advisor.

Keywords Mergers and Acquisitions · European banking · Acquirers · Targets · Financial advisors · In-house managed deals

JEL Classification G34

1 Introduction

A puzzling question is why banks appoint external advisors, given that with their expertise banks can manage the deals in house. We seek to explore this puzzle. According to data from Securities Data Corporation (SDC), almost 85% of all takeover deals between non-bank acquirers and targets are executed with the assistance of external financial advisors. These non-bank firms appoint banks as financial advisors because the banks have the

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necessary expertise in brokering the takeover deals, which the non-bank firms lack. There is no puzzle here. However, for the investment bank takeovers, the proportion of deals that are managed in-house is almost the reverse. We find that 85.9% of target and 77.8% acquiror banks managed their deals in-house. This is not surprising, given the expertise of banks. Nevertheless, a non-trivial 14.1% and 22.2% respectively employed other banks as their external advisor. This is puzzling. Why would banks who have the expertise and act as external advisors, appoint other banks to be their external advisors when it comes to themselves being an acquiror or target? Whereas prior literature has investigated the role of financial advisors among non-bank M&As, the role of financial advisors in M&As among banks has not been studied.

The academic literature provides two rationales for the choice of advisor. It is argued that wealth-maximizing firms will select advisors firstly, for their reputation and secondly for their ability to deliver value enhancements (Sibilkov and McConnell 2014). The reputation hypothesis suggests that firms choose advisors with higher ranking due to their market knowledge and ability to provide value gains. Top-tier advisors gain their reputation mainly from their superior skills in deal-negotiation and expertise (Rhee and Valdez 2009). Over the period 2002–2011, in the U.S market, acquirers paid in excess of \$20 billion to financial advisors. The consolidation in the financial sector has also attracted attention in the academic literature including the role of financial advisors.¹ M&As among banks are an important element of the structure of the financial services market. Some acquirors and targets may choose not to use an investment bank advisor in M&A transactions because they may prefer to manage such deals in-house. For banks, proprietary analytics and valuation expertise, coupled with the advantage of being privy to sensitive data that are part of the ongoing operations, enables in-house management of M&A deals. Capitalising on such capabilities can potentially provide for significant cost savings, enhanced deal completion rates, deal expediency and act as a valuable identification of key valuation drivers, which are typically highly confidential and time sensitive. Given the significant differences between banks and industrial firms, bank mergers are a fruitful area for researchers to pay attention to. Mergers and acquisitions in the banking sector draw a lot of attention because they determine the banking landscape for many years to come (Carletti et al. 2021). Increased attention to the topic is also be attributed to the major consolidations that occurred in the banking industry after the global financial crisis of 2008 (Cumming et al. 2023).

In the financial crisis of 2007–2008, M&As have provided opportunities for some banks, problems for others and the threat of survival for a few troubled others. Evidence from the US market might not be universally applicable to other markets. Hagendorff et al. (2008) argue that differences in institutional practices, sectoral financial arrangements and cultural differences in financial transaction completion can potentially materially impact value appropriations, wealth effects and investor reaction differs across markets. Besides significant financial state support or the partial nationalisation of many banks in the developed economies, some vulnerable banks, to protect the banking industry, have been forced/encouraged to merge or to be taken over by other banks in government supported deals

¹ Changes in the economic and regulatory environment have had a significant effect on the banking sector over the past thirty years. Reforms in the American banking regulatory system, the advancing of the integration of the European Union, the increasing importance of emerging economies in the global stage and the latest wave of creative disruption by the emerging financial technology companies has provided opportunities and challenges for banks and has fuelled increasing mergers and acquisitions (M&As) activity.

(ECB 2004; Valkanov and Kleimeier 2007; Asimakopoulos and Athanasoglou 2013). This resulted in a further increase in bank concentration following the crisis (Rao-Nicholson and Salaber 2016). The evidence on the wealth effects of geographic dispersion in the take-over activity is mixed (DeYoung et al. 2009). In that vein, Arena and Dewally (2017) show that financial advisors with proximity, cultural affinity, and localised experience play an important role in assisting acquirers create greater value synergies.

A significant body of empirical research provides evidence of the drivers of M&As among financial institutions in the U.S. (see Berger et al. 1999; Dymksi 1999; Berger 2003; Amel et al. 2004; Humphrey and Vale 2004; Harford 2005; Jones and Critchfield 2005; DeYoung 2007a, b). The evidence on the effect of M&A deals on shareholder wealth is mixed. For the period prior to the year 2000, there is some consensus on the wealth effects, with the shareholders of the target benefiting significantly and the acquirer shareholders experiencing marginally negative abnormal returns (Houston and Ryngaert 1994; Pilloff 1996). However, in post-2000 studies, the empirical evidence is conflicting. Some studies report financial gains for the acquirers (Kwan and Wilcox 2002; Knapp et al. 2006; Hannan and Pilloff 2006; Berger and Dick 2007) and others provide mixed results (see Allen et al. 2004; Henock 2004; Becher and Campbell 2005; Bauer et al. 2009). There is no empirical literature relating to the banking sector reporting evidence on the role of financial advisors in the M&A bank deals.

Previous studies on bank M&As explore factors such as managerial motives or the choice of financial advisor, deal complexity, speed of completion, level of fees and fee structure. The certification hypothesis argues that prestigious advisors with expert knowledge and reputation provide superior financial services and value (Chemmanur and Fulghieri 1994). In Europe, the evidence weighs more towards productivity and efficiency gains (see Cybo-Ottone and Murgia 2000; Huizinga et al. 2001; Beitel et al. 2004; Diaz et al. 2004; De Guevara et al. 2005; Campa and Hernando 2006; Altunbas and Marques 2008). Ayadi et al. (2013) though draw the conclusion that merger operations in European banking are motivated mostly by complementarity improvement objectives such as business line synergies as opposed to efficiency and productivity gains. While the previous empirical literature has examined a broad set of countries globally, it covers Europe either only partially (Beck et al. 2006a, b; De Nicoló et al. 2004) or only covers Western/Eastern European countries (Schaeck and Čihák, 2007; Schaeck et al. 2006).

Hagendorff et al. (2008), provide evidence that acquirer banks realize higher returns when targeting companies in lower investor protection economies (e.g., France, Germany and Italy among the civil law European markets) compared to acquirers targeting institutions, which operate under a higher investor protection regime (notably the UK and Ireland within Europe and other common law nations like the US outside Europe) (see also La Porta et al. 1999). In a comparative study, Hagendorff and Keasey (2009) suggest that the M&A activity in different markets is governed by varying managerial motives, resulting in differential post-merger implications for both bidders and targets. Kolb (2019) in a European study, argues that investment banks in their role as financial advisors help generate shareholder value only when both the bidder and the target are in the UK. Investment banks seem to offer value to their clients most effectively only in the UK-based acquisitions. Their findings provide support for two implications. First, research results from the US markets might not be generalizable to Europe. Second, focusing on M&As among European banks might shed new light on the question of whether financial advisors provide value to their M&A clients.

The splintered and patchwork quilt nature of the extant research on the role of financial advisors in European banking calls for a study that is integrated over all the countries comprising the European banking sector, with a comprehensive sample of deals that spans over

several decades while employing the same standardised methodology. This is necessary due to its potential shareholder, regulatory and wider social implications. The bulk of the prior literature focuses on single-country or domestic M&A environments, it is thinner in cross-border M&As and even sparser within the context of the European financial services industry. We, therefore, collect a comprehensive sample of all M&A bank deals in Europe.² Angwin et al. (2023) argue that M&A research remains largely confined within established boundaries leaving in this way new, potentially important insights, understudied in varied sectors and different contexts.

Our study makes three contributions. First, we provide comprehensive evidence on the shareholder wealth effects of M&A deals for both acquirers and targets, using the population of all deals in the European banking industry over a 30-year period from 1987 to 2016. Our analysis extends to include deals where the target is either a bank or a non-bank and includes domestic and cross-border transactions. Second, we shed light on the determinants of the likelihood that the financial advisor appointed—by either the acquirers or the targets—is from the top tier as compared to lower tier. We also study the associated shareholder wealth experience of the acquirers and targets to selecting from the top-tier or the lower tier. Furthermore, we investigate differences in the wealth effects of selecting advisors from the top- or lower-tier during and outside the 2007–2008 financial crisis. Third, we provide evidence on the determinants of the likelihood that acquirers and targets in European bank M&A deals appoint external financial advisors or manage the deal in-house. We also explore how this decision of targets and acquirers to choose external advisors or manage the deal in-house, affects the wealth experience of their shareholders.

2 The role of financial advisors in mergers and acquisitions

The importance of financial advisors in M&A deals has been studied as early as the 1990s. Bowers and Miller (1990) argued that top-tier advisors are able to signal their higher quality through identifying and helping to successfully conclude complex, high-synergy and value-adding deals for a premium fee. In the same spirit, McLaughlin (1990) reports that, on average, contingent fees reached 1.29% of the average transaction deal value with bankers been incentivised on deal completion rates. They note however, that despite such contracts being contingent and hence motivating investment bankers to satisfy some client objectives, many also create conflicts of interest between the advising bank and the firm. Servaes and Zenner (1996) examined the importance of financial advisors as a choice associated with cost reduction and value enhancement. Their findings suggest that the appointment of a top-tier advisor is related to deal complexity but does not, in general, result in higher gains. Rau (2000) finds an inverse relationship between incentivized fees and post-acquisition performance and no announcement-related abnormal returns for the acquirer and concludes that top-tier financial advisors do not make overall superior deals. Furthermore, Rau and Rodgers (2002) find that top-tier financial advisors are associated with lower long-term returns, but they deliver higher rates of completion. In another study Hunter and Jagtiani (2003) document declining post-merger gains when top-tier advisors were involved. Their findings also support the view that top-tier advisors were able to charge higher fees and close deals more swiftly than lower tiered advisors, however, the

² We start our sample from 1987 because M&As prior to that date are too few to be representative and there are data availability issues.

size of fees was irrelevant to the rate of deal completion. Choi and Triantis (2008, 2010) argue that the potential benefits from the top tier financial advisors are associated to their expert advice, design of customised cross-party risk allocation contracts, addressing risk-related changes to firm fundamentals and reducing the magnitude of long-run valuation errors.

Saunders and Srinivasan (2001) examine prior, ongoing and switching investment banking relationships, fees and associated performance. Their findings suggest that acquiring firms pay on average a higher fee to advisors with whom they have had a continuing relationship and a lower fee when they change to an advisor with no prior relationship. Even with higher fees, acquiring firms perceive value benefits of retaining prior merger advisors. Importantly however, higher fees are shown not to be compensation for superior abnormal performance. Hayward (2003) examines the circumstances under which professional firms use prior client relationships to secure recommissions and find that financial advisors lead clients towards multifaceted, complex solutions with problematic outcomes. Griffin et al. (2014) examine reputable underwriters and their effect on the quality of the securities produced and find that while high-reputation advisors in general produce good quality securities, when such dealings are presented with a higher-than-average amount of complexity they tend to underperform during market downturns. Ismail (2010) finds that US bidders utilizing top-tier advisors lost more than \$42 billion, in contrast to those advised by lower tier advisors that gained \$13.5 billion, at the merger announcement. Target advisors provided higher wealth gains for their clients, which led to higher combined gains at the expense of the acquirer. These findings are also partially consistent with the superior deal hypothesis since the presence of a prominent advisor on at least one side of the M&A deal produced superior wealth gains to the pooled entity.

The certification effect and the dual role of financial advisors is explored by Allen et al. (2004), who examine advisor duality as both lender and financial advisor and argue that any certification effect can either be muted or diminished due to potential conflict of interest. They also find a positive certification effect for the target firms but not for the bidding firm and that acquirer returns are unresponsive to the choice of own bank as an advisor in a merger. Ertugrul and Krishnan (2014) examine investment banks in a dual role as advisers to M&As and as underwriters and find evidence of lower bidder announcement returns and higher target announcement returns associated with higher acquisition premiums.

Fernando et al. (2015) investigate why investment banks in their role as advisors and security underwriters invest in reputation-building. Their results are striking in the sense that they provide strong evidence regarding price and service discrimination based on underwriter reputation, where top-tier advisors overall earn significantly higher spreads compared to lower-tier advisors. Such reputational premiums are the result of higher valuations and the provision of non-price benefits. They also document significant cross-sectional variation in the structure of the fees and service. An interesting finding of their study is that the fee spread of the same advisor between the U.S and Europe directly questions the value of reputational capital, and the authors argue that European clients are not necessarily pre-occupied with underwriter reputational capital. Russo and Perrini (2006) study the cost of M&A advice in Europe between 1988 and 1997 and conclude that financial advisors might distract managers from the true objectives by raising the cost to their own benefit. Their results confirm similar findings by Servaes and Zenner (1996) regarding the decision to hire external advisors because of the complexity of acquisition, as well as more recent evidence provided by Golubov et al. (2012). In a sectoral context, specifically REITs, Daniels and Phillips (2007) report that where financial advisors were involved, both target and acquiring firms enjoy higher value gains. This value was approximately 10%

higher than deals done without advisors, with the acquirers' advisors contributing 11% more than the target advisors. Top-tier advisors correlate with higher returns and higher transaction value acquisition.

Francis et al. (2014a, b) and Hayward earlier (2003) examine whether prior relationships and certification value matter and how such engagements influence the acquirer's choice of advisors. They find that clients without prior M&A experience are also expected to utilize their underwriters as advisors in stock-paid deals. This though is reversed in firms with prior M&A experience where clients switch financial advisors who have exhibited poor prior deal performance. Interestingly, Sibilkov and McConnell (2014) examine whether prior client performance is a considerable determinant of the probability that a financial advisor will be appointed as the advisor by other acquirers. They find that prior client performance is positively related to the changes in the advisor's market share and that acquirers' announcement period CARs are positively correlated with contemporary changes in advisors' market values. Bao and Edmans (2011) explore top-tier financial advisors performance persistence and find that prior advisor performance is a more reliable indicator of top-tier reputation compared to other traditional measures such as market share. Further evidence on the role of financial advisors in M&As is provided by Golubov et al. (2012) for US deals for the period 1996–2009. They find that, top-tier advisors perform better than lower-tier advisors for acquirers by capturing higher, strategic synergies due to their fine-tuned negotiation skills. Their findings also support the view that top-tier advisors have higher completion times, like evidence in Hunter and Jagtiani (2003).

Song et al. (2013) find that 'boutique', lower tier financial advisors are associated with lower deal premiums and more favourable deal outcomes, as compared to 'full-service', bulge bracket advisors. Furthermore, while boutique advisors are mostly used in smaller value deals and where the deal is hostile, they are also employed in more complex deals due to their expertise, industry specific knowledge, as well as potential prior relationships as in-house, ex-associates of bulge bracket investment banks. They are also associated with lower premium fees and longer deal duration suggesting a higher quality service in terms of due diligence, valuation and negotiating skills. They also find, in agreement with Kolasinski and Kothari (2008), that the autonomy of smaller advisors makes them less susceptible to conflict of interests, as recently evidenced around the financial crisis of 2007–08, where there has been a heightened sense of conflict of interest around the 'bulge' bracket banks. Hackethal et al. (2012) report that investment bank-related advisory accounts are less efficient compared to smaller financial advisors by subtracting more in terms of fees and charges than any monetary value they add to the accounts. Chang et al. (2016) find that advisors with greater industry expertise earn higher advisory fees and increase the probability of deal completion, but they find no evidence indicating that an advisor's industry expertise is associated with value creation for the target or for the bidding firms. Noonan (2016) states that executives often show a clear preference for bulge-bracket investment banks, but this is not justified by service quality. Indap (2015) argues that large institutions are unwilling to gravitate to companies whose characteristics do not firmly correspond to bulge bracket rank, predominantly because they are status conscious as a result of being subject to higher legal scrutiny.

Practitioner research though reports that lower-tier, boutique investment banks also gain share on some of the world's biggest mergers and acquisitions. In 2013 alone, 80% of the top 10 M&A deals involved lower-tier, independent advisors. The market share of U.S. boutique financial advisors rose to 18% in 2016, up from 8% in 2008, with seven out of

the top 20 M&A deals fee earners being independent firms.³ In spite of a thin public profile, new niche advisors and boutique banks (notably in the United States) imitate bulge-bracket players with surprising success in terms of winning prestigious deals. For example, in a recent ‘*coup d’état*’ (March 2015), Centerview Partners elbowed out the top-tiers in the year’s biggest deal of \$75 billion merger of Kraft Foods Group Inc. and H.J. Heinz Co. Similar ascendance of market share of the lower-tier financial advisors has also been recently observed in Europe. Approximately 45 per cent, of all mergers and acquisition fees in the Europe are captured by smaller, independent advisory firms. Boutique advisors have overall, taken 44 percent (nearly \$1.7 billion) of total fees for deals completed in Europe with Europe-based independents holding 25 percent, (\$964 million) and the rest holding 19 percent.⁴ According to the Director of ‘Deals Intelligence’ at Thomson Reuters, (2016) “... boutique and independent advisory firms cashed in on their industry expertise during 2016, accounting for 34% of overall advisory fees, an all-time high and illustrating the changed advisory landscape since 2000, when boutique advisory firms accounted for 13% of fees and the top-tier advisors accounted for 63% ...”.

The majority of the prevailing evidence reported in the bank M&A literature focuses on performance measures, where the evidence of advisor-related performance improvement is to a considerable extent mixed. More importantly, the existing literature often construes the analysis of the obtained results from relatively limited samples. Furthermore, it ignores the factors that affect the choice of investment advisor. Renneboog and Vansteenkiste (2019) argue that both the wide variety of performance measures and the heterogeneity in sample sizes complicates the drawing of accurate and unambiguous conclusions. Overall, there is no evidence on the relationship between the choice of external financial advisor or in-house M&A deal management for M&As in European banking. There is also no evidence on the factors that affect the decision to select external advisors for either the acquirers or the targets. This paper aims to expand the current literature by employing a comprehensive pan-European sample, by examining M&A banking performance under different advisor scenarios and by distinguishing among several factors that affect advisor choice.

3 Data and methodology

3.1 Sample

We collect a sample of European bank M&A deals announced between January 1, 1987, and December 31, 2016, from the Thomson Financial SDC Mergers and Acquisitions database. Our original sample includes 5,860 deals where all mergers and acquisitions involving targets and/or acquirers whose shares are not actively traded are excluded from our sample. Years before 1987 are not included due to lack of data. The sample was cleaned of private and undisclosed value transactions, divestitures and privatizations, liquidations and restructurings, reverse takeovers and bankruptcy acquisitions. This yielded a sample of 4,780 deals. We include in our sample only transactions with a clear change of control, where the

³ See Hoffman, L. (2016), *Boutiques Ride M&A Surge to Record Year*, Wall Street Journal – MoneyBeat, Retrieved 2017/05/19, as well as Schäfer, D. (2012), *Investment banking: David versus Goliath*, Financial Times. Retrieved 2018/06/03.

⁴ Thomson Reuters (2016), *Europe’s boutique firms stealing M&A market share, dealmakers, data shows*, Aug 14, 2016.

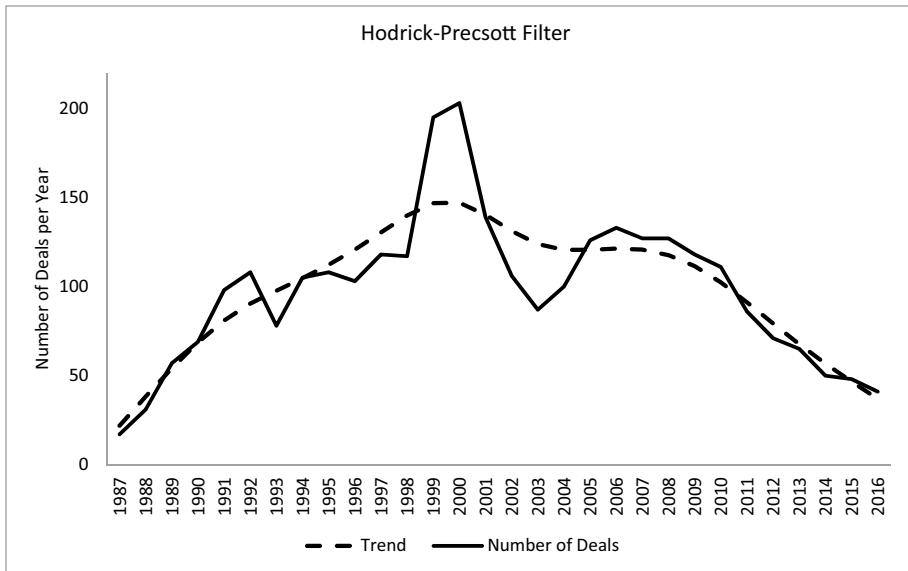


Fig. 1 European banking M&A activity. Note: All European banking mergers for the period 1987–2016 as reported on Securities Data Corporation’s merger and acquisition database. The study includes all deals with data available on DataStream. The horizontal axis shows the year and the vertical axis the total number of deals per year

acquirers own less than 50% of the target before and more than 50% after the acquisition. We require all deals to have data on equity returns for the estimation of the event period as well as advisor information. Our final sample results in 3,604 transactions. We also draw a classification table among financial advisors.

In line with Fang (2005), Chidambaran et al. (2010) and Golubov et al. (2012), we classify advisors based on deal value since methodologically it is a metric that has a continuous effect on our dependent variables, but it also confines us within the economic definition of ‘tiers’, i.e., ‘bulge bracket’ and lower-tier advisors. Advisors are dynamically classified every year for the whole period into two tiers and are ranked according to the dollar-value deal of the transactions they advised on over the same period. For classification purposes, our tier-1 advisors are the top 10 firms by value of transactions, followed by firms in all the other ranks. Our sample stops at year 2016 in line with the M&A activity slowing sharply in 2016 amid heightened economic and political uncertainty that caused dealmakers to become more cautious as global finance became more expensive and falling valuations. Few deals were completed after 2015 and most of them were directed towards the acquisition of unlisted FinTech firms. In Europe, bank mergers and acquisitions have been heavily subdued and gradually falling as well as failing in the euro area since the global financial crisis. Most M&A activity has had a domestic focus and has involved smaller targets within national borders. A lot of them were also performed by small, boutique-style, unlisted financial services firms (Thomson Reuters 2016) and data was not publicly available.

3.2 Descriptive statistics

In Fig. 1, we present the annual distribution of the number of deals and values (in Table 1) in our sample. Starting in 1987, there is a continuous upward trend in the number of deals

Table 1 Descriptive statistics for European banking mergers and acquisitions

Year	N	Deal Value		Acquirer Market Cap		Target Market Cap		Relative Size	
		Mean	Median	Mean	Median	Mean	Median	Mean	Median
1987	17	281	37	148	76	781	630		
1988	31	362	111	1,995	987	1,862	979	1.04	0.29
1989	57	654	160	5,886	3,961	20,639	1,358	25.99	0.38
1990	69	172	80	8,396	2,253	16,633	914	8.96	0.53
1991	98	117	24	8,027	1,639	17,737	703	39.95	0.39
1992	108	184	27	8,688	1,976	13,640	230	28.47	0.10
1993	78	115	26	3,638	2,240	2,208	265	0.93	0.21
1994	105	250	53	5,590	4,470	9,335	1,278	0.82	0.28
1995	108	505	56	77,233	3,353	56,582	1,521	195.16	0.47
1996	103	339	77	6,372	2,902	23,933	1,097	8.29	0.32
1997	118	1,274	151	18,672	5,191	3,593	1,481	4.69	0.12
1998	117	669	100	164,731	16,322	71,862	1,912	15.25	0.16
1999	195	1,592	130	26,335	13,995	69,895	2,339	10.90	0.25
2000	203	680	96	29,848	15,774	212,959	1,183	6.19	0.11
2001	139	424	84	26,005	9,883	44,959	950	1.39	0.13
2002	106	790	146	33,677	10,400	6,057	915	0.60	0.12
2003	87	269	70	21,356	11,504	52,028	780	5.79	0.05
2004	100	552	69	56,039	12,412	3,771	587	1.64	0.07
2005	126	1,083	104	59,633	22,517	53,618	1,123	1.06	0.08
2006	133	1,403	262	132,245	30,260	13,845	1,761	0.86	0.15
2007	127	937	119	139,255	61,271	193,564	1,053	1.88	0.03
2008	127	845	145	117,843	36,013	403,637	1,910	54.33	0.08
2009	118	193	53	83,391	16,555	384,950	692	7.97	0.13
2010	111	477	78	197,386	31,580	17,818	1,068	0.30	0.10
2011	86	171	36	277,145	32,626	43,533	2,024	0.29	0.08
2012	71	144	35	166,479	21,950	13,627	532	0.24	0.07
2013	65	85	24	92,609	14,384	3,418	307	0.10	0.01
2014	50	297	62	197,087	36,900	10,164	2,084	0.39	0.13
2015	48	184	66	155,011	19,738	143,566	9,879	11.89	0.10
2016	41	346	43	102,571	8,913	55,120	2,903	19.18	0.17

Summary statistics are reported for our sample, which includes all mergers and acquisitions in the European banking industry covered by the Securities Data Corporation (SDC) mergers and acquisitions database, from all countries, announced over the period from 1987 to 2016. We report the number of M&A announcements, the mean and median market value of equity of acquirers and targets, as well as the deal value in US\$bn converted at the US\$/local currency exchange rate prevailing at the announcement date of each deal and the ratio of equity market value of target to acquirer

until 2000 where merger activity reaches an all-time high of 203 deals in a single year (see Table 1). Subsequently, the trend is reversed with the market correction following the bursting of the dot.com bubble and coinciding with the introduction of the Euro for some EU member-states.

From 2003 the trend turns upwards again until the onset of the 2007 financial crisis where it is reversed once again in the third quarter. Since this point onwards and throughout

Table 2 National distribution of number of deals for acquirors and targets

Acquirors				Targets			
Italy	871	Netherlands	129	Italy	855	Netherlands	69
Germany	657	Ireland	71	France	468	Ukraine	63
France	598	Iceland	68	Russia	464	Belgium	60
Spain	546	Turkey	57	Spain	395	Finland	51
UK	481	Hungary	43	UK	367	Ireland	51
Russia	449	Cyprus	38	Germany	354	Hungary	49
Switzerland	326	Luxembourg	36	Poland	214	Romania	48
Greece	219	Finland	29	Switzerland	194	Czech	47
Sweden	197	Czech	26	Greece	174	Croatia	45
Denmark	164	Lithuania	26	Denmark	165	Luxembourg	45
Austria	151	Croatia	25	Norway	154	Cyprus	29
Belgium	141	Ukraine	22	Portugal	137	Bulgaria	28
Poland	139	Bulgaria	16	Sweden	124	Estonia	27
Portugal	136	Slovenia	15	Austria	97	Iceland	27
Norway	130	Georgia	14	Turkey	83	Lithuania	23
		Rest of Europe	40			Rest of Europe	187
		Rest of World	0			Rest of World	766
		Total	5,860			Total	5,860

The table reports the total number of deals by nation. All European acquirors are included. Targets are mostly also from Europe, except in 766 deals. We report the number of deals, for acquirors, per nation for the top 30 nations, while the rest of Europe comprise 40 deals, in the first four columns and similarly for targets in the last four columns

the remainder of the sample period there is a decline in the number and value of deals. This is also consistent with the cross-border banking consolidation waves that took place in the U.S and Europe and peaked around the year of the introduction of the Euro (fully implemented for the then member states in the first quarter of 2001) and has continuously decreased since then in particular in Western European countries (Berger 2007).

The distribution of the deals does not reveal any other discernible patterns apart from the fact that acquirors become constantly larger reaching a median top market capitalisation of \$61 billion in 2007 (see Table 1 below). We exclude the years before 1987 because the companies involved in the small number of deals reported in SDC for those years do not have data available.

We report in Table 2, the distribution of M&A deals by country for acquirors and targets. Acquirors come from 39 European nations and targets from 52 nations. For acquirors, we report individual number of deals for the top 30 nations and sum the rest for the other 9 nations. All but 40 acquirors are from the top 30 nations (99.3%). Similarly, 5,094 (86.9%) targets are from European nations and 766 (13.1%) are from non-European nations. Of the 5,094 European targets, 4,907 (96.3%) are from the top 30 nations, while 187 (3.7%) targets from the other 22 European nations.

Table 3 provides characteristics of acquirors and targets. Acquirors are on average 7 times the size of the targets with an average market capitalisation of approximately \$18.03 billion and \$2.57 billion respectively. The average beta of acquirors is 1 and that of the targets is 0.75. The acquirors' interest cover is also 2.64 times higher than those of the targets.

Table 3 Acquirers and targets characteristics

Variable	Acquirer (N=2,530)	Target (N=1,074)	t-diff	Acquirers: Percentiles		
				25th	Median	75th
Market Capitalisation	18,031	2,568	28	1,403	6,335	23,942
Beta	1.00	0.75	17.35	0.67	1.06	1.26
Interest Cover	429.2	162.4	1.4	1.5	2.2	4.6
MTB Ratio	1.67	6.75	1.15	0.95	1.43	2.19
Price Earnings Ratio	19.73	38.32	2.89	9.50	13.30	19.50
Price Cash Ratio	7.15	43.85	1.12	3.34	5.91	9.59
Quick Ratio	1.26	3.00	1.08	0.73	1.48	1.59
Relative Beta	0.91		0.48	0.71	1.03	
Relative MV	17.29		0.02	0.12	0.63	
Relative PE	3.24		0.70	1.15	2.22	
Relative PC	3.87		0.24	0.96	2.07	
Relative Interest Cover	78.37		0.2	1.0	3.0	

The table reports the number, mean, median, minimum and maximum for a number of key accounting and market characteristics of acquirers and targets. The sample includes all merger and acquisitions deals as reported in the SDC database over a period of 30 years from 1987 to 2016, without any size or other restrictions or filtering. Accounting data and equity market valuation ratios for the companies in our sample are collected from Datastream. All data relating to monetary values are converted to US\$m at the US\$/local currency exchange rates prevailing at the announcement date of each merger. We report summary statistics for market capitalisation, beta, interest cover, M/B ratio, P/E ratio, Price/Cash ratio, Quick Ratio, all in (US\$m) and the following relative ratios: relative Beta, relative MV, relative P/E, relative P/C, relative Interest Cover

Acquirers' M/B ratio is 1.67 while that of the targets stands at 6.75 which is 4 times higher than their bigger counterparts. The P/E ratio of the targets at 38.32 is nearly double that of the acquirers which stands at 19.73. Overall, the accounting data support the view that while acquirers seem to be higher valued companies than targets and better capitalised, targets seem to be better placed as growth investments.

3.3 Cumulative abnormal returns

We use a standard market model approach to estimate the daily abnormal returns of the sample of firms. The parameters of the market model are estimated from day -300 to day -60 and the event period is from day -20 to +20. The estimated parameters are used to compute the expected returns in the event period and the abnormal returns are then, under the null hypothesis that the event will have no effect, specified as:

$$AR_{it} = R_{it} - E(R_{it}) \sim N(0, \sigma_i^2)$$

$$\text{where } E(R_{it}) = \hat{\alpha}_i + \hat{\beta}_i(R_{mt}) \quad (1)$$

R_{it} is firm i 's daily stock return on date t , R_{mt} is the return on a suitable market index m , also on date t , while $\hat{\alpha}_i$ and $\hat{\beta}_i$ are estimated from a period prior to the event (often a prior period but not necessarily). The sample of deals spans 28 European countries, and we thus employ the main stock market index associated with each nation for the full estimation and event period.

As Harrington and Shrider (2007) argue there are two types of changes in variance that need to be accounted for when computing test statistics. First, the variance of the abnormal returns expected in the event period might change as compared to that computed from the estimation period. Second, the variance of the abnormal returns over the event period might change compared to the estimation period, due to the announcement effect. Studies that do not account for such changes suffer from potentially biased results. We therefore employ the Harrington-Shrider adjustments. Since there are cross-sectional differences in the level of response to an M&A announcement, this produces an increase in the variance of the abnormal returns. We then further amend the standard errors according to the adjustment suggested by Harrington and Shrider (2007).

3.4 Identifying hot and cold periods

Periods of high takeover activity are defined as hot periods and those with low takeover activity levels are denoted as cold. The Hodrick-Prescott methodology identifies those periods by decomposing the number of mergers per quarter into a time-trend component and a cyclical component (Hodrick and Prescott 1997). This approach filters out the slow-moving, low frequency, non-deterministic trend component and retain the cyclical component. This cyclical part is the deviation of the level of the quarterly takeover activity from the long-run trend identifies hot and cold periods. The takeovers occurring during periods where at least two consecutive quarters have positive cyclical components are defined as occurring in hot periods. Deals in cold periods are those occurring in periods where at least two consecutive quarters have negative cyclical components, and the remaining deals are classified as neutral. The Hodrick-Prescott methodology minimises the variance of the cyclical component for smoothing out the trend component, which is achieved by minimising the function:

$$\sum_{t=1}^T (q_t - \tau_t)^2 + \lambda \sum_{t=1}^{T-1} (\Delta^2 \tau_{t+1})^2 \quad (2)$$

where λ is the cost attached to the volatility of the trend component; q_t is the number of announcements per quarter; and τ_t is the trend component per quarter. The function in (10) is differentiated with respect to τ_t , and the cyclical component is as follows:

$$c_t = q_t - \tau_t^* \quad (3)$$

where c_t is the cyclical component per quarter, and τ_t^* is the optimal trend component per quarter obtained from minimising (10).

3.5 Maximum likelihood logistic regression

To examine the influence of firm and deal characteristics of firms engaging in bank M&As in Europe whether they appoint an external advisor or manage the deal in house, as well as among those that appoint external advisors, whether they select advisors from the top-tier or lower tier, we employ a probit model specified as:

The binomial probit model is specified as:

$$\Pr(y_i = 1|x_i\beta') = \frac{\phi(x_i\beta')x_i}{\Phi(x_i\beta')} \quad (4)$$

$$\Pr(y_i = 0|x_i\beta') = -\frac{\phi(x_i\beta')x_i}{1 - \Phi(x_i\beta')} \text{ or } 1 - \frac{\phi(x_i\beta')x_i}{\Phi(x_i\beta')}, \quad (5)$$

where y_i denotes the group to which deal i belongs, β' is a vector of parameters to be estimated and x_i denotes the vector of explanatory variable, while $\phi()$ and $\Phi()$ are density and distribution functions.

The likelihood of using an external advisor or keeping the deal in-house is estimated by a logistic regression. This likelihood is a function of a vector of independent covariates X and parameters β . Marginal effect of a 1% change in specific acquirer or deal characteristics on the likelihood that an acquirer or target chooses an external advisor or manages the deal in-house, where $y_i = 1$ denotes the choice of an external advisor and $y_i = 0$ represents the in-house management of the deal. The vector of explanatory variables, x_i is employed based on previous literature.

Although the commonly coefficients are reported in respect to probit models, since the coefficients in non-linear models do not directly refer to the relevant impact on the likelihood of interest, we report the marginal probabilities. Since only sign of the coefficients in non-linear models is directly meaningful, we compute the change in probability, which is more easily interpretable. We compute the marginal effects of the probit models which is the partial derivative of the likelihood with respect to the independent variable of interest. The convention is to set the independent variables at their mean or median values, although the partial derivative can, of course, also be evaluated at any quantile.

In non-linear models like the probit, the coefficients are straightforwardly meaningful for their effect on the likelihood of an outcome of interest. Marginal effects are the measure of interest. Meanwhile, testing whether the coefficient estimates are significant is important at the model specification stage where we investigate whether include or exclude specific variables hypothesised to be relevant. Even though a coefficient estimate was statistically significant, and its marginal effect was not, does not validate its exclusion from the probit estimation as being irrelevant because that significant variable also affects the marginal effects of all the other variables and hence including the significant variable in the probit estimation will have produced a better fitted model (Mize 2019). The marginal effects reported for the probit models are computed as partial derivatives with respect to each independent variable:

$$\left. \frac{\partial P}{\partial x} \right|_{x=\bar{x}} = \left. \frac{\delta f(x\hat{\beta}')}{\delta x} \right|_{x=\bar{x}} \quad (6)$$

where $f(x\hat{\beta}') = \Phi(x\beta')$

3.6 Sample selection bias and heckman probit models

Sample selection is a problem that often affects empirical results. We seek to study the decision of acquirers to appoint external advisors as compared to managing the deal in-house. It might be possible that the unobservable factors that affect the decision of a firm to manage a deal in-house or appoint an external advisor are correlated to unobservable factors that lead it to become an acquirer. Furthermore, given that an acquirer has chosen to

appoint an external advisor, what factors affect their choice between top-tier vs lower tier advisors? We claim that unobservable factors that determine the choice of top-tier advisors are correlated to the unobservables that drive acquirers to seek external advisors in the first place.

By including in our analysis all acquirers involved in bank M&As in Europe, we eliminate the sample selection bias in the former case. However, sample selection bias might be present in the latter. To control for sample selection bias, we employ the conventional Heckman selection model. In the selection model, the identification variables are market capitalisation and the price-earnings ratio. We expect to see smaller acquirers facing a higher need for the services of external advisors and that acquirers with lower price-earnings multiples, may feel the need for the authority of an external advisor to attenuate the rather dim view of the market.

The underlying model of the choice between top-tier and lower tier advisors:

$$y_j^* = X_j\beta + u_{1j} \quad (7)$$

The observed probit model is:

$$y_j^{probit} = (y_j^* > 0) \quad (8)$$

The y_j^{probit} is observed only if:

$$y_j^{select} = (z_j\gamma + u_{2j} > 0) \\ \text{where } u_{1j}, u_{2j} \sim N(0, 1) \text{ and } \rho_{u_1, u_2} \neq 0 \quad (9)$$

While there is no selection bias when, $\rho_{u_1, u_2} = 0$, Heckman (1979) showed that if $\rho_{u_1, u_2} \neq 0$ a separate selection model can be estimated to compute the hazard rate of selection bias. The inverse Mills ratio computed from the selection equation, which must contain a suitable identification variable, can be employed to address the bias in the coefficients that would otherwise be present. More specifically, z_j must contain at least one variable that is not present in X_j .

4 Results

For a significant body of the academic literature on banks' M&As, the empirical evidence comes mainly from the US. While the role and impact of financial advisors in bank takeovers is relatively less explored, with few papers presenting evidence from the US, almost no empirical evidence is reported about the interaction between the self-choice and role of advisor firms in EU banking M&As.

We conduct extensive empirical analysis and report findings along various dimensions. First, we report the results of an event study analysis of banking M&A deals in Europe covering the entirety of the banking industry from 1987 to 2016 and provide comprehensive evidence of the effect of the takeover announcements on shareholder wealth both of acquirers and of targets. We also explore the effect of the decision of acquirers and targets to either appoint external advisors or to manage the deal in-house, as well as the interaction of the advisor choice by acquirers and targets, on the wealth of their shareholders. The analysis is extended to the choice of top-tier or lower tier advisor by acquirers and targets. Furthermore, we investigate whether the financial crisis of 2007–2008 had any effect on

Table 4 Average abnormal returns for acquirers and targets

Panel A: Daily Abnormal Returns (AR) around Day 0					
Day	Acquirers (N = 3394)		Targets (N = 1026)		
	AR	Std error	AR	Std error	
-5	0.0001	(0.0001)	0.0003	(0.0088)	
-4	-0.0003	(0.0002)	0.0022*	(0.0013)	
-3	-0.0001	(0.0001)	0.0030***	(0.0009)	
-2	-0.0001	(0.0001)	0.0018**	(0.0009)	
-1	0.0001	(0.0002)	0.0025**	(0.0010)	
0	0.0003	(0.0015)	0.0059***	(0.0013)	
1	0.0007	(0.0013)	0.0211***	(0.0028)	
2	0.0000	(0.0000)	0.0071***	(0.0019)	
3	-0.0001	(0.0001)	0.0024*	(0.0014)	
4	-0.0001	(0.0001)	0.0019	(0.0017)	
5	0.0008	(0.0120)	0.0008	(0.0006)	
Panel B: Cumulative Abnormal Returns (CAR) in various windows—Overall Sample					
Window	Acquirers (N = 3394)		Window	Targets (N = 1026)	
	CAR	Std error		CAR	Std error
(-1, 1)	0.0011	(0.0015)	(-4, 3)	0.0459***	(0.0048)
(-20, -2)	0.0029***	(0.0010)	(-20, -5)	0.0162***	(0.0040)
(2, +20)	0.0029***	(0.0010)	(4, +20)	0.0024	(0.0302)
(-20, +20)	0.0068***	(0.0016)	(-20, +20)	0.0646***	(0.0095)

Panel A reports, in columns two and four, daily average abnormal returns for the full sample of acquirers and targets respectively. Panel B reports Cumulative Abnormal Returns (CARs) for various relevant windows. Day zero is the deal announcement day and reference to days means trading days relative to the announcement day zero. The announcement dates are from the SDC and when they fall on a non-trading day, they have been adjusted to the nearest following trading day. The standard errors are reported in brackets, while *, **, *** represent significance at the 10%, 5% and 1% levels respectively

the choice of top-tier financial advisors and the shareholder wealth implications of that crisis. The impact of the condition of the economic environment has also been explicitly investigated, with evidence from hot and cold periods. Finally, we employ a multi-period, logistic maximum likelihood analysis to identify the determinants of advisor choice of European banking M&As.

4.1 Wealth effects for acquirers and targets

The effect of takeover announcements on the wealth of shareholders of acquirers and targets is estimated using the event study methodology and the findings are reported in Table 4 below. The announcement effect is expected to be observed around the announcement day zero but the exact event window is an empirical issue. We therefore report the average daily abnormal returns over the period from day -5 to day +5 around the announcement day, in Panel A. There are no significant abnormal returns for the acquirers around the announcement day zero, but for the targets there are positive and significant abnormal wealth gains from four days prior to three days after the announcement.

The Cumulative Abnormal Returns (CARs) for the acquirers in the event window (-1, +1) and in (-4, +3) for the targets, are reported in Panel B. The effect of the announcement on shareholders' returns is also reported for the longer period of one month before, one month after and two months overall, around the announcement day. The market response to the announcement of the European banking M&A deals differ for acquirers and targets. The wealth gains are significant for the targets but not for the acquirers over the event window. Over the longer period the acquirers gain equally in the month before and after whereas the target gains are mainly in the event window and the month before but experience no gains in the month after. The targets realise 4.59% cumulative abnormal returns over the event window (-4, 3) but there are no wealth implications for the acquirers (0.1%). The shareholder gains of the targets come from the announcement period event window (4.59%) and the month before the event (1.62%). For the acquirers, there are significant 0.3% cumulative abnormal returns for the month before the announcement. These are persistent (0.3% in the month following the announcement (+2, +20)), resulting to an overall cumulative abnormal return of 0.68% for the two-month period around the announcement of the takeover deal. These results are also largely in line with prior research (Cybo-Ottone and Murgia 2000; Altunbas and Ibanez 2004; Ismail and Davidson 2005; Campa and Hernando 2006; Altunbas and Marques 2008) providing evidence of benefits accruing mostly to the targets.

4.2 The effect of the status of the external advisor

The financial advisors in mergers and acquisitions justify their reputation and the high fees charged on the presumption that they offer a value for money service to their corporate clients. The higher fees of the 'bulge-bracket' advisors should therefore be associated with higher gains of their clients. However, the empirical evidence, which is mainly based on the wealth experience of acquirers, does not conclusively support this (Kolb 2019; Chang et al. 2016; Ismail 2010; Hunter and Jagtiani 2003). In the light of this empirical evidence, we consider the role of financial advisors in European M&As. We report, in Table 5 below, the distribution of CARs, for both the acquirers and the targets, distinguishing between those using top tier or lower tier advisors. The results are presented for the effect on acquirer and target, by the choice of acquirer's advisor in panels A and B respectively and by the choice of target's advisor in panels C and D. CARs for both acquirers and targets when they employ advisers from the top tier are in column four while for lower tier are shown in column six, and their differences are reported in column eight.

Interestingly we find that the acquirers do not gain from employing top-tier advisors. In Panel A we report that acquirers do not benefit from their choice of financial advisor either from the top (0.2%) or lower tier (0.1%). However, over the longer periods around the announcement, the acquirers gain significantly from employing lower tier advisors. In the two-month period (-20, +20) the acquirers appointing lower tier financial advisors gain a significant 0.76%, in contrast to those who appoint top tier advisors that have no significant gains (0.07%). Similar results are observed when the financial advisors are chosen by the targets, as reported in Panel C.

Another interesting finding is that the choice of the target advisor affects the wealth experience of the acquirer, over the period of two months around the announcement (-20, +20). The acquirers gain significantly (0.7%) where the targets choose lower tier financial advisors in contrast to when they chose top-tier advisors (0.4%). These findings are in broad agreement with results reported by Ismail (2010). Our findings are consistent

Table 5 Cumulative abnormal returns for acquirers and targets using different tier financial advisors

Panel A: Acquirer CARs by Tier Rank of Acquirer Adviser		Top Tier (N = 365)		Lower Tier (N = 3029)		Difference	
Window	CAR	Std error	CAR	Std error	CAR	Std error	CAR
(-1, -1)	0.0011	(0.0015)	0.0020	(0.0074)	0.0010	(0.0010)	0.0010
(-20, -2)	0.0029***	(0.0010)	-0.0033	(0.0286)	0.0036***	(0.0012)	-0.0069
(+2, +20)	0.0029***	(0.0010)	0.0020	(0.0325)	0.0030***	(0.0010)	-0.0009
(-20, +20)	0.0068***	(0.0016)	0.0007	(0.0202)	0.0076***	(0.0017)	-0.0068
Panel B: Target CARs by Tier Rank of Acquirer Adviser		Top Tier (N = 119)		Lower Tier (N = 907)		Difference	
Window	CAR	Std error	CAR	Std error	CAR	Std error	CAR
(-4, 3)	0.0459***	(0.0048)	0.0502***	(0.0124)	0.0428***	(0.0053)	0.0074
(-20, -5)	0.0162***	(0.0040)	0.0130*	(0.0076)	0.0162***	(0.0042)	-0.0031
(+4, +20)	0.0024	(0.0302)	0.0210	(0.0128)	0.0027	(0.0363)	0.0183
(-20, +20)	0.0646***	(0.0095)	0.0843***	(0.0215)	0.0616***	(0.0105)	0.0226*
Panel C: Acquirer CARs by Tier Rank of Target Adviser		Top Tier (N = 253)		Lower Tier (N = 3141)		Difference	
Window	CAR	Std error	CAR	Std error	CAR	Std error	CAR
(-1, 1)	0.0011	(0.0015)	0.0050	(0.0123)	0.0008	(0.0008)	0.0042
(-20, -2)	0.0029***	(0.0010)	-0.0055	(0.1068)	0.0035***	(0.0012)	-0.0090
(+2, +20)	0.0029***	(0.0010)	0.0049	(0.0593)	0.0027***	(0.0009)	0.0022
(-20, +20)	0.0068***	(0.0016)	0.0043	(0.0298)	0.0070***	(0.0016)	-0.0027
Panel D: Target CARs by Tier Rank of Target Adviser		Top Tier (N = 71)		Lower Tier (N = 955)		Difference	
Window	CAR	Std error	CAR	Std error	CAR	Std error	CAR
(-4, 3)	0.0459***	(0.0048)	0.0478***	(0.0146)	0.0434***	(0.0051)	0.0044
(-20, -5)	0.0162***	(0.0040)	0.0349**	(0.0133)	0.0144***	(0.0039)	0.0205
(+4, +20)	0.0024	(0.0302)	-0.0036	(0.0134)	0.0054	(0.0124)	-0.0090
(-20, +20)	0.0646***	(0.0095)	0.0790***	(0.0247)	0.0632***	(0.0101)	0.0159

Day zero is the deal announcement day and reference to 'days' means trading days relative to the announcement day zero. All announcement dates on SDC are checked and where they fall on non-trading days, have been adjusted to instead fall on the nearest following trading day. The standard errors are reported in brackets, while *, **, *** represent significance at the 10%, 5% and 1% levels respectively

with Kolb (2019) but raise the question of what value do top-tier advisors contribute to European bank M&As. The fact that lower tier financial advisors appear to provide better value services to acquirers in the European bank M&As, supports the argument of a more muted certification effect of top tier financial advisors for acquirers.

In contrast, the targets appear to benefit more from top tier financial advisors. The findings, in Panel B, show that, when the acquirers choose top tier financial advisors, the targets earn significant abnormal returns of 5.02%, which are 17% higher than the 4.28% CARs of targets when lower tier advisors are chosen. However, these target wealth gains differences are not significant. In the two-month window around the announcement (-20, +20) the targets realise significantly higher CARs of 8.43% when the acquirers choose top tier advisors, which are significantly higher (by 37%) than the 6.16% realised when the acquirers choose lower tier advisors. These findings are mirrored in the results reported in Panel D. In this part of the analysis, our results are in support of earlier research (Hagendorff et al. 2014) that supports the view that European bank targets' shareholders are more sanguine about being acquired by larger banks potentially because such mergers strengthen target capitalizations at the expense of the acquirer's capitalization. Risk considerations thus seem to potentially be at the forefront of M&A negotiations in continental Europe M&As where green lighting an M&A seems to rather reflect synergy risk certification where acquiring banks seek profitable, high-growth and low risk targets. Our results are broadly in agreement also with Ayadi et al. (2013) who conclude that merger operations in European banking are motivated mostly by complementarity improvement objectives such as risk sharing and (regulatory) capital consolidation.

Overall, for the targets, when top-tier advisors are appointed by either the acquirers or the targets, gains are higher compared to when lower-tier advisors are appointed. This is in contrast to the implication of the certification effect of advisor's reputation for the targets. For the acquirers, in contrast, there is an indication of support for the certification effect, parallel to the argument advanced by Allen et al. (2004). The results of this section regarding acquirer shareholder gains are interesting in the context of the conflicting extant evidence in the prior literature. Arguments by Servaes and Zenner (1996), Rau (2000), Hunter and Jagtiani (2003), Ismail, (2010) align with our findings whereas contrasting evidence has been reported by Boone and Mulherin (2008), Bao and Edmans (2011), Golubov et al. (2012).

In light of the above findings, it is thus particularly interesting to proceed further and examine whether deals kept in-house are more beneficial compared to banks retaining externally appointed advisors. The section that follows examines this proposition.

4.3 Deals managed in-house or externally

Prior literature that has reported positive correlation of the wealth gains of the acquirers and the status of their financial advisors, has attributed those gains to the quality of services and expertise of the financial advisors (Golubov et al. 2012). However, there are also studies, questioning these findings, reporting no significant wealth gain contribution of the financial advisors for the acquirers. Chang et al. (2016), attribute the contribution of financial advisors to qualitative aspects of the deal, such as speed of completion and managing deal complexity which is in line with arguments advanced by Hunter and Jagtiani (2003), and Servaes and Zenner (1996). However, there is limited evidence on the effect of the decision to manage the deal in-house. Wallace et al. (2012) report that there are no gains for the acquirers and the target gains are reduced, when M&A deals are managed in-house.

The wealth effects of deal announcement for the acquirer in deals where the acquirer manages the deal in-house as compared to when they use external advisors, are reported in Table 6, Panel A. The corresponding effects for targets are reported in Panel B.

The results for the acquirers, in Panel A, show that the decision of the acquirer to manage the deal in-house or employ external advisors is value-neutral for the shareholders of the acquirer. Over the event window (-1, 1) the CARs of acquirer are 0.1% when the deal is managed in-house and 0.09% when an external advisor is appointed. However, in the longer period of two months around the announcement of the deal (-20, +20) the acquiring banks benefit significantly more (by 0.02%) when they manage the deals in-house rather than appointing external financial advisors (0.70% vs 0.68%).

The decision of the acquirers in how to manage the deal has in a similar manner insignificant wealth effects for the targets, as our finding in Panel B show. When the acquirer manages the deal in-house, while the target gains a significant 4.47%, this is not substantially different to the gain of 3.97% when an external advisor is appointed.

The decision of the target in how the deal is managed also does not have any differential effect on the wealth of the acquirer shareholders. Over the event window (-1, +1) the acquirer gains CARs of 0.05% when the target manages the deal in-house and an insignificantly different 0.42% when the deal is managed by an advisor. However, in the longer period of two months (-20, +20) around the announcement, the acquirer gains a significant 0.03% more, when the target decides to manage the deal in-house than appoint an advisor (0.69% vs 0.65%).

The significant gains of the target are not affected by its decision on the management of the deal. When the target manages the deal in-house, its shareholders gain a significant 4.27% over the event window (-4, +3) and 4.95% when they appoint external advisors. Over, the longer period of (-20, +20) the gains of the targets, as in Panel D, are 2.92% significantly higher (8.93% vs 6.01% respectively). These findings are also consistent with Wallace et al. (2012) who report that in-house managed deals have no significant effect on the abnormal returns of acquiring firms while they reduce the abnormal returns of target firms.

Overall, we observe that both acquirers and targets fail to gain any significant additional benefits from their decisions of either party to appoint external advisors. The CARs in the event window of the announcement of the deal are not significantly different. There is, however, an indication that in the longer period of two months around the announcement of the deal (-20, +20), there are gains from appointing external advisors. Interestingly, we observe that, as the results in Panels B and C show, over the longer period (-20, +20), both the acquirer and target gain more when the counter party decides to self-manage the deal.

We content that the decision of the acquirer and target to appoint external advisor or not, in a takeover deal, might also depend on the decision of the other party and we find some evidence supporting that in Tables 7 and 8 below.

In Table 7, Panel A, we present the CARs of acquirers that manage the deal in-house conditional on the choice of the target. Column 4 shows the CARs of acquirers when the target also manages the deal in-house and column 8 when the target manages the deal externally. Overall, the CARs of the acquirers in the event window, are the same irrespective of the choice of the target, which is similar to the months before and after. Panel B reports the CARs of targets when the acquirers manage the deal in-house conditional on the choice of the target. Column 4 shows the CARs of targets when the target also manages the deal in-house and column 8 when the target manages the deal externally. Our findings indicate that the targets realise similar wealth gains irrespective of their choice of advisor when the acquirer chooses to manage in-house.

Table 6 Cumulative abnormal returns for acquirers and targets for in-house and external advisors

Panel A: Acquirer CARs when acquirer manages deal inhouse or externally		Inhouse (N = 2642)		External (N = 752)		Difference	
Window	Overall (N = 3394)	CAR	Std error	CAR	Std error	CAR	Std error
(-1, 1)	0.0011	0.0011	(0.0015)	0.0011	(0.0010)	0.0003	(0.0003)
(-20, -2)	0.0029***	0.0025***	(0.0010)	0.0043	(0.0060)	-0.0018**	(0.0008)
(+2, +20)	0.0029***	0.0032***	(0.0010)	0.0018	(0.0010)	0.0014	(0.0010)
(-20, +20)	0.0068***	0.0068***	(0.0016)	0.0070	(0.0142)	-0.0002***	(0.0001)
Panel B: Target CARs when acquirer manages deal inhouse or externally		Inhouse (N = 815)		External (N = 211)		Difference	
Window	Overall (N = 1026)	CAR	Std error	CAR	Std error	CAR	Std error
(-4, 3)	0.0459***	0.0447***	(0.0048)	0.0397***	(0.0053)	0.0050	(0.0054)
(-20, -5)	0.0162***	0.0175***	(0.0040)	0.0092*	(0.0048)	0.0083	(0.3828)
(+4, +20)	0.0024	0.0043	(0.0302)	0.0067	(0.0798)	-0.0024	(0.0022)
(-20, +20)	0.0646***	0.0665***	(0.0095)	0.0556***	(0.0111)	0.0109	(0.0363)
Panel C: Acquirer CARs when target manages deal inhouse or externally		Inhouse (N = 2848)		External (N = 546)		Difference	
Window	Overall (N = 3394)	CAR	Std error	CAR	Std error	CAR	Std error
(-1, 1)	0.0011	0.0005	(0.0015)	0.0004	(0.0004)	-0.0037	(0.0033)
(-20, -2)	0.0029***	0.0033***	(0.0010)	0.0010	(0.0010)	0.0028*	(0.0016)
(+2, +20)	0.0029***	0.0031***	(0.0010)	0.0018	(0.0010)	0.0013	(0.0010)
(-20, +20)	0.0068***	0.0069***	(0.0016)	0.0065	(0.0138)	0.0003**	(0.0001)
Panel D: Target CARs when target manages deal inhouse or externally		Inhouse (N = 881)		External (N = 145)		Difference	
Window	Overall (N = 1026)	CAR	Std error	CAR	Std error	CAR	Std error
(-4, 3)	0.0459***	0.0427***	(0.0048)	0.0495***	(0.0054)	-0.0068	(0.0053)
(-20, -5)	0.0162***	0.0136***	(0.0040)	0.0292***	(0.0039)	-0.0157	(0.0124)
(+4, +20)	0.0024	0.0038	(0.0302)	0.0106	(0.0322)	-0.0068	(0.0076)
(-20, +20)	0.0646***	0.0601***	(0.0095)	0.0893***	(0.0107)	-0.0292**	(0.0152)

Day zero is the deal announcement day and reference to 'days' means trading days relative to the announcement day zero. All announcement dates on SDC are checked and where they fall on non-trading days, have been adjusted to instead fall on the nearest following trading day. The standard errors are reported in brackets, while *, **, *** represent significance at the 10%, 5% and 1% levels respectively

Panel C shows the CARs of acquirers that manage the deal externally conditional on the choice of the target. Column 4 shows the CARs of acquirers when the target also manages the deal in-house and column 8 when the target manages the deal externally. The evidence presented shows that acquirers do not gain irrespective of the target's choice. Panel D shows the CARs of targets when the acquirers manage the deal externally conditional on the choice of the target. Column 4 shows the CARs of targets when the target also manages the deal in-house and column 8 when the target manages the deal externally. Interestingly, when acquirers appoint external advisors, but the targets manage the deal in-house, targets do not gain. This is surprising for it runs against the grain of the extant evidence of positive and significant target gains from M&As. We document that the targets gain significantly when they follow the acquirers in appointing external advisors to manage the deal. The significant difference in the CARs of the targets indicate that the appointment of external advisors is a value enhancing decision. Overall, we document that whereas the choice of appointing external advisors against managing in-house is not so important for acquirers, it is for targets.

In Table 8, Panel A, we present the CARs of acquirers when the targets manage the deal in-house conditional on the choice of the acquirer. Column 4 shows the CARs of acquirers when the acquirer also manages the deal in-house and column 8 when the acquirer appoints external advisors. Overall, the CARs of the acquirers in the event window are not significant irrespective of the choice of the target. Panel B shows the CARs of targets when the target manages the deal in-house conditional on the choice of the acquirer. Column 4 shows the CARs of targets when the acquirer also manages the deal in-house and column 8 when the acquirer appoints external advisors. When the target manages the deal in-house, the decision of the acquirer to do the same, confers significantly higher gains to the target, whereas if the acquirer appoints external advisors, the target does not gain.

In Panel C, we present the CARs of acquirers when the targets appoint external advisors, conditional on the choice of the acquirer. Column 4 shows the CARs of acquirers when they manage the deal in-house and column 8 when they appoint external advisors. The evidence presented shows that, conditional on targets appointing external advisors, the choice of acquirers makes no difference. Panel D presents the CARs of targets when the target manages the deal externally conditional on the choice of the acquirer. Column 4 shows the CARs of targets when the acquirer manages the deal in-house and column 8 when the acquirer also appoints an external advisor. The choice of the acquirer makes no difference to the gains of the target. Overall, we show that when the target appoints external advisors, its significant gains are not affected by the choice of the acquirer (Panel D). In contrast, when targets manage the deal in-house, the choice of the acquirer affects the wealth experience of targets, and in particular, if the acquirer also manages the deal in-house, it creates higher gains for the targets, whereas if it appoints external advisors, it eliminates the significance of the CARs of the targets (Panel B). The choice of the acquirer makes no difference either when the target manages the deal in-house (Panel A) or appoints an external advisor (Panel C).

4.4 Advisor reputation and the financial crisis

The reputation of financial advisors might be more important in takeover deals during a period of uncertainty, like the 2007–2008 global financial crisis. Macias and Moeller (2013, 2016) argue that the presence of expert advisors is most prevalent when information asymmetries are likely high, and signalling is particularly beneficial. Targets

may not effectively contribute to the provisions of the merger execution, or they may fail to fittingly maintain their professional conduct. Hence, asymmetric information and adverse selection implicates the target concealing information that decreases its value to the acquirer. If risk provisions signal high target quality, then consequently, target announcement returns should also be higher in takeovers with greater confidence in a target's high quality. Weiß et al. (2014) show that following M&As, the idiosyncratic risk of acquiring firms decreases, while their level of systematic risk increases. Their concentration-fragility hypothesis therefore suggests that this raises questions about the decentralisation potential of bank consolidations. Joos et al. (2016) though argue that fundamental risk perceptions and evaluation ability improve significantly after a financial crisis compared to pre-crisis events. This is also consistent with shocks reducing informational asymmetries and raising analysts' awareness of systematic risk exposures post-crisis.

Our findings in Table 9 Panels A, show that, for the acquirers, the takeover deals during the 2007–2008 financial crisis show no advisor reputational effect. There is no difference in the CARs of the acquirer between appointing top or lower tier advisors. Similarly, as in Panel C, the target's decision to appoint top or lower tier advisor is a value neutral event for the acquirer. In contrast, the findings in Panel B show that the decision of the target to appoint a top tier advisor, during the financial crisis, results to significantly higher abnormal returns of 5.16% compared to a 2.58% CARs when a lower tier advisor is appointed. When the acquirer appoints a top tier advisor, as in Panel D, there is no differential effect for the target.

Our findings provide some partial evidence of higher target returns associated with the appointment of top tier advisors during the 2007–08 financial crisis. For the acquirers there are no differential wealth effects. This contrasts with the general evidence from US M&As reported in Golubov et al. (2012), who show that, for the acquirers, top-tier advisors provide on average higher returns compared to lower tiered firms. Interestingly, the wealth contribution of the top tier financial advisors does not extend outside the period of the 2007–2008 financial crisis.

Table 10 shows the CARs for acquirers and targets outside the financial crisis period. The findings are largely similar to those of the crises period deals. The targets realise significant gains when lower tier advisors are appointed either by the acquirors or targets. Similarly, acquirors earn significantly from appointment of lower tier advisors, either by the acquirors or targets, over the period of one month around the announcement of the deal.

The preceding analysis shows only weak reputational effects for acquirers. Spokeviciute et al. (2019), however, suggest that certain benefits may accrue to acquirer banks as a result of the opportunity to conclude deals under advantageous circumstances in crisis times. For example, the value of the investments of acquired banks may be captured by the remaining banks through spillovers (Knott and Posen 2005), where the removal of inefficient banks is an attractive proposition. Such banks are damaging to the real economy, due to an inherent nexus between the development of the banking sector and economic growth. Their findings suggest that failed banks produce externalities that significantly and considerably contain industry costs. This implies that in times of crisis there may be both a strong economic rationale to support, promote and even accelerate the exit by mergers of smaller banks as another channel of longer-term growth both for the banking industry and the economy, as well as a self-selection motive on the part of smaller banks. Salsberg (2020) states that evidence from the global financial crisis demonstrates that firms that completed substantial acquisitions outperformed those that did not and that during such periods, bargains will be had by those with the liquidity and the risk tolerance to move quickly. In unison, and with a strict focus on safeguarding the shape

Table 7 CARs conditional on whether acquirers managed deals either internally or externally

Panel A: Acquirer manages deal inhouse (Acquirer CARs)—Target manages the deal inhouse or externally											
Overall (N = 2642)											
Window	Inhouse (N = 2433)			External (N = 209)			Difference				
	CAR	Std error	Std error	CAR	Std error	Std error	CAR	Std error			
(-1, 1)	0.0011	(0.0010)	(0.0006)	0.0059	(0.0006)	(0.0139)	-0.0052	(0.0067)			
(-20, -2)	0.0025***	(0.0007)	(0.0006)	0.0033	(0.0006)	(0.0070)	-0.0010	(0.0006)			
(+2, +20)	0.0032***	(0.0010)	(0.0010)	-0.0007	(0.0010)	(0.0106)	0.0042	(0.0048)			
(-20, +20)	0.0068***	(0.0014)	(0.0012)	0.0085	(0.0012)	(0.0206)	-0.0019*	(0.0010)			
Panel B: Acquirer manages deal inhouse (Target CARs)—Target manages the deal inhouse or externally											
Overall (N = 815)											
Window	CAR	Std error	Std error	External (N = 64)		Difference					
	CAR	Std error	Std error	CAR	Std error	CAR	Std error				
(-4, 3)	0.0447***	(0.0053)	(0.0057)	0.0391***	(0.0133)	0.0061	(0.0100)				
(-20, -5)	0.0175***	(0.0046)	(0.0047)	0.0385**	(0.0193)	-0.0228	(0.0235)				
(+4, +20)	0.0043	(0.0798)	(0.0510)	0.0022	(0.0046)	0.0022	(0.0045)				
(-20, +20)	0.0665***	(0.0111)	(0.0117)	0.0798**	(0.0365)	-0.0145	(0.0275)				
Panel C: Acquirer manages deal externally (Acquirer CARs)—Target manages deal inhouse or externally											
Overall (N = 752)											
Window	CAR	Std error	Std error	External (N = 337)		Difference					
	CAR	Std error	Std error	CAR	Std error	CAR	Std error				
(-1, 1)	0.0009	(0.0027)	(0.0210)	0.0031	(0.0058)	-0.0041	(0.0094)				
(-20, -2)	0.0043	(0.0060)	(0.0106)	-0.0012	(0.0079)	0.0100	(0.0224)				
(+2, +20)	0.0018	(0.0122)	(0.0026)	0.0034	(0.4288)	-0.0028	(0.0197)				
(-20, +20)	0.0070	(0.0142)	(0.0201)	0.0053	(0.0192)	0.0031	(0.0423)				
Panel D: Acquirer manages deal externally (Target CARs)—Target manages deal inhouse or externally											
Overall (N = 211)											
Window	CAR	Std error	Std error	External (N = 81)		Difference					
	CAR	Std error	Std error	CAR	Std error	CAR	Std error				
(-4, 3)	0.0397***	(0.0122)	(0.0204)	0.0577***	(0.0165)	-0.0291*	(0.0156)				
(-20, -5)	0.0092*	(0.0048)	(0.0014)	0.0219*	(0.0114)	-0.0207	(0.0215)				
(+4, +20)	0.0067	(0.0056)	(0.0016)	0.0172*	(0.0096)	-0.0171	(0.0127)				
(-20, +20)	0.0556***	(0.0164)	(0.0244)	0.0968***	(0.0249)	-0.0669**	(0.0291)				

Day zero is the deal announcement day and the relevant days are trading days. All announcement dates reported in SDC that are on non-trading days have been adjusted to fall on the nearest following trading day. The standard errors are reported in brackets, while *, **, *** represent significance at the 10%, 5% and 1% levels respectively

of the economy, controlling for systemic risk and jobs, supervisors and regulators are progressively encouraging of acquisitions. For such reasons, advisor reputation both within and outside financial crises might only weakly be linked to banks' performance since their probability of acquiring or being acquired is not dependent directly on their performance (Berger and Bouwman 2013; Cole and White 2012; DeYoung and Torna 2013; Liu and Ngo 2014). In essence the effect of governmental intervention will have either assisted large banks in acquiring smaller banks or increased the receptiveness of smaller banks to acquisition proposals. This effect can weaken likely certification effects on the one hand and promote self-managed deals on the other. Bayazitova and Shivdasani (2012) provide support for this interpretation by showing that there was strong self-selection bias in the decision of banks to participate in the US consolidation wave following the latest financial crisis. Croci et al. (2010) also indirectly support this interpretation by claiming that many M&A deals during expansion stages are perceived as wasteful investments often encouraged by managerial over-confidence and hubris.

5 Determinants of appointing advisors

Banks often operate as quasi-insiders to companies and have access to sensitive company data. They are therefore well-placed to evaluate borrowers' assets and to provide financial and technical assistance for both internal organic growth and external expansion through mergers and acquisitions (Bodnaruk et al. 2009). Banks therefore accumulate wide-ranging transaction and valuation expertise, which can be uniquely exploited to develop and apply both their underwriting and advisor capabilities across a wide spectrum of markets (Benveniste et al. 2002). The same authors further argue that this opportunity of banks to broker and manage M&A deals can be best capitalised within their own industry, where they can exploit opportunities to bundle deals together for their own benefit. Chang et al. (2016) argue that advisors with higher industry specific expertise can command higher fees and are more likely to be appointed in deals of higher complexity or when there is limited information about a counterparty. However, they note that due to concerns of leakage of information resulting from sharing financial advisors, acquirers tend to avoid sharing financial advisors with industry competitors.

The gains, of those banks involved in own-M&As, from managing the deal in-house mainly emanate from utilising their own expertise and ability to manage such deals. Managing deals in-house, mitigates leakage of sensitive information on cost structures, liquidity and solvency that are disclosed in typical due diligence processes. Furthermore, in-house deals avoid external advisor's fees and can be, therefore, cost efficient. The net effect depends on deal-specific features as well as the characteristics of acquirers and targets. The net gains of in-house advising must be weighed against net gains from engaging external advisors. An external advisor brings deal and industry-specific knowledge as well as expertise in managing complex deals, speed of completion and reducing valuation uncertainty. It has been reported that the use of external advisors might be related to the certification effect (Golubov et al. 2012; Hunter and Jagtiani 2003). However, this is a contested issue since Fernando et al. (2015) argue that the certification effect related to the reputational capital of underwriters in Europe is less valuable than it appears to be for US underwriters. The proposition of Fernando et al (2015) with respect to equity underwriting is also in agreement with the consideration that acquiring banks find high-growth and lower risk targets appealing, due to the depth of bank regulation, supervision, and deposit insurance regimes in Europe. These aspects seem to have measurable effects on takeover pricing.

Table 8 CARs conditional on whether targets managed deals either internally or externally

Panel A: Target manages deal inhouse (Acquirer CARs)—Acquirer manages deal inhouse or externally									
Window	Overall (N = 2848)		Inhouse (N = 2433)		External (N = 415)		Difference		Std error
	CAR	Std error	CAR	Std error	CAR	Std error	CAR	Std error	
(-1, -2)	0.0005	(0.0004)	0.0007	(0.0006)	-0.0009	(0.0010)	0.0017	(0.0038)	(0.0028)
(-2, -2)	0.0033***	(0.0010)	0.0024***	(0.0006)	0.0088	(0.0106)	-0.0064**	(0.0028)	(0.0027)
(+2, +2)	0.0031***	(0.0010)	0.0035***	(0.0010)	0.0005	(0.0026)	0.0030	(0.0007)	(0.0007)
(-2, +2)	0.0069***	(0.0014)	0.0066***	(0.0012)	0.0084	(0.0201)	-0.0017**	(0.0007)	(0.0007)
Panel B: Target manages deal inhouse (Target CARs)—Acquirer manages deal inhouse or externally									
Window	Overall (N = 881)		Inhouse (N = 751)		External (N = 130)		Difference		Std error
	CAR	Std error	CAR	Std error	CAR	Std error	CAR	Std error	
(-4, 3)	0.0427***	(0.0054)	0.0452***	(0.0057)	0.0285	(0.0204)	0.0166*	(0.0095)	(0.0095)
(-2, -5)	0.0136***	(0.0039)	0.0157***	(0.0047)	0.0013	(0.0014)	0.0145	(0.0312)	(0.0312)
(+4, +2)	0.0038	(0.0322)	0.0045	(0.0510)	0.0002	(0.0016)	0.0043	(0.0742)	(0.0742)
(-2, +2)	0.0601***	(0.0107)	0.0653***	(0.0117)	0.0300	(0.0244)	0.0354	(0.0348)	(0.0348)
Panel C: Target manages deal externally (Acquirer CARs)—Acquirer manages deal inhouse or externally									
Window	Overall (N = 546)		Inhouse (N = 209)		External (N = 337)		Difference		Std error
	CAR	Std error	CAR	Std error	CAR	Std error	CAR	Std error	
(-1, 1)	0.0042	(0.0061)	0.0059	(0.0139)	0.0031	(0.0058)	0.0028	(1.2531)	(1.2531)
(-2, -2)	0.0005	(0.0013)	0.0033	(0.0070)	-0.0012	(0.0079)	0.0045	(0.0160)	(0.0160)
(+2, +2)	0.0018	(0.0526)	-0.0007	(0.0106)	0.0034	(0.4288)	-0.0041	(0.0722)	(0.0722)
(-2, +2)	0.0065	(0.0138)	0.0085	(0.0206)	0.0053	(0.0192)	0.0032	(0.0210)	(0.0210)
Panel D: Target manages deal externally (Target CARs)—Acquirer manages deal inhouse or externally									
Window	Overall (N = 145)		Inhouse (N = 64)		External (N = 81)		Difference		Std error
	CAR	Std error	CAR	Std error	CAR	Std error	CAR	Std error	
(-4, 3)	0.0495***	(0.0108)	0.0391***	(0.0133)	0.0577***	(0.0165)	-0.0186	(0.1657)	(0.1657)
(-2, -5)	0.0292***	(0.0106)	0.0385**	(0.0193)	0.0219*	(0.0114)	0.0166	(0.0798)	(0.0798)
(+4, +2)	0.0106	(0.0105)	0.0022	(0.0046)	0.0172*	(0.0096)	-0.0150	(0.0097)	(0.0097)
(-2, +2)	0.0893***	(0.0205)	0.0799**	(0.0365)	0.0968***	(0.0249)	-0.0169	(0.0178)	(0.0178)

Day zero is the deal announcement day and the relevant days are trading days. All announcement dates reported in SDC that are on non-trading days have been adjusted to fall on the nearest following trading day. The standard errors are reported in brackets, while *, **, *** represent significance at the 10%, 5% and 1% levels respectively

Austere management and monitoring regimes, coupled with resilient insurance schemes, seem to lower the risk perceptions and consequently the takeover premiums paid by acquiring banks (Hagendorff et al., 2012a, b).

It is then an empirical question whether and when the net-gains from appointing external advisors are outweighed by managing in-house. Distinguishing between the two helps better understand the gains from certification since a certification effect is present only when external advisors are appointed but not when managing in-house. Furthermore, there is no evidence on the potential determinants of the choice of external or in-house advisors by either acquirers or targets. Empirical evidence on determinants gives an insight into the conditions that propel banks to seek certification. Our analysis therefore explores factors that affect the decision to either appoint external advisors or manage in-house, by acquirers and targets in European bank M&As, including deal-specific characteristics. In Table 11, we report the effect of the characteristics of acquirers that are associated with their decision to select either an external advisor to manage the deal or to do so in-house. We find that overall, the acquirer is more likely to manage the deal in-house, when the target also manages the deal in-house. A 1% increase in the likelihood that the target manages the deal in-house, results in a significant 0.80% increase of the likelihood that the acquirer will follow suit. When there is increased debt financing of the deal, the acquirer is more likely to use an external financial advisor. Prior U.S. evidence shows that bond market access has an inverse effect on abnormal returns generated by the acquisitions and that firms with superior access to financing pursue targets of lesser quality (Blomkvist et al. 2018). This is in line with arguments in the literature that external advisors contribute to monitoring by reducing valuation errors as well as by mitigating cross-party transaction risks (Servaes and Zenner 1996; Daniels and Phillips 2007; Choi and Triantis 2010). When the target is a bank, the acquirer is more likely to appoint an external advisor. A 1% increase in the likelihood of the target being a bank, results in a 3.02% decline of the likelihood that the acquirer manages the deal in-house. When the deal is focus increasing, that is, between banks, the acquirer is more likely to manage the deal in-house. A 1% increase in the likelihood of the target being a bank the acquirer is 2.67% more likely to also manage the deal in-house. This supports the argument that when the acquirer and target are in different industries, there are higher information asymmetries, which the acquirer attempts to mitigate through the services of an external financial advisor (Coates 2012; Choi and Triantis 2010). This is consistent with a shifting information setting, where informational asymmetries are particularly prominent during the negotiation stage but decline after deal completion. Acquirers are also less likely to be managing the deal in-house in cross-border deals potentially due to informational asymmetries, market opacity, lack of tacit knowledge, higher levels of risk and uncertainty in the foreign market supporting the opacity theory in-between announcements and the transparency theory following M&A completion (Andriosopoulos et al. 2015; Hernando et al. 2009). This is also consistent with the empirical dominance of the market risk hypothesis, whereby internationalization increases banks' risk due to market-specific factors in foreign markets (Berger et al. 2017).

The price-earnings ratio, as a measure of growth prospects, of the acquirer is positively related (0.08%) to the decision to manage the deal in-house. Beccalli and Frantz (2013) argue that a history of high growth increases the likelihood of banks being acquirers. We utilise the return on assets (ROA) of acquirers as a proxy for their level of profitability where according to the same authors the likelihood of becoming an acquirer increases with the bank's size and profit efficiency. This is also in agreement with research supporting the idea that worse performing banks, namely, banks with lower ROA and capital ratios and higher levels of non-performing loans, being closer to

a distress condition, may be more likely acquisition targets (Hannan and Rhoades 1987; Wheelock and Wilson 2012). However, Agrawal and Jaffe (2003) do not support this view. Low performance is found to be significantly positively associated with the likelihood that the acquirer will manage the deal in-house. A 1% increase in ROA, results in a 0.22% increase in the likelihood that the acquirer will manage in-house. In contrast, the size of the acquirer, measured by its total market value, is negatively related (-1.14%) to the likelihood that the acquirer will manage the deal in-house. Hernando et al. (2009) suggest that larger institutions may be more difficult to integrate with the acquiring firm's business and as such are more likely to acquire than be acquired.

In columns 3 and 4 we present the findings for the cases where the target is either a bank or non-bank respectively. We observe that the likelihood that the acquirer will follow the target's decision to appoint external advisors or manage in-house is similar for both bank as well as non-bank targets. When the target manages the deal in-house the likelihood that the acquirer will follow suit, is significantly higher, with 0.94% and 0.74%, for banks and non-banks respectively. The effect of debt financing, however, is different for bank and non-bank targets. Debt financing makes it less likely that the acquirer manages in-house when the target is a bank. However, it has no effect when the target is a non-bank. When banks acquire non-bank targets, we find a positive association between operating efficiency of the acquirer and the likelihood of acquirers managing in-house, as well as when targets are in Eastern Europe, while it is negatively associated for cross-border deals.

We find that the PE ratio affects positively the likelihood that the acquirer will manage the deal in-house for both bank and non-bank targets, with 0.11% and 0.12%, for banks and non-banks respectively. Similarly, the higher the ROA ratio the more likely the acquirer will manage the deal in-house for both bank and non-bank targets. The overall positive effect of the acquirer's ROA on the likelihood of managing the deal in-house, is also observed for both bank (0.25%) and non-bank (0.23%) targets. In contrast, the size of the acquirer is negatively related to the likelihood that the acquirer will manage the deal in-house for both bank and non-bank targets, as in the overall sample.

In Table 12 we report the findings of the analysis of the decision of the target to manage the deal in-house or appoint external advisor in respect to acquirer's characteristics. Overall, the target is more likely to manage the deal in-house when the acquirer also manages in-house. A 1% increase in the likelihood that the acquirer manages in-house, results in a significant 0.58% increase in the likelihood that the target follows suit. Acquirer's equity and debt financing have significant negative effects for the decision of targets to stay in-house. A 1% increase in equity financing results in a 0.63% reduction in the likelihood that targets will self-manage the deal. A similar effect is observed for both bank targets (0.46%) and non-bank targets (0.89%). Debt financing of the deal increases the likelihood that the target appoints an external advisor also increases and this applies similarly to deals involving either bank or non-bank targets. Debt financing is related to higher risk and the appointment of external advisors might reduce informational asymmetries and agency costs (Servaes and Zenner 1996; Daniels and Phillips 2007; Choi and Triantis 2010). In friendly deals, it is more likely that the target banks will self-manage the deal, whereas the attitude of the deal has no effect on the choice of non-bank targets. Eastern European targets are more likely to manage the deal in-house in the overall sample (0.22), irrespectively of whether the target is a bank (0.24) or not (0.28). Examining the size of the acquirer bank, we find that the size of the acquirer is negatively related (-0.76) to the likelihood that the target will manage the deal in-house for the overall sample. This holds also where the target is either a bank or a non-bank, with marginal likelihoods of -1.21% and -0.86%

Table 9 CARs for acquirers and targets by tier ranking of advisors during the financial crisis 2007–08

Panel A: Acquirer CARs by Tier Rank of Target Adviser during the financial crisis						
Window	Top Tier (N = 39)		Lower Tier (N = 318)		Difference	
	CAR	Std error	CAR	Std error	CAR	Std error
(-1, 1)	-0.0050	(0.0212)	-0.0011	(0.0145)	-0.0039	(0.0198)
(-20, -2)	-0.0098	(0.1843)	0.0036	(0.0090)	-0.0134	(0.0735)
(+2, +20)	0.0058	(0.0802)	0.0066	(0.0075)	-0.0008	(0.0037)
(-20, +20)	-0.0090	(0.1450)	0.0091	(0.0110)	-0.0181	(0.0543)
Panel B: Target CARs by Tier Rank of Target Adviser during the financial crisis						
Window	Top Tier (N = 33)		Lower Tier (N = 237)		Difference	
	CAR	Std error	CAR	Std error	CAR	Std error
(-4, 3)	0.0516***	(0.0189)	0.0258**	(0.0114)	0.0257*	(0.0146)
(-20, -5)	0.0379	(0.0397)	0.0276***	(0.0075)	0.0103	(0.0264)
(+4, +20)	0.0178	(0.0167)	0.0046	(0.0105)	0.0132	(0.0156)
(-20, +20)	0.1072**	(0.0431)	0.0580***	(0.0165)	0.0492	(0.0445)
Panel C: Acquirer CARs by Tier Rank of Acquirer Adviser during the financial crisis						
Window	Top Tier (N = 83)		Lower Tier (N = 274)		Difference	
	CAR	Std error	CAR	Std error	CAR	Std error
(-1, 1)	-0.0016	(0.0097)	-0.0015	(0.0188)	-0.0001	(0.0012)
(-20, -2)	-0.0060	(0.0310)	0.0046	(0.0090)	-0.0106	(0.0254)
(+2, +20)	0.0079	(0.0203)	0.0061	(0.0080)	0.0017	(0.0590)
(-20, +20)	0.0002	(0.0034)	0.0093	(0.0111)	-0.0090	(0.0267)
Panel D: Target CARs by Tier Rank of Acquirer Adviser during the financial crisis						
Window	Top Tier (N = 65)		Lower Tier (N = 205)		Difference	
	CAR	Std error	CAR	Std error	CAR	Std error
(-4, 3)	0.0415***	(0.0154)	0.0250**	(0.0124)	0.0165	(0.0121)
(-20, -5)	0.0202	(0.0131)	0.0316***	(0.0091)	-0.0114	(0.0326)
(+4, +20)	0.0389**	(0.0160)	-0.0042	(0.0086)	0.0431**	(0.0183)
(-20, +20)	0.1006***	(0.0269)	0.0524***	(0.0197)	0.0482*	(0.0247)

Day zero is the deal announcement day and the relevant days are trading days. All announcement dates reported in SDG that are on non-trading days have been adjusted to fall on the nearest following trading day. CARs for top-tier advisers utilised are in column 4 and CARs for lower-tier advisers utilised can be found in column six with the CAR differences reported in column eight. The standard errors are reported in brackets, while *, **, *** represent significance at the 10%, 5% and 1% levels respectively

respectively. These results are also in broad agreement with prior empirical findings, which show that larger banks are more likely to engage in riskier lending, securitization and that a higher bank value indicates less liquid and more risky assets in a bank's balance sheet (Goddard et al. 2014; Wheelock and Wilson 2012). We assert that risk perceptions potentially decline in the perceived presence of an external advisor who may be able to reduce agency costs and integration failure.

In Table 13, we report the characteristics of acquirers that are associated with whether the target selects top tier vs. lower tier advisors. In practice, most corporate decisions are non-random and as such the sample-induced endogeneity problem is critical in M&A research (Certo et al. 2016; Li and Prabhala 2005). Hence, in this context, a bank's determination to allocate top or lower tier advisors could be affected by various firm characteristics. To address the potential sample selection bias, we run regressions using a two-stage

Table 10 CARs for acquirers and targets by tier ranking of the advisors outside the financial crisis 2007–08

Panel A: Acquirer CARs by Tier Rank of Target Adviser outside the financial crisis						
Window	Top Tier (N = 214)		Lower Tier (N = 2823)		Difference	
	CAR	Std error	CAR	Std error	CAR	Std error
(-1, 1)	0.0068	(0.0125)	0.0010	(0.0010)	0.0058	(0.0074)
(-20, -2)	-0.0047	(0.1416)	0.0035***	(0.0011)	-0.0083	(0.0097)
(+2, +20)	0.0047	(0.0806)	0.0023***	(0.0006)	0.0024	(0.0025)
(-20, +20)	0.0068	(0.0366)	0.0068***	(0.0014)	0.0000	(0.0000)
Panel B: Target CARs by Tier Rank of Target Adviser outside the financial crisis						
Window	Top Tier (N = 38)		Lower Tier (N = 718)		Difference	
	CAR	Std error	CAR	Std error	CAR	Std error
(-4, 3)	0.0445*	(0.0231)	0.0492***	(0.0058)	-0.0046	(0.3376)
(-20, -5)	0.0322***	(0.0120)	0.0100**	(0.0047)	0.0222**	(0.0104)
(+4, +20)	-0.0221	(0.0355)	0.0057	(0.0222)	-0.0278	(0.0418)
(-20, +20)	0.0546**	(0.0265)	0.0649***	(0.0125)	-0.0103	(0.0122)
Panel C: Acquirer CARs by Tier Rank of Acquirer Adviser outside the financial crisis						
Window	Top Tier (N = 282)		Lower Tier (N = 2755)		Difference	
	CAR	Std error	CAR	Std error	CAR	Std error
(-1, 1)	0.0031	(0.0078)	0.0012	(0.0013)	0.0018	(0.0027)
(-20, -2)	-0.0025	(0.0941)	0.0035***	(0.0010)	-0.0060	(0.0060)
(+2, +20)	0.0003	(0.0011)	0.0026***	(0.0008)	-0.0023	(0.0030)
(-20, +20)	0.0009	(0.0109)	0.0074***	(0.0015)	-0.0065	(0.0046)
Panel D: Target CARs by Tier Rank of Acquirer Adviser outside the financial crisis						
Window	Top Tier (N = 54)		Lower Tier (N = 702)		Difference	
	CAR	Std error	CAR	Std error	CAR	Std error
(-4, 3)	0.0608***	(0.0200)	0.0480***	(0.0059)	0.0128	(0.0168)
(-20, -5)	0.0044	(0.0051)	0.0116**	(0.0046)	-0.0072	(0.0492)
(+4, +20)	-0.0006	(0.0026)	0.0047	(0.0259)	-0.0053	(0.0190)
(-20, +20)	0.0646*	(0.0378)	0.0643***	(0.0122)	0.0002	(0.0010)

Day zero is the deal announcement day and the relevant days are trading days. All announcement dates reported in SDC that are on non-trading days have been adjusted to fall on the nearest following trading day. CARs for top-tier advisers utilised are in column 4 and CARs for lower-tier advisers utilised can be found in column six with the CAR differences reported in column eight. The standard errors are reported in brackets, while *, **, *** represent significance at the 10%, 5% and 1% levels respectively

correction model. Heckman probit selection models were estimated to account for the potential selection bias that may arise since the sample for the estimation of this model is restricted to those acquirers that appointed external advisors. The inverse Mill's ratio, i.e., fitted value Λ , is then used in a second-stage regression, where the dependent variable is advisor selection (top-tier). The results of not controlling for selection bias are reported in the right-most three columns of the table. We find that, when the target self-manages the deal, the acquirer is less likely to appoint a top-tier advisor. The same holds for when the target is a bank, but it does not hold for non-bank targets. This corroborates with the previous findings, indicating advisor's matching reciprocity appears to prevail in these bank M&As.

There is a differential effect of the method of payment for bank and non-bank targets. In the overall sample, we find that a 1% increase in debt financing increases by 0.13% the

likelihood the acquirer uses a top tier advisor while in the sub-sample of acquirers where the target is a bank, a 1% increase in debt financing increases by 0.18% the likelihood the acquirer uses a top tier advisor. This finding is consistent with Beccalli and Frantz (2013) that debt financing in bank M&As increases the risk of the deal, which can potentially justify the decision of the acquirers to use the costlier services of top tier advisors.

Meanwhile, in the sample of acquirers where the target is a non-bank, a 1% increase in debt financing decreases by 0.09% the likelihood the acquirer uses a top tier advisor although the result is not statistically significant. Our results are also in agreement with Guo et al. (2018), who argue that the effects of top-tier bankers are dependent on acquirer financial conditions. The authors find that specifically, top-tier advisors improve the performance of highly leveraged acquirers where leveraged acquirers tend to retain top-tier investment bankers to gain superior synergies. In the overall sample, operating efficiency of the acquirer increases the likelihood that a top advisor is appointed. A 1% increase in operating efficiency increases by 0.12% the likelihood the acquirer uses a top tier advisor. Similarly, a 1% increase in operating efficiency increases by 0.24% the likelihood that the acquirer uses a top tier advisor, for the sub-sample of acquirers where the target is a non-bank and by 0.06% when the target is a bank, although the latter is not statistically significant. Higher market leverage of the acquirer, in the overall sample, decreases the likelihood that it appoints a top-tier advisor. A 1% increase in leverage decreases by 1.55% the likelihood the acquirer appoints a top tier advisor. Similarly, a 1% increase in leverage decreases by 1.91% the likelihood that the acquirer uses a top tier advisor, for the sub-sample of acquirers where the target is a bank and by 1.70% when the target is a non-bank, although the latter is not statistically significant.

In Table 14, we report the results of our analysis of the characteristics of acquirers on the choice of the target to appoint a top-Tier advisor or not. The Heckman probit selection models were estimated to account for the potential selection bias that may arise since the sample for the estimation of this model is restricted to those deals where targets selected external advisors. The results of not controlling for selection bias can be seen in the right-most three columns of the table. We find that it is less likely that an acquirer appoints a top-tier advisor to manage the deal when the target manages the deal in-house, while the same holds for non-bank targets, it does not among bank targets. If a deal is friendly, we find, in the overall sample, that it is less likely that targets will select top tier advisors. Furthermore, in the overall sample, the higher market leverage of the acquirer decreases the likelihood that the target appoints a top-tier advisor. Martynova and Renneboog (2011) argue that a triple lock of the characteristics of both the acquiring and target firms as well as of the bid itself can explain a significant part of M&A returns. They specifically observe that, on a comparative basis, deal hostility reduces acquirers' returns and the same time it increases targets' returns and they also find that an equity payment leads to a decrease in both bidder's and target's returns.

A 1% increase in leverage decreases by 4.23% the likelihood the target employs a top tier advisor. In the overall sample, the operating efficiency of the acquirer increases the likelihood that the target appoints a top-tier advisor. A 1% increase in operating efficiency increases by 0.23% the likelihood the acquirer uses a top tier advisor. Similarly, a 1% increase in operating efficiency increases by 2.13% the likelihood that the acquirer uses a top tier advisor, for the sub-sample where the target is a non-bank. Regarding operating performance, according to Hornstein and Nguyen (2014), larger firms generally face lower future growth, and they potentially pursue industrially diversifying M&As as a means of boosting growth. Custodio (2014) argues the hypothesis that firms may overpay for diversifying acquisitions and that the more the firm is changing due to the diversifying M&A the

longer it will take for the firm to extract full value from the acquisition. Diversification premium explanation for this seeming contradiction is that the diversified firms are perceived to have greater risk and greater scope for agency costs. The presence of a top-tier adviser can potentially help alleviate risk perceptions and mitigate such disadvantages.

There is no clear overall effect of the ROA of the acquirer on the choice of advisor by the target. Only the non-bank group of targets are less likely to appoint top-tier advisor with an increasing acquirer ROA. Finally, the higher PE ratio of the acquirer increases the likelihood that the target appoints a top-tier advisor, similar to the effect of the target bank group. A 1% increase in PE ratio increases by 0.08% the likelihood the target employs a top tier advisor. Similarly, a 1% increase in PE ratio increases by 0.11% the likelihood that the target uses a top tier advisor. This is line with the indication of the earlier finding that top-tier advisors are more likely to be required to verify the value of potential synergies.

6 Conclusion

This study provides new evidence on the role of financial advisors in European bank M&As. We expand on the growing banking literature on the determinants of the ex-ante choice of advisor by both acquirers and targets. This is of interest to managers, investors, stakeholders, and regulators. We explore the puzzling question of why banks decide to accept the cost of employing the services of an external financial advisor for their own deals. The investigation is also extended to the effect of the use of top tier financial advisors against lower tier advisors. We further examine the factors that affect the decision of acquirers and targets to manage the deal in-house or appoint external advisors. When external advisors are appointed, we also provide evidence on the factors that determine the choice of top versus lower tier advisor. Furthermore, we provide comprehensive evidence from the whole population of M&A deals on the wealth experience of shareholders external of acquirers and targets over the recent thirty-year period, as well as how this wealth is affected by the decision to use financial advisors or manage the deal in house.

Overall, the wealth gains are significant for the targets but not the acquirers, which is in line with most of the empirical evidence reported in the broader M&A literature. Interestingly, our evidence documents that the certification effect of financial advisors seems to be less important in European bank M&As compared to US takeovers, with the majority of the acquirers (77.8%) as well as targets (85.9%) deciding to manage the deal in-house. We also observe that overall, the acquirers and targets tend to match the decision of the other party in the way they manage the deal in-house. Furthermore, the decision to appoint external advisors or manage the deal in-house has no effect on the wealth changes of the shareholders of either acquirers or targets. Matching the choice of the counter party as how to manage the deal, does not affect the wealth of acquirer shareholders. However, such decisions matter for the target. Our findings show that targets should follow the acquirers' decision to appoint external advisors. When the target does not match the decision of the acquirer to appoint an external advisor, it does not gain from the deal. This is the only case where the evidence shows that there are no gains for target shareholders in an M&A deal. When the target manages the deal in-house, the decision of the acquirer to manage the deal externally means target shareholders do not gain.

Regarding the decision to manage the deal in-house, the investigation of the factors that affect the decision of the acquirers, shows that there is a clear pattern of matching the

Table 11 Logit model marginal likelihood when acquirer advisor is in house

	Overall	Target is Bank	Target is Not Bank
Target Self-Managed Bid	0.798*** (0.103)	0.942*** (0.170)	0.741*** (0.142)
Equity Payment	0.0212 (0.189)	0.327 (0.303)	-0.297 (0.238)
Debt Payment	-0.557*** (0.149)	-0.766*** (0.237)	-0.333 (0.218)
Attitude	-0.160 (0.120)	-0.134 (0.205)	-0.241 (0.161)
Target is Bank	-3.021*** (0.288)		
Focus Increasing	2.668*** (0.278)		
Cross Border Deal	-0.178* (0.103)	-0.255 (0.208)	-0.192* (0.115)
Target is East European	0.223* (0.114)	0.206 (0.215)	0.285** (0.130)
Hot Period Deal	-0.00401 (0.0845)	-0.00139 (0.161)	0.0511 (0.0912)
Operating Efficiency	0.0474 (0.0505)	-0.0796 (0.139)	0.114* (0.0605)
PE	0.0822*** (0.0255)	0.106*** (0.0359)	0.120** (0.0595)
MTB	-0.129 (0.120)	-0.270 (0.215)	-0.0631 (0.128)
ROA	0.215*** (0.0711)	0.252* (0.139)	0.227** (0.101)
Total Market Value	-1.137*** (0.318)	-1.495*** (0.536)	-0.609* (0.365)
Market Leverage	0.145 (1.062)	-2.540 (1.991)	1.656 (1.144)
N	734	374	328

The table shows the marginal effect of a 1% change in specific acquirer characteristics on the likelihood that the acquirer chooses itself as the in-house advisor on the deal. The superscripts show ***, **, and * denote significance at the 1%, 5% and 10% levels respectively. Robust standard errors of the marginal effects are in parentheses

counterparty's decision. When the target manages the deal in-house, it is more likely that the acquirer will also do the same and similarly, when the acquirer manages the deal in-house the target mirrors this decision. This applies equally to bank and non-bank targets. When the deal is focus increasing, the acquirer is more likely to manage the deal in-house, which supports the argument that deals within the same industry pose lower information asymmetry challenges for the acquirer. In line with that, in cross border deals, we find that it is more likely that an acquirer will employ the services of external advisors and attempt

Table 12 Logit model marginal likelihood when target advisor is in house

	Overall	Target is Bank	Target is Not Bank
Acquirer Self-Managed Bid	0.576*** (0.0712)	0.680*** (0.119)	0.614*** (0.109)
Equity Payment	-0.625*** (0.174)	-0.462* (0.240)	-0.892*** (0.280)
Debt Payment	-0.365*** (0.0926)	-0.514*** (0.140)	-0.311* (0.176)
Attitude	0.133 (0.0873)	0.289* (0.150)	-0.121 (0.135)
Target is Bank	0.0406 (0.299)		
Focus Increasing	-0.155 (0.301)		
Cross Border Deal	-0.0396 (0.0721)	0.0424 (0.135)	0.0574 (0.110)
Target is East European	0.220*** (0.0828)	0.236* (0.143)	0.275** (0.138)
Hot Period Deal	-0.0340 (0.0614)	-0.0193 (0.113)	-0.0148 (0.0831)
Operating Efficiency	-0.0578 (0.0454)	0.151 (0.0939)	-0.135 (0.0912)
PE	-0.0102 (0.0210)	-0.0330 (0.0329)	-0.0109 (0.0470)
MTB	-0.0378 (0.0844)	-0.162 (0.157)	0.0213 (0.116)
ROA	0.0501 (0.0551)	-0.0671 (0.103)	0.0553 (0.0838)
Total Market Value	-0.761*** (0.245)	-1.121*** (0.416)	-0.864*** (0.374)
Market Leverage	0.810 (0.703)	0.375 (1.299)	-0.0567 (1.197)
N	744	374	336

The table shows the marginal effect of a 1% change in specific acquirer characteristics on the likelihood that the target chooses itself as the in-house advisor on the deal. The superscripts show ***, **, and * denote significance at the 1%, 5% and 10% levels respectively. Robust standard errors of the marginal effects are in parentheses

to mitigate the risks involved when there is higher information asymmetry and lack of direct market knowledge.

In deals that external advisors are employed, the choice of top or lower-tier advisor is affected by the decision of the counter party to manage the deal in-house or appoint external advisors. When the target manages the deal in house, it is more likely that the acquirer will appoint a lower tier advisor irrespectively as to whether the target is a bank or non-bank. We also document that, overall, in deals that involve debt financing both acquirers and targets are more likely to employ the services of external financial advisors rather than

Table 13 Logit model marginal likelihood for acquirer selects top tier advisor

	Heckman Probit			Probit		
	Overall	Target bank	Target Non-bank	Overall	Target bank	Target Non-bank
Target Self-Managed Bid	-0.200*** (0.0773)	-0.0975* (0.0516)	-0.164 (0.125)	-2.416*** (0.298)	-1.752*** (0.290)	-6.245*** (1.509)
Debt Payment	0.126* (0.0663)	0.182*** (0.0705)	-0.0915 (0.101)	1.217*** (0.343)	1.382*** (0.362)	-0.0733 (1.220)
Attitude	0.0486 (0.0663)	-0.0294 (0.0742)	0.214 (0.226)	0.464 (0.398)	0.325 (0.365)	0.685 (1.508)
Target is Bank	-0.0286 (0.0555)			1.217*** (0.297)		
Cross Border Deal	-0.0698 (0.0570)	-0.0842 (0.0732)	-0.100 (0.0811)	0.0403 (0.310)	0.364 (0.338)	-0.876 (0.905)
Target is East-European	0.0654 (0.0704)	0.0215 (0.0816)	0.229 (0.141)	-0.309 (0.367)	-0.485 (0.343)	0.0568 (1.215)
Operating Efficiency	0.118*** (0.0395)	0.0598 (0.0382)	0.247** (0.117)	0.112 (0.194)	0.527** (0.229)	0.00926 (0.245)
MTB	-0.0692 (0.0435)	-0.0538 (0.0525)	-0.0316 (0.0719)	0.437 (0.319)	0.284 (0.325)	1.545 (1.160)
ROA	-0.0756 (0.0469)	-0.0392 (0.0354)	-0.332 (0.211)	-0.484 (0.341)	-0.881*** (0.342)	-0.0969 (0.717)
Market Leverage	-1.552*** (0.543)	-1.914*** (0.713)	-1.699 (1.370)	5.067 (3.147)	1.453 (3.143)	19.13* (10.03)
PE	-0.0279 (0.0276)	-0.0195 (0.0333)	-0.0599 (0.0770)	-0.112 (0.105)	-0.0946 (0.102)	-1.154 (0.975)
N	629	344	202	629	344	202

The table shows the marginal effect of a 1% change in specific acquirer characteristics on the likelihood that the acquirer chooses a top tier advisor. The superscripts show ***, **, and * denote significance at the 1%, 5% and 10% levels respectively. Robust standard errors of the marginal effects are in parentheses

manage the deal in-house. This applies equally to deals for bank and non-bank targets. When targets appoint external advisors, higher levels of debt financing, make it more likely that a top tier advisor will be employed. However, for acquirers, this applies only when the target is a bank.

We find only partial confirmatory evidence of the importance of the reputational status of financial advisors during the 2007–2008 financial crisis. The appointment of top tier financial advisors during this period leads to significantly higher shareholder returns, only for the targets. However, this positive wealth effect of top tier advisors observed during the crisis for targets does not extend to acquirers or beyond the crisis period. As argued earlier, advisor reputation effects when examined in periods surrounding a financial crisis might only inconclusively be linked to a bank's performance since a bank's probability of acquiring or being acquired is not dependent solely and directly on their own performance during such periods. In times of financial crises, governments might intervene to support the consolidation of the banking sector by way of promoting acquisitions of weaker banks, which might affect the wealth implications of some deals. This might weaken the ability to fully capture the certification effect of financial advisors as distinct from the effects of

Table 14 Logit model marginal likelihood for target selects top tier advisor

	Heckman Probit			Probit		
	Overall	Target bank	Target Non-bank	Overall	Target bank	Target Non-bank
Acq Self-Managed Bid	-0.503* (0.262)	-0.342 (0.235)	-1.843** (0.827)	-2.584*** (0.403)	-2.350*** (0.519)	-3.242*** (0.814)
Debt Payment	0.255 (0.161)	0.263 (0.180)	-0.251 (0.945)	1.487*** (0.385)	1.924*** (0.486)	1.077 (0.798)
Attitude	-0.337* (0.199)	-0.242 (0.179)	-1.907 (1.180)	-1.227*** (0.381)	-1.478*** (0.466)	-0.855 (0.822)
Target is Bank	-0.196* (0.116)			-0.0847 (0.303)		
Cross Border Deal	0.223 (0.180)	0.446 (0.291)	0.174 (0.758)	0.650** (0.327)	1.212*** (0.423)	-1.204 (0.905)
Target is East European	-0.194 (0.211)	-0.447 (0.288)	0.689 (1.672)	-1.235*** (0.464)	-1.853*** (0.581)	0.354 (0.804)
Operating Efficiency	0.225* (0.132)	0.0729 (0.112)	2.132*** (0.744)	0.428*** (0.132)	-0.0688 (0.297)	1.844*** (0.583)
MTB	-0.140 (0.119)	-0.0800 (0.100)	-0.388 (0.654)	0.0672 (0.335)	0.522 (0.442)	-0.302 (0.754)
ROA	-0.302 (0.214)	-0.0907 (0.151)	-3.570*** (1.384)	-0.702** (0.307)	-0.432 (0.400)	-1.942** (0.840)
Market Leverage	-4.230** (2.154)	-2.423 (1.757)	-16.09* (8.334)	-5.847* (2.993)	-2.982 (3.935)	-6.895 (6.163)
PE	0.0798* (0.0473)	0.108* (0.0597)	0.0938 (0.272)	0.235*** (0.0777)	0.273*** (0.0992)	0.0335 (0.246)
N	655	321	244	655	321	244

The table shows the marginal effect of a 1% change in specific acquirer characteristics on the likelihood that the target chooses a top tier advisor. The superscripts show ***, **, and * denote significance at the 1%, 5% and 10% levels respectively. Robust standard errors of the marginal effects are in parentheses

governmental influence. Our evidence, however, can provide the grounds of justification of such further research.

Declarations

Conflict of interest No conflict of interest of any type has been identified with this paper.

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