

# THE IMPACT OF PRE-MERGER EARNINGS MANAGEMENT ON NON-CASH ACQUISITION PREMIA: EVIDENCE FROM THE EUROPEAN MARKET FOR CORPORATE CONTROL

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## Abstract

Using 1320 European mergers and acquisitions (M&As) completed between 2003 and 2012, this paper investigates patterns of earnings management and the implications for non-cash acquisition premia considering both the form of payment and the target firm's listing status. The empirical evidence documented in this study suggests that management teams engage in pre-merger upward earnings management and that it is more evident for private rather than for publicly listed targets in order to compensate for the higher information asymmetry. This earnings management procedure leads to higher takeover premia even after controlling for variables such as the acquirer's internal investment opportunities, profitability or available free cash flow.

**Keywords:** Mergers, Acquisitions, Earnings Management, Acquisition Premium

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## 1 Introduction

Mergers and acquisitions continue to be significant corporate investments that have been shown to create, destroy and redistribute shareholder wealth. Related studies have sought to ascertain whether acquiring firms manage earnings to provide a root explanation behind the initial equity overvaluation, providing compelling evidence of upward earnings management pre-merger announcement (Erickson and Wang, 1999; Louis, 2004; Gong et al. 2008; and Botsari and Meeks, 2008; Alsharairi, 2012). This paper enriches this existing literature by investigating pre-merger earnings management and non-cash acquisition premia within a multi-country sample from the European context, stratifying by target listing status.

However, there is an incentive for earnings management in share-for-share transactions. Specifically, in share transactions, the share exchange ratio determines the number of bidder shares each target shareholder receives for each target share held. In the first steps of the deal structuring, the acquirer and the target shareholders agree on a purchase price. The share-exchange-ratio is then calculated based on the price of the acquiring company at the time of the merger agreement. As a result, the higher the acquirer's share price, the smaller the number of acquirer shares converted and distributed to the target shareholders. The direct influence of the acquirer's stock price on the share exchange ratio is an incentive

to increase the acquirers share price prior to merger talks.

As a consequence, the high value-relevance of earnings data is a main driver for an acquirer to manipulate its earnings prior to actions in the market for corporate control. In fact, the current literature provides convincing evidence of pre-merger earnings management indicating that a firm's management succeeds in their attempts to influence reported earnings (Erickson and Wang, 1999; Louis, 2004; Gong et al. 2008; and Botsari and Meeks, 2008; Alsharairi, 2012). However, it is important to note that such evidence per se does not necessarily indicate that managers are also able to influence the investor's perception – especially in the case of dealing with well-informed traders as in merger transactions.

This paper proposes that there is a direct and positive relationship between earnings management as proxied by abnormal current accruals and non-cash acquisition premia, following Alsharairi (2012). Using a European sample, we find that acquiring companies engage in earnings management, detectable up to one year before the deal's announcement date. We also find a strongly significant and positive relationship between an acquirer's earnings management prior to the deal being negotiated and the subsequent premium offered.

This paper contributes to the existing literature in several unique ways. First, this study sheds light on possible differences between the highly researched US takeover market and the European one given its

distinct characteristics such as a tendency to comprise of more private targets as well as a stronger requirement for predominantly cash payments. Merger and acquisitions have historically been dominated by deals originating in the US and as such it is not surprising to find much academic attention centred on this market rendering little to be unknown about the second most active market – the EU. Moreover, together, the GDP of the EU outstrips that of the US at over €12 trillion (Europa, 2013) and thus the growing integration of Europe indicates more research is required into this growing market. Second, this study extends the control variables used in the previous literature in order to examine the effect of earnings management on the non-cash acquisition premia as employed by Alsharairi (2012) through the inclusion of additional variables as proposed by Gondhalekar (2002, 2004) as well as the inclusion of other possible drivers of takeover premia.

## 2 Literature review

### 2.1 Pre-merger earnings management

Under normal conditions, acquirers have control over M&A timing and can therefore plan and implement their earnings management strategy to successfully manipulate their earnings in the desired way (Alsharairi, 2012). Erickson and Wang (1999) as well as Botsari and Meeks (2008) provide significant evidence that acquirers do use managerial discretion to inflate earnings upwards prior to mergers. However, this only happens if equity is offered as part of the deal's payment structure<sup>2</sup>.

Louis (2004) provided strong evidence of intentional exaggeration of pre-announcement earnings of acquiring firms in share-for-share deals. In a sample of privately held targets, Baik et al. (2007) argue that bidders have a greater incentive to inflate earnings in order to make up for the relatively higher information uncertainty. Guo et al. (2008) in addition document evidence that acquirers tend to manage their earnings upwards prior to acquisitions in order to manipulate their valuation. Conversely, they also document a tendency of share splits prior to share deals, motivated by the assumption that this could delay the market's reaction to the earnings management. Pungaliya and Vijn (2008) further report that the larger the relative size of the target, the greater the incentive for the bidder to manage its earnings upwards prior to offering equity as payment method to reduce the real cost of the acquisition.

<sup>2</sup> Following Erickson and Wang (1999), this is due to the fact that inflated earnings usually drive the share price upwards. Since the share price determines the share-exchange ratio, this results in a lower number of newly issued shares and consequently less dilution effects of the merger. Due to this, there are no incentives to employ earnings management strategies for cash-only deals.

### 2.2 Cash and non-cash acquisition premia

As Gondhalekar et al. (2004: 735) point out, “*in spite of [the] extensive literature regarding mergers and acquisitions, surprisingly little has been done to determine what influences the actual price paid by an acquirer for a target.*” Bidding strategies represent a dilemma in all corporate takeovers. If the agreed upon premium is too high, the subsequent return on investment is reduced. On the other hand, a premium that is too low could result in a failed offer and hence the loss of a profitable opportunity.

Huang and Walking (1987) investigate acquisition premia from a tax perspective and suggest that target shareholders require a higher premium on the target's actual market value under cash payment. This is due to the fact that cash deals will result in an immediate liability for capital gains tax whereas non-cash deals can offer the seller the option to defer this tax liability to a later date, and hence lower premiums should theoretically be accepted.

From a different viewpoint, Haw et al. (1987) assert that in order to avoid further risks, acquisitions of firms in sound financial conditions may result in different premia than acquisitions of financially distressed firms, although their empirical findings show that distressed firms with tax-loss-carry forwards result in significantly different premia. However, Crawford and Lechner (1996) claim that after controlling for liquidity and solvency using suitable proxies, these results are weak if not mixed.

Although earlier research views the acquirer as a passive recipient in an acquisition, Bugeja and Walter (1995) consider bidders' and targets' characteristics such as pre-merger performance or toehold investments in their analysis. According to their model, pre-merger performance shows a negative relation to takeover premia as opposed to toehold investments, which exhibit a positive relation. Choudhury and Jegadesh (1994) explain the latter as being due to the fact that a toehold investment signals the target's higher valuation by the respective bidder. Schwert (2000) criticizes the former finding by claiming that both performance and size are not reliably related to resulting takeover premia, and alternatively introduces a competitive bidder setting as a possible driver of the resulting premia. His findings show that a hostile or competitive takeover process results in higher premia. Recent empirical findings by Wickramanayake and Wood (2009) offer a different perspective on toehold investments. They argue that their negative relation lies in the relatively lower number of additional shares that have to be acquired in order to hold a controlling stake. Such a setting weakens the position of competitive bidders and consequently lowers the offered acquisition premium.

Hauschild (1994) and Porrini (2006) shed further light, showing that the involvement of investment

banking firms in deals results in higher premia, explained by the fact that M&A advisory fees are linked to deal size and therefore maximised by higher premia.

In comprehensive analyses, Walkling and Edmister (1985), as well as Gondhalekar et al. (2002, 2004), examine an extensive set of target and acquirer characteristics to investigate motives that influence the price paid for targets. They find that hubris, as proxied using the volatility of the target's earnings per share, is not a driving force for takeover premia. However, the free cash flow and agency-relationship is shown to play an important role in determining the magnitude of acquisition premia.

Recent work by Alsharairi (2012) is the first to explicitly investigate whether pre-merger earnings management practices have a significant influence on the resulting takeover premia especially when the payment structure includes equity share issues as takeover currency. His empirical study documents a very significant and robust positive relationship between non-cash acquisitions premia and acquirer's pre-merger earnings management even after controlling for different sets of variables. No evidence, however, could be found for pre-merger earnings management in the case of 100% cash deals.

Alsharairi (2012) offers two different explanations for this finding. On the one hand, this could be due to the fact that the target's shareholders are able to detect the inefficient earnings management efforts by the acquirer's management team and hence request a higher premium. On the other hand, he argues that this premium appears to be high from a nominal point of view but due to the earnings management comes at no extra cost and might be equal to or lower than otherwise on a real basis after accounting for the manipulation.

### 2.3 Target firm listing status

The financial statements of unlisted firms tend to be less reliable than those of publicly listed corporations (Van Tendeloo and Vanstraelen, 2008). The existing literature argues that this is as a result of greater information asymmetry. Investors tend to be restricted to being able to trade the shares of unlisted firms, while on the whole, they do not become as aware of the existence of unlisted firms in their financial decision-making as these firms tend to not fall into their visible spectrum in the buying process (Barber and Odean, 2008) with analysts and the media following only a select few in the unlisted market. As these firms do not fall on a listed stock exchange, shareholders do not have the accompanying regulatory requirements if they did. Together, these factors contribute to weaken the reliability of the financial statements produced (Vander Bauwhede and Willekens, 2004; Van Tendeloo and Vanstraelen, 2008).

In a M&A setting, this can cause increased difficulty if acquirers are unable to ascertain a fair value for the target. Information asymmetry can cause acquirers enhanced risk as they face the risk that not only are they overpaying for the target, but the statements used in due diligence may not be as reliable as desired.

In European evidence, Faccio and Masulis (2005) study the M&A payment choices of public and unlisted targets from 1997 to 2000. They write that acquisitions of unlisted targets invoke sellers to consider their consumption/liquidity needs, with a preference for cash given the typical concentration of their portfolios (in that usually these firms are closely-controlled by shareholder-managers who exit at impending retirement). The empirical evidence finds much more concentrated ownership in Europe than in the US with a stronger effect on the M&A financing decision. Acquirers with favourable access to bank borrowing will use cash financing, while stock financing is less likely for unlisted targets to both avoid the creation of a new blockholder and increase the chance of the terms being accepted by the exiting parties.

### 2.4 Hypothesis development

Analogous to the aforementioned studies documenting empirical evidence found for samples from US M&A deals, this study investigates pre-merger earnings management of acquiring firms in Europe. Given the undoubtedly high value relevance of accounting earnings, the first testable proposition is as follows:

*H1: If a high capital market valuation of the acquiring firm, which engages in a share-for-share transaction, ceteris paribus lowers the share-exchange ratio and consequently mitigates EPS and share dilution effects and furthermore lowers other related costs, firms acquiring targets via share-swaps are expected to upward manage their earnings prior to announcing merger plans.*

Furthermore, built on the previous hypothesis, and the evidence documented in literature, if the acquirer's pre-merger earnings are managed upwards in order to influence the share price, then the target's shareholders, representing rational, sophisticated and well-informed user, are expected to detect these efforts. Furthermore, they are expected to correct them by discounting the acquirer's stock price. This strategy aims to maintain acquisition premium at the same "real" level.

*H2: The study postulates a significant and positive relationship between pre-merger earnings management effects (i.e. a higher equity value) and the agreed upon non-cash acquisition premium.*

## 3 Methodology

The source of the data used within this paper for all variables related to European M&A transactions is

Thomson ONE Banker of SDC Platinum. Supplementing information for semi-annual accounting data comes from Thomson DataStream or WorldScope respectively.

A sample of European acquiring firms was taken from Thomson One Banker according to the following criteria:

1. Announced between 01/06/2002 and 07/04/2012<sup>3</sup>;
2. Only completed transactions;
3. Acquirers are publicly listed companies from Germany, France, United Kingdom, Italy or Spain<sup>4</sup>;
4. Firms from the financial sector, which have SIC codes between 6000 and 6999, are excluded from the sample due to different regulatory requirements;
5. The deal value is at least \$1 million (or equivalent)<sup>5</sup>;
6. The acquirer obtains a controlling ownership interest in the target firm<sup>6</sup> (i.e. owns 51% or more of the target post-completion);
7. The deals have acquisition premium data available on Thomson One Banker and semi-annual earnings management data on WorldScope.

Accruals are a straightforward and simple instrument for temporarily manipulating reported earnings around specific events because of their relative low cost, as opposed to the risk of reducing shareholder value as a consequence of sub-optimal operating decisions (Peasnell, 2000; Botsari and Meeks, 2008). However, identifying and measuring the portion of accruals arising from managerial discretion is among the major challenges to be faced when investigating this relationship.

Following Pungaliya and Vijh (2008), the current accruals for the following analyses are computed using the changes in the non-cash working capital:

$$CAC_i = \Delta CA_i - (\Delta CL_i - \Delta STD_i) - \Delta CASH_i \quad (1)$$

- CAC: current accruals;  
 ΔCA: semi-annual change in current assets;  
 ΔCL: semi-annual change in current liabilities;  
 ΔSTD: semi-annual change in short-term liabilities included in current liabilities and current portion of long-term debt;  
 ΔCASH: semi-annual change in cash.

We use a cross-sectional industry-performance-matched accruals model similar to the research design of Louis (2004), Gong et al. (2008) and Alsharairi (2012). The following model is based on the Dechow and Sloan (1995) modified Jones (1991) model and considers Kothari et al.'s (2005) recommendation to use performance-based portfolios as a non-linear control in order to improve the reliability of the accrual regression model.

Following Kothari et al.'s (2005) recommendations, all firms within the same industry (based on their 2-digit SIC) are clustered by calendar years and semi-annual periods and subsequently ranked according to their efficiency – using the ROA of the same period in the previous year as proxy for performance – to form five quintiles.

We furthermore implement Gong et al.'s (2008) procedures for stronger robustness and reduced measurement errors. In order to discard outliers, the highest and the lowest 0.1 percent ROA are dismissed. Also, current accruals divided by the previous year's total assets resulting in a ratio bigger than one are not used to estimate the coefficients in order to exclude erroneous database entries and extreme values. Finally, small portfolios with less than 10 constituents as well as insignificant current accrual forecasting models are excluded from the regression and forecasting process as well.

Following the aforementioned procedure, the cross-sectional regression and estimation model for each portfolio is as follows:

$$\frac{CAC_{i,j}}{TA_{i,j-4}} = \sum_{q=0}^3 \alpha_{1+q} Q_{1+q,i,j} + \alpha_5 \left( \frac{|\Delta REV_{1,j} - \Delta AR_{i,j}|}{TA_{i,j-4}} \right) + \alpha_6 \left( \frac{CAC_{i,j-1}}{TA_{i,j-4}} \right) + \alpha_7 \left( \frac{PPE_{i,j}}{TA_{i,j-4}} \right) + \varepsilon_i \quad (2)$$

- Q<sub>q</sub>: dummy variable to control for seasonality effects;  
 ΔREV: semi-annual changes in revenue;  
 ΔAR: semi-annual change in trade receivables;  
 PPE: denotes the net amount of property, plant and equipment in a semi-annual period;  
 TA<sub>j-4</sub>: one year lagged total assets in the same semi-annual period;  
 α: coefficients' index  
 ε: represents the residual term of the regression model;  
 i: sampled company's index;  
 q: index of the semi-annual period.

To explain the relation between the magnitude of non-cash acquisition premia and acquirers' pre-merger earnings management, an ordinary-least-squares regression model as proposed in Alsharairi (2012) is applied in order to test this:

<sup>3</sup> The sampling period cut-off point 07/04/2012 is determined once data collection for this study started in July 2012. A period of ten years is chosen in an ad hoc sampling period, due to the fact that WorldScope provides interim data beginning 2002.

<sup>4</sup> The five biggest EU economies according to GDP in 2011.

<sup>5</sup> Small deals offer a lower motivation to manage earnings due to the insignificant economic benefits that can be expected (Erickson and Wang 1999).

<sup>6</sup> Takeover premia are more likely for the acquisition of controlling stakes as they are for portfolio stakes (Arzac 2004).

$$\begin{aligned}
 PR_i = & \alpha_0 + \alpha_1 EM_i + \alpha_2 DEALVALUE_i + \alpha_3 RSIZE_i + \alpha_4 ROEACQ_i + \alpha_5 MBACQ_i + \alpha_6 FCFACQ_i \\
 & + \alpha_7 DEACQ_i + \alpha_8 DIVERS_i + \alpha_9 CROSSB_i + \alpha_{10} TOEHOLD_i + \alpha_{11} ADVISOR_i \\
 & + \alpha_{12} ROETARG_i + \alpha_{13} FCFTARG_i + \alpha_{14} DETARG_i + \alpha_{15} EPSG_i + \alpha_{16} EPSSTD_i \\
 & + \alpha_{17} BETA_i + \alpha_{18} BANKRUPTCY_i + \sum_{y=1}^{m=10} \alpha_{y+18} D_{y+2003} + \varepsilon_i
 \end{aligned} \quad (3)$$

- PR: acquisition premium in the M&A deal, based on the share's price index four weeks prior to the deal's announcement date;
- EM: earnings management by the acquiring company as proxied by the aforementioned aggregate abnormal accruals over three months prior to the deal announcement;
- DEALVALUE: natural logarithm of the deal value;
- RSIZE: revenue size of the target relative to the acquirer;
- ROEACQ: acquirer's return on equity one year prior to the transaction announcement;
- MBACQ: acquirer's market-to-book value calculated the period prior to the transaction announcement;
- FCFACQ: acquirer's free cash flow to total assets calculated the period prior to the transaction announcement;
- DEACQ: denotes the acquirer's debt-to-equity-ratio;
- DIVERS: dummy variable for diversifying deals –measured as the same first two digits of the SIC-code, 0 otherwise;
- CROSSB: dummy variable, which indicates cross-boarder transactions, 0 otherwise;
- TOEHOLD: acquirer's toehold ownership interest in the target firm prior to the deal;
- ADVISOR: dummy variable capturing a top-tier investment bank advising the acquirer on the M&A transaction;
- ROETARG: target's return on equity one year prior to the transaction announcement;
- MBTARG: target's market-to-book value calculated the period prior to the transaction announcement;
- FCFTARG: target's free cash flow to total assets calculated the period prior to the transaction announcement;
- DETARG: denotes the target's debt-to-equity-ratio;
- EPSG: target's average EPS growth three semi-annual periods prior to the transaction;
- EPSSTD: target's EPS standard deviation three semi-annual periods prior to the transaction;
- BETA: target's stock price beta prior to the transaction (DataStream: BETA);
- BNKRPTCY: target's bankruptcy risk measured via the Merton (1973) model;
- $D_{y+2003}$ : dummy variable capturing the year of the M&A transaction;
- $\alpha$ : coefficients' index;
- $\varepsilon$ : represents the residual term of the regression model;
- $i$ : sampled M&A deal's index.

### 3.1 Descriptive statistics

Table 1 demonstrates the characteristics of the sample. In Panel A of Table 1, the sample distribution by year shows that many deals in Europe are clustered in 2006 to 2007 with 418 deals being completed, whereas 2009 provides the lowest number of deals in the sample with only 103 M&A deals meeting the selection criteria. Table 1 furthermore reveals that of the overall sample, 1,173 deals (88.9 percent) were financed entirely by cash, while the remaining 147 deals (11.1 percent) were structured entirely as share-for-share deals.<sup>7</sup> A further striking fact but a typical characteristic of the European market for corporate control is the notably high proportion of private targets, representing about 1,091 deals (82.7%) within the selected sample.

The distribution of deals per industry of acquirer and target are shown in Panel G of Table 2 Sectors

that are highly represented in the sample are services advertising (SIC 73), services engineering (SIC 87), electronics (SIC 36) and chemicals (SIC 28). Collectively, these sectors account for the deals of 551 acquirers (41.7 percent) and 547 targets (41.4 percent).

The following descriptive statistics for deals are organised in three columns for the overall sample, for non-cash deals and cash transactions respectively. The statistics for the overall sample show an average premium of 40.19 percent, which is consistent with reported European takeover premia levels throughout literature.

<sup>7</sup> The notably high amount of pure cash deals is one of the distinct characteristics of the European takeover market. (Cf. Faccio and Masulis, 2005)

**Table 1.** Sample distribution

The table presents the distribution of the overall sample of M&A deals. Panel A groups the sample into year of the announcement, Panel B shows deals grouped into country of the acquirer, distribution of the sample by industry relatedness (i.e. matched 2-digit SIC codes) is exhibited in Panel C, it's cross-border status in Panel D, by method of payment in Panel E and by the targets listing status in Panel F. Finally, the industry distribution is exhibited in Panel G.

Panel A: Deals distribution by year			Panel B: Deals distribution by country		
	Freq.	%		Freq.	%
2003	28	2.12%	France	145	10.98%
2004	125	9.47%	Germany	76	5.76%
2005	150	11.36%	Italy	65	4.92%
2006	199	15.08%	Spain	25	1.89%
2007	219	16.59%	United Kingdom	1009	76.44%
2008	155	11.74%	Total	1320	100.00%
2009	103	7.80%			
2010	149	11.29%			
2011	143	10.83%			
2012	49	3.71%			
Total	1320	100.00%			

Panel C: Deals by industry relatedness			Panel D: Domestic and cross-border deals		
	Freq.	%		Freq.	%
Unrelated	765	57.95%	Domestic	660	50.00%
Related	555	42.05%	Cross-border	660	50.00%
Total	1320	100.00%	Total	1320	100.00%

Panel E: Deals by payment method			Panel F: Deals by Target listing status		
	Freq.	%		Freq.	%
Pure cash	1173	88.86%	Public	229	17.35%
Non-cash	147	11.14%	Private	1091	82.65%
Total	1320	100.00%	Total	1320	100.00%

**Table 2.** Sample distribution

Panel G: Sample distribution by acquirer and target industry						
SIC	Industry	Acquirer		Target		
		Freq	%	Freq	%	
10	Metal Mining	26	1.97%	26	1.97%	
12	Bituminous Coal & Lignite Mining	3	0.23%	5	0.38%	
13	Crude Petroleum & Natural Gas	36	2.73%	34	2.58%	
14	Mining & Quarrying Of Nonmetallic Minerals (No Fuels)	10	0.76%	12	0.91%	
15	General Bldg Contractors - Residential Bldgs	25	1.89%	21	1.59%	
16	Heavy Construction Other Than Bldg Const - Contractors	5	0.38%	9	0.68%	
17	Construction - Special Trade Contractors	6	0.45%	15	1.14%	
20	Food And Kindred Products	49	3.71%	32	2.42%	
21	Tobacco Products	1	0.08%	1	0.08%	
22	Textile Mill Products	3	0.23%	8	0.61%	
23	Apparel & Other Finishd Prods Of Fabrics & Similar Matl	11	0.83%	10	0.76%	
24	Lumber & Wood Products (No Furniture)	0	0.00%	2	0.15%	
25	Household Furniture	1	0.08%	4	0.30%	
26	Papers & Allied Products	8	0.61%	9	0.68%	
27	Newspapers: Publishing Or Publishing & Printing	52	3.94%	31	2.35%	
28	Chemicals & Allied Products	90	6.82%	107	8.11%	
29	Petroleum Refining	6	0.45%	0	0.00%	
30	Tires & Inner Tubes	13	0.98%	10	0.76%	
31	Leather & Leather Products	2	0.15%	1	0.08%	
32	Flat Glass	9	0.68%	13	0.98%	
33	Steel Works, Blast Furnaces & Rolling & Finishing Mills	14	1.06%	12	0.91%	

**Table 2.** Sample distribution (continued)

Panel G: Sample distribution by acquirer and target industry					
SIC	Industry	Acquirer		Target	
		Freq	%	Freq	%
34	Metal Cans	31	2.35%	20	1.52%
35	Engines & Turbines	51	3.86%	54	4.09%
36	Electronic & Other Electrical Equipment (No Computer Equip)	74	5.61%	49	3.71%
37	Motor Vehicles & Passenger Car Bodies	33	2.50%	29	2.20%
38	Search, Detection, Navigation, Guidance, Aeronautical Sys	49	3.71%	56	4.24%
39	Jewelry, Silverware & Plated Ware	4	0.30%	9	0.68%
41	Local & Suburban Transit & Interurban Hwy Passenger Trans	12	0.91%	13	0.98%
42	Trucking & Courier Services (No Air)	5	0.38%	6	0.45%
44	Water Transportation	8	0.61%	4	0.30%
45	Air Transportation, Scheduled	3	0.23%	6	0.45%
47	Transportation Services	7	0.53%	5	0.38%
48	Radiotelephone Communications	53	4.02%	42	3.18%
49	Electric, Gas & Sanitary Services	54	4.09%	47	3.56%
50	Wholesale-Durable Goods	40	3.03%	48	3.64%
51	Wholesale-Paper & Paper Products	4	0.30%	14	1.06%
52	Retail-Building Materials, Hardware, Garden Supply	0	0.00%	0	0.00%
53	Retail-Department Stores	4	0.30%	3	0.23%
54	Retail-Food Stores	8	0.61%	2	0.15%
55	Retail-Auto Dealers & Gasoline Stations	21	1.59%	17	1.29%
56	Retail-Apparel & Accessory Stores	3	0.23%	9	0.68%
57	Retail-Home Furniture, Furnishings & Equipment Stores	6	0.45%	2	0.15%
58	Retail-Eating & Drinking Places	18	1.36%	21	1.59%
59	Retail-Miscellaneous Retail	17	1.29%	13	0.98%
62	Security & Commodity Brokers, Dealers, Exchanges & Services	0	0.00%	1	0.08%
65	Real Estate	10	0.76%	16	1.21%
67	Blank Checks	3	0.23%	3	0.23%
70	Hotels, Rooming Houses, Camps & Other Lodging Places	0	0.00%	7	0.53%
72	Services-Personal Services	5	0.38%	5	0.38%
73	Services-Advertising	268	20.30%	285	21.59%
75	Services-Automotive Repair, Services & Parking	2	0.15%	3	0.23%
76	Services-Miscellaneous Repair Services	0	0.00%	1	0.08%
78	Services-Motion Picture & Video Tape Production	11	0.83%	11	0.83%
79	Services-Amusement & Recreation Services	10	0.76%	18	1.36%
80	Services-Health Services	7	0.53%	11	0.83%
81	Services-Legal Services	0	0.00%	1	0.08%
82	Services-Educational Services	2	0.15%	11	0.83%
83	Services-Social Services	4	0.30%	5	0.38%
87	Services-Engineering, Accounting, Research, Management	119	9.02%	106	8.03%
89	Services-Services, Nec	1	0.08%	2	0.15%
	Total	1320	100%	1320	100%

When examining the data of the second and third column, one immediately noticed the average (median) value of cash premia is 44.44% percent (35.86%). This is significantly higher than that paid in non-cash deals, being 24.11% (22.57%). Huang and Walkling (1987) argue that the acquisition premium paid in cash is higher due to the fact that shareholders are compensated for immediate taxation of capital gains as opposed to non-cash deals where this tax component is deferred until realisation.

### 3.2 Summary statistics of acquirer and target data

Table 3 reports the descriptive statistics of the variables used in the regression i.e. acquirer and target

characteristics, for the overall sample, as well as the relevant figures after segregation into groups according to the payment method. As expected, the pre-merger cumulative earnings management coefficient ( $EM_{Ai}$ ), proxied by abnormal current accruals, in share-for-share deals shows a mean (median) value of 9.3% (1.0%), which is significantly higher than the average (median) coefficient of cash acquirers, resting at almost zero. The observed difference between the cash and the non-cash sample is consistent with current literature on this topic as bidders offering cash lack the economic incentive to manage their earnings upwards unlike share-for-share acquirers, which are able to influence the share price used to calculate the share-exchange-ratio. (Erickson and Wang 1999, Alsharairi, 2012)

On average, acquirers paying in cash seem to be more profitable with a mean (median) pre-merger ROE of 13.54% (12.71%) compared to those which offered equity with a mean (median) ROE of 6.01% (0.13%), however they tend to have a much higher debt-to-equity ratio 35.00% (27.00%) than their non-cash peers 12.00% (0.00%). Table also reveals that acquirers structuring the deal a share-for-share transaction have a greater pre-merger toehold in their target with a mean (median) value of 4.43% (0.00%) as opposed to cash acquirer with a mean (median)

value of 1.93% (0.00%). One could again set this in context with Choudhury and Jegadesh's (1994) hypothesis and argue that acquirers try to obtain a higher pre-merger toehold as this provides them with a better negotiation position when it comes to convince management and shareholders to accept the offer. However, it contradicts Bugeja and Walter's (1995) findings since they argue and document that the acquisition of a target using cash is more feasible if the acquirer already has interest in the target.

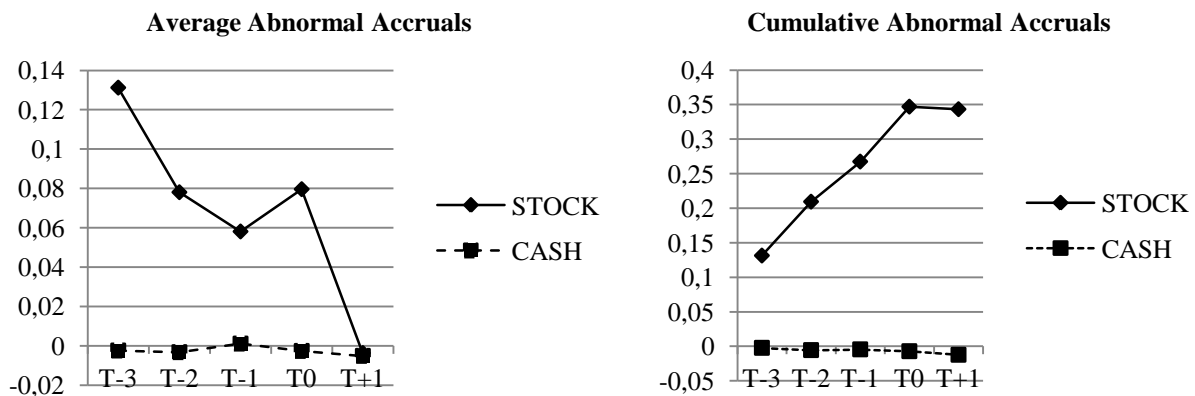
**Table 3.** Deal characteristics

This table presents the descriptive statistics of sample of acquirers used for this study. Deal value is in million US dollars. Premium represents the offered price (percent) in excess to the target's share price four weeks preceding the deal announcement. Relative sales size is the acquirer's sales to the target's sales in the last semi-annual period prior to the acquisition.

	Descriptive Statistics of Deals								
	Total (N=1,320)			Non-cash (N=147)			Cash (N=1,173)		
	Mean	Med.	STD	Mean	Med.	STD	Mean	Med.	STD
Dealvalue	401.51	23.75	2,289.41	873.72	36.96	5,228.80	342.34	23.36	1,568.91
Premium	40.19	33.05	33.65	24.11	22.57	16.13	44.44	35.86	35.69
R.Size	2.33	0.46	15.21	6.58	1.54	21.53	1.68	0.43	13.94

**Figure 1.** Average and cumulative abnormal accruals

The following figure depicts the average cumulative abnormal accruals of the last three semi-annual periods prior to the deal announcement for the segregated non-cash and cash payment samples (N=147 and 1,173, respectively). T0 denotes the semi-annual period in which the M&A deal is announced. As opposed to T0 and T-1, T-2 and T-3 are non-significant.



When examining the targets' characteristics, one immediately notices that share-for-share deals tend to be more popular for less profitable targets with higher leverage, lower growth opportunities and available free cash flow as well as higher share price and bankruptcy risk. Furthermore, these targets tend to be younger and therefore offer a shorter track record of financial performance. This seems intuitive since non-cash acquirer are able to share the acquired additional risk with the target's shareholders and are furthermore able to implicitly lower the real bid premium by conducting earnings management and hence including the risk in the takeover premium.

More descriptive statistics and the results of the several regression analyses are shown in the following sections.

#### 4 Results and analysis

The applied linear regression model assesses the relationship between non-cash acquisition premia (PR) and an acquirer's pre-merger earnings management as proxied by its abnormal current accruals (EM). Table 5a and Table 5b document the results of the regression. The explanatory power of the model is at its best Adjusted R-Squared of 0.5985 in setup (13), in which the acquirer's earnings management (EM), the acquirer's market-to-book ratio (MBACQ), the acquirer's free cash flow to total assets (FCFACQ), and the acquirer's pre-merger toehold (TOEHOLD) is controlled for.



**Table 4.** Summary statistics of acquirer and target data

This table presents the descriptive statistics of the study sample. Cumulative EM indicates the acquirer's earnings management coefficient as proxied by abnormal current accruals of the last two semi-annual periods prior to deal's announcement date. Toehold indicates the acquirer's ownership interest in the target firm before the respective transaction. Leverage controls for the acquirer's and target's debt/equity-ratio and profitability is captured by the firm's performance in the preceding semi-annual period. Bankruptcy risk is proxied by Merton's (1974) default probability.

Total Acquisitions - Firm Descriptive Statistics Summary									
	Total (N=1,320)			Non-cash (N=147)			Cash (N=1,173)		
	Mean	Median	STD	Mean	Median	STD	Mean	Median	STD
<u>Acquirer</u>									
Cumulative EM	0.010	0.000	0.286	0.093	0.010	0.514	0.000	0.000	0.242
Sales	1,643.72	221.84	4,284.93	606.13	18.28	2,046.40	1,770.23	244.10	4,466.17
Profitability	12.79	11.59	29.99	6.01	0.13	11.87	13.54	12.71	31.26
Leverage	0.33	0.26	1.61	0.12	-0.01	1.29	0.35	0.27	1.65
M/B-Ratio	2.44	2.12	3.70	2.99	1.88	4.67	2.37	2.12	3.56
FCF to Total Assets	0.05	0.06	0.09	-0.02	0.02	0.15	0.06	0.06	0.07
% CEO Shares	24.51	17.23	23.08	32.27	28.32	23.15	23.60	16.14	22.91
Toehold in %	2.19	0.00	9.20	4.43	0.00	12.35	1.93	0.00	8.71
<u>Target</u>									
Sales	128.55	4.42	1,208.21	181.86	5.13	666.72	120.34	4.31	1,271.62
Profitability	3.67	0.08	9.02	3.03	0.08	5.86	3.92	0.09	10.05
Leverage	0.23	0.01	1.50	0.97	0.27	2.65	-0.03	-0.03	0.62
M/B-Ratio	2.78	1.92	3.86	1.61	1.54	0.76	3.19	2.14	4.42
FCF to Total Assets	0.02	0.03	0.09	-0.02	0.02	0.12	0.03	0.04	0.07
EPS growth	0.19	0.03	1.13	0.14	0.04	0.90	0.20	0.03	1.20
EPS STD	1.12	0.08	3.43	0.89	0.23	1.29	1.20	0.08	3.92
Stock beta	0.92	0.84	0.49	0.99	0.93	0.48	0.89	0.81	0.49
Bankruptcy risk	71.29	53.94	65.48	74.42	50.29	81.41	70.14	55.87	59.01
Listing age	19.01	14.00	17.43	15.05	14.00	8.48	20.40	14.00	19.50

The overall results indicate a significant and positive correlation between pre-merger earnings management efforts of acquiring companies and resulting non-cash acquisition premia. The coefficient of the acquirer's pre-merger earnings management (EM) is significant at the 5 percent level and has a positive sign attached in most setups ran for non-cash deals.

Interestingly, it can be noticed that excluding the acquirer's pre-merger earnings management coefficient (EM) when replicating best setup (13) for the non-cash acquisition premium leads to a deterioration of explanatory power as well as the significance of the model. More significantly, setup (14) loses approximately 21% of its explanatory power - Adjusted R-Squared from 0.5985 in setup (13) to 0.475 in setup (14) - and loses about 26% of its significance - F-Statistic from 4.35\*\*\* in setup (13) to 3.22\*\* in setup (14).

The agency hypothesis for mergers is proxied by the acquirer's free cash flow (FCFACQ) and its market-to-book ratio (MBACQ). The coefficient estimate to measure (BMACQ) indicates a negative association; the coefficient (FCFACQ) shows a positive sign in most models. The coefficients are significant or highly significant at the 10, 5 or 1 percent confidence levels in most setups. These results are consistent with the empirical findings of previous studies arguing that managerial self-interest in mergers is a driving force of takeover premia. The observed significant and positive coefficient of the acquirer's free cash flow is consistent with Jensen's (1988) free cash flow hypothesis. Complementing this finding, (BMACQ) indicates that firms with more attractive investment opportunities and growth potential tend to pay lower non-cash acquisition premia.

As Gondhalekar et al. (2004) argue, managerial hubris could be a cause to overpay for high-risk firms in the belief that the bidding management team is able to manage the firm more effectively. This variable is measured as the standard deviation of the target's return. Consequently, a statistically significant and positive coefficient would imply that the hubris theory drives acquisition premia. This however cannot be found in any of the aforementioned models.

The control variable (TOEHOLD) documents negative coefficient estimates in setup (11) and (14). Consistent with the literature, the higher the acquirer's stake prior to the transaction, the lower the premium becomes; this is a clear sign that acquirers do exercise bargaining power in obtaining control rights if they already hold a stake in the target (Stulz 1988; Bugeja and Walter 1995; Wickramanayake and Wood 2009). These findings, however, are in sharp contrast with Choudhury and Jegadesh (1994), who argue the opposite effect due to signalling of the target's higher subjective value for the acquirer.

#### 4.1 Concurrent analysis for cash deals

As Erickson and Wang (1999) and Alshairi (2012) argue, pre-merger earnings management would only have an impact on offered acquisition premia if the M&A payment structure of the deal is a share-swap (i.e. equity is issued to pay for the transaction). In the alternative case of a 100% cash deal, they argue that the hypothesis itself implies that the coefficient for the acquirer's pre-merger earning management is shown to be irrelevant to explain the acquisition premium. The former section directly tests the first hypothesis using a non-cash sample. Running a corresponding regression analysis, using a sample of cash deals, tests the latter hypothesis. This verifies the aforementioned theory and reinforces the findings of the previous section.

Table 6a and 6b document the ordinary-least-squares regression results of the models for a concurrent sample of cash deals. As expected, the coefficient of earnings management (EM) is insignificantly different from zero. The study documents a negative and insignificant coefficient in all regressions, which is in contrast to the results reported for the non-cash deals.

In summary, the analysis of cash-only deals does not indicate any significant relation between pre-merger earnings management of the acquiring firm and the agreed upon acquisition premium. The evidence documented in this section supports and furthermore adds greater robustness to the earlier findings regarding the documented significant relation in share-swap deals.

Table 7 reveals strong evidence of relatively higher positive abnormal accruals for acquiring firms prior to the merger announcement period if they bid for a private company, suggesting that the acquirers inflate earnings within the scope of managerial discretion in an effort to increase the share price. More importantly, this is particularly evident for acquirers of private targets, which report significantly greater abnormal current accruals. This result further supports Baik et al.'s (2007) pricing-uncertainty hypothesis: by taking the relatively higher information asymmetry into account, the bidder engages more aggressively in upward earnings management to transfer parts of this risk to the target's shareholders.

Additionally, it appears that the reversal effects of prior earnings management at merger announcements are non-existent for private targets. These findings are in line with results by Louis (2004) and Eckbo (2009).

#### 5 Conclusion

This research has investigated earnings management within a structured sample of acquirers listed in Europe's biggest economies namely Germany, the UK, France, Spain and Italy. The study combines three streams of M&A relevant research to contribute to current literature – specifically to event-driven earnings management and non-cash acquisition premia.

**Table 5a.** Analysis of non-cash acquisition premia

The following table presents the results of the ordinary least squares regression for non-cash acquisition premia. EM indicates the abnormal current accruals during the last two semi-annual periods prior to the deal announcement date, DEALVALUE indicates the natural logarithm of the target's equity value, RSIZE indicates the relative sales size of the target firm, ROEACQ indicates the acquirer's return on equity ratio in the semi-annual period preceding the deal announcement, MBACQ indicates the acquirer's internally available investment opportunities as proxied by the market value of the acquirer to its book value, FCFACQ indicates the acquirer's available free cash flow, DEACQ indicates the acquirer's debt ratio before the deal, DIVERS is a dummy variable which takes 1 if the deal was within the first two SIC-code digits, CROSSB is a dummy variable which takes 1 if the is located outside the acquirers country, and 0 otherwise, TOEHOLD indicates the acquirer's pre-merger ownership interest in the target firm. Finally, ADVISOR indicates that a top-tier investment bank provided M&A advisory services for the acquiring firm. The symbols \*\*\*, \*\* and \* denote significance at the 1, 5 and 10 percent levels respectively.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
EM	20.510	18.237	15.899	25.257	37.284	34.362	9.453	8.114	5.827	-0.778	22.056	29.903	21.881
( <i>t-value</i> )	(2.49)**	(1.93)*	(1.63)	(1.88)*	(2.44)**	(2.58)**	(0.52)	(0.39)	(0.27)	(-0.04)	(1.09)	(1.17)	(2.44)**
DEALVALUE			-1.183	-1.104	0.222	-1.865	-1.312	-1.302	-1.608	-2.535	-2.012	-1.226	
( <i>t-value</i> )			(-1.02)	(-0.80)	(0.15)	(-1.20)	(-0.87)	(-0.82)	(-0.95)	(-1.58)	(-1.47)	(-0.61)	
RSIZE				0.080	0.110	0.144	-3.539	-3.383	-3.408	-2.349	-1.518	-0.028	
( <i>t-value</i> )				(0.54)	(0.76)	(1.13)	(-1.18)	(-1.02)	(-1.00)	(-0.76)	(-0.58)	(-0.01)	
ROEACQ					-0.259	-0.377	-0.568	-0.601	-0.601	-0.306	-0.241	-0.389	
( <i>t-value</i> )					(-0.49)	(-0.81)	(-1.36)	(-1.24)	(-1.21)	(-0.64)	(-0.60)	(-0.78)	
MBACQ						-0.083	-0.075	-0.075	-0.077	-0.079	-0.102	-0.118	-0.279
( <i>t-value</i> )						(-2.49)**	(-2.35)**	(-2.23)*	(-2.09)*	(-2.26)*	(-2.00)*	(-1.50)	(-2.38)**
FCFACQ							130.046	139.984	168.308	187.505	131.823	109.273	195.990
( <i>t-value</i> )							(1.90)*	(1.50)	(1.61)	(1.99)*	(1.57)	(1.12)	(3.69)***
DEACQ								-0.400	-0.512	-0.274	1.446	2.176	
( <i>t-value</i> )								(-0.17)	(-0.21)	(-0.12)	(0.70)	(0.86)	
DIVERS									-5.540	-9.767	-2.968	-1.617	
( <i>t-value</i> )									(-0.69)	(-1.29)	(-0.41)	(-0.20)	
CROSSB										11.728	9.186	10.977	
( <i>t-value</i> )										(1.74)	(1.58)	(1.59)	
TOEHOLD											-0.418	-0.544	-0.460
( <i>t-value</i> )											(-1.99)*	(-1.73)	(-2.44)**
ADVISOR												-9.852	
( <i>t-value</i> )												(-0.57)	
( <i>t-value</i> )				(0.85)									
Constant	22.237	11.488	17.449	16.430	32.794	13.851	-9.277	-10.991	-10.253	-17.979	-5.212	-17.229	-9.951
( <i>t-value</i> )	(8.94)***	(1.32)	(1.66)	(0.85)	(1.49)	(0.89)	(-0.38)	(-0.39)	(-0.36)	(-0.69)	(-0.23)	(-0.63)	(-0.69)
N	141	141	141	134	129	129	125	125	125	125	125	125	128
F-statistic	6.190	1.630	1.570	1.200	1.260	2.010	2.87	2.42	2.16	2.73	3.89	3.28	4.35
P-value	0.017**	0.151	0.164	0.345	0.330	0.098*	0.049**	0.091*	0.1349	0.090*	0.050**	0.096*	0.004***
R2	0.137	0.321	0.343	0.374	0.485	0.635	0.8006	0.8012	0.8124	0.869	0.921	0.9258	0.777
Adj. R2	0.115	0.124	0.125	0.062	0.099	0.319	0.5214	0.4698	0.4371	0.5508	0.684	0.6437	0.5985

**Table 5b.** Analysis of non-cash acquisition premia cont'd

The following table presents the results of the ordinary least squares regression for non-cash acquisition premia. EM indicates the abnormal current accruals during the last two semi-annual periods prior to the deal announcement date, MBACQ indicates the internally available investment opportunities as proxied by the market value of the acquirer to its book value, FCFACQ indicates the acquirers available free cash flow, TOEHOLD indicates the acquirer's pre-merger ownership interest in the target firm, ROETARG indicates the target's return on equity ratio in the semi-annual period preceding the deal announcement, FCFTARG indicates the target's available free cash flow, DETARG indicates the target's debt ratio before the deal, EPSG indicates the target's earnings growth rate during the last three semi-annual periods before the deal announcement, EPSSTD indicates the target's EPS standard deviation during the semi-annual accounting periods preceding the deal announcement, BETA indicates the targets stock market beta in the accounting period prior to the deal announcement, BANKRUPTCY indicates the target's probability to default on its debt as proxied by the Merton (1974) model. The symbols \*\*\*, \*\* and \* denote significance at the 1, 5 and 10 percent levels respectively.

	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)
EM ( <i>t-value</i> )		24.494 (2.79)***	38.781 (1.77)	19.216 (0.79)	16.345 (0.74)	-42.366 (-0.69)	-38.311 (-0.67)	-75.422 (-1.11)	-12.372 (-0.10)
MBACQ ( <i>t-value</i> )	-0.185 (-3.60)***								
FCFACQ ( <i>t-value</i> )	187.192 (3.09)***								
TOEHOLD ( <i>t-value</i> )	-0.342 (-1.64)	-0.588 (-2.87)***	-0.787 (-1.71)	-0.829 (-1.18)	-0.768 (-1.11)	0.177 (0.17)	-0.056 (-0.06)	0.465 (0.42)	-0.413 (-0.22)
ROETARG ( <i>t-value</i> )			2.066 (1.43)						
FCFTARG ( <i>t-value</i> )				6.035 (0.15)					
DETARG ( <i>t-value</i> )					-0.937 (-0.50)				
EPSG ( <i>t-value</i> )						-4.080 (-0.76)	-7.052 (-1.28)	-9.803 (-1.60)	-4.727 (-0.45)
EPSSTD ( <i>t-value</i> )							-4.143 (-1.27)	-2.098 (-0.55)	-3.567 (-0.71)
BETA ( <i>t-value</i> )								-13.948 (-1.02)	-16.309 (-0.99)
BANKRUPTCY ( <i>t-value</i> )									0.158 (0.67)
Constant ( <i>t-value</i> )	-20.366 (-1.3)	12.306 (1.57)	-33.672 (-0.97)	13.807 (0.96)	16.940 (1.16)	0.204 (0.00)	14.818 (0.31)	-8.034 (-0.15)	32.156 (0.37)
N	128	141	116	114	115	114	114	114	114
F-statistic	3.220	2.630	2.430	1.090	1.350	1.140	1.340	1.330	0.910
P-value	0.016**	0.019**	0.203	0.535	0.451	0.487	0.451	0.506	0.684
R2	0.689	0.467	0.870	0.784	0.832	0.719	0.817	0.880	0.917
Adj. R2	0.475	0.290	0.511	0.062	0.216	0.087	0.208	0.217	-0.085

**Table 6a.** Concurrent analysis for cash acquisition premia

The following table presents the results of the ordinary least squares regression for pure-cash acquisition premia. EM indicates the abnormal current accruals during the last two semi-annual periods prior to the deal announcement date, DEALVALUE indicates the natural logarithm of the target's equity value, RSIZE indicates the relative sales size of the target firm, ROEACQ indicates the acquirer's return on equity ratio in the semi-annual period preceding the deal announcement, MBACQ indicates the acquirer's internally available investment opportunities as proxied by the market value of the acquirer to its book value, FCFACQ indicates the acquirer's available free cash flow, DEACQ indicates the acquirer's debt ratio before the deal, DIVERS is a dummy variable which takes 1 if the deal was within the first two SIC-code digits, CROSSB is a dummy variable which takes 1 if the is located outside the acquirers country, and 0 otherwise, TOEHOLD indicates the acquirer's pre-merger ownership interest in the target firm. Finally, ADVISOR indicates that a top-tier investment bank provided M&A advisory services for the acquiring firm. The symbols \*\*\*, \*\* and \* denote significance at the 1, 5 and 10 percent levels respectively.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
EM	-0.066	-0.294	-3.764	-2.318	-7.995	-9.480	-8.081	-7.774	-6.015	-9.171	-8.178	-9.572	-10.495
<i>(t-value)</i>	<i>(-0.01)</i>	<i>(-0.02)</i>	<i>(-0.29)</i>	<i>(-0.14)</i>	<i>(-0.46)</i>	<i>(-0.54)</i>	<i>(-0.37)</i>	<i>(-0.35)</i>	<i>(-0.27)</i>	<i>(-0.44)</i>	<i>(-0.42)</i>	<i>(-0.48)</i>	<i>(-0.84)</i>
DEALVALUE			-2.289	-3.152	-2.822	-3.549	-3.301	-3.257	-3.844	-8.275	-9.476	-9.138	-4.380
<i>(t-value)</i>			<i>(-1.46)</i>	<i>(-1.81)*</i>	<i>(-1.58)</i>	<i>(-1.93)*</i>	<i>(-1.64)</i>	<i>(-1.55)</i>	<i>(-1.77)*</i>	<i>(-3.52)***</i>	<i>(-4.17)***</i>	<i>(-3.83)***</i>	<i>(-2.73)***</i>
RSIZE				-0.288	-0.237	-0.312	0.706	0.703	0.361	2.809	1.967	1.981	
<i>(t-value)</i>				<i>(-0.33)</i>	<i>(-0.27)</i>	<i>(-0.35)</i>	<i>(0.24)</i>	<i>(0.24)</i>	<i>(0.12)</i>	<i>(0.99)</i>	<i>(0.72)</i>	<i>(0.72)</i>	
ROEACQ					0.306	0.182	0.190	0.191	0.123	0.154	0.002	-0.009	
<i>(t-value)</i>					<i>(2.14)**</i>	<i>(0.87)</i>	<i>(0.86)</i>	<i>(0.86)</i>	<i>(0.53)</i>	<i>(0.72)</i>	<i>(0.01)</i>	<i>(-0.04)</i>	
MBACQ						-0.455	-0.495	-0.489	-0.418	-0.899	-0.541	-0.547	
<i>(t-value)</i>						<i>(-1.09)</i>	<i>(-0.95)</i>	<i>(-0.95)</i>	<i>(-1.10)</i>	<i>(-0.54)</i>	<i>(-0.94)</i>	<i>(-0.92)</i>	
FCFACQ							47.911	48.036	62.119	74.082	69.336	69.126	
<i>(t-value)</i>							<i>(0.81)</i>	<i>(0.81)</i>	<i>(1.03)</i>	<i>(1.32)</i>	<i>(1.29)</i>	<i>(1.28)</i>	
DEACQ								-0.411	-0.765	-2.128	1.317	1.700	
<i>(t-value)</i>								<i>(-0.08)</i>	<i>(-0.14)</i>	<i>(-0.43)</i>	<i>(0.27)</i>	<i>(0.34)</i>	
DIVERS									-9.789	-12.370	-5.708	-5.859	
<i>(t-value)</i>									<i>(-1.10)</i>	<i>(-1.49)</i>	<i>(-0.69)</i>	<i>(-0.71)</i>	
CROSSB										38.188	41.220	42.183	23.902
<i>(t-value)</i>										<i>(3.64)***</i>	<i>(4.11)***</i>	<i>(4.11)***</i>	<i>(3.52)***</i>
TOEHOLD											-1.038	-1.036	-0.632
<i>(t-value)</i>											<i>(-2.96)***</i>	<i>(-2.94)***</i>	<i>(-2.44)**</i>
ADVISOR												-4.506	
<i>(t-value)</i>												<i>(-0.50)</i>	
Constant	44.435	42.751	56.335	49.508	45.902	43.691	81.935	81.774	84.549	109.862	116.360	114.503	57.232
<i>(t-value)</i>	<i>(14.68)***</i>	<i>(1.69)*</i>	<i>(2.1)**</i>	<i>(3.02)***</i>	<i>(2.24)**</i>	<i>(2.13)**</i>	<i>(2.16)**</i>	<i>(2.14)**</i>	<i>(2.21)**</i>	<i>(3.03)***</i>	<i>(3.37)***</i>	<i>(3.28)***</i>	<i>(2.25)**</i>
N	140	140	140	119	112	108	93	93	93	93	93	93	140
F-statistic	0.000	0.960	1.070	1.250	1.600	1.910	1.71	1.58	1.56	2.48	3.07	2.9	2.340
P-value	0.996	0.484	0.390	0.265	0.103	0.039**	0.069*	0.099*	0.1016	0.003***	0.000***	0.000***	0.007***
R2	0.000	0.069	0.084	0.114	0.163	0.209	0.2352	0.2352	0.2471	0.3602	0.4279	0.4298	0.195
Adj. R2	-0.007	-0.003	0.006	0.023	0.061	0.099	0.0979	0.0862	0.0886	0.2152	0.2887	0.2814	0.112

**Table 6b.** Concurrent analysis for cash acquisition premia cont'd

The following table presents the results of the ordinary least squares regression for pure-cash acquisition premia. EM indicates the abnormal current accruals during the last two semi-annual periods prior to the deal announcement date, MBACQ indicates the internally available investment opportunities as proxied by the market value of the acquirer to its book value, FCFACQ indicates the acquirers available free cash flow, TOEHOLD indicates the acquirer's pre-merger ownership interest in the target firm, ROETARG indicates the target's return on equity ratio in the semi-annual period preceding the deal announcement, FCFTARG indicates the target's available free cash flow, DETARG indicates the target's debt ratio before the deal, EPSG indicates the target's earnings growth rate during the last three semi-annual periods before the deal announcement, EPSSTD indicates the target's EPS standard deviation during the semi-annual accounting periods preceding the deal announcement, BETA indicates the target's stock market beta in the accounting period prior to the deal announcement, BANKRUPTCY indicates the target's probability to default on its debt as proxied by the Merton (1974) model. The symbols \*\*\*, \*\* and \* denote significance at the 1, 5 and 10 percent levels respectively.

	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)
EM	-10.495	-9.572	-32.341	-40.879	27.083	26.376	-25.674	-10.720	-19.654
<i>(t-value)</i>	<i>(-0.84)</i>	<i>(-0.29)</i>	<i>(-0.97)</i>	<i>(-1.10)</i>	<i>(0.38)</i>	<i>(0.35)</i>	<i>(-0.87)</i>	<i>(-0.45)</i>	<i>(-0.68)</i>
DEALVALUE	-4.380	-8.294	-4.329	-5.965	-2.892	-3.080	-3.319	-0.608	-3.753
<i>(t-value)</i>	<i>(-2.73)***</i>	<i>(-2.02)*</i>	<i>(-1.12)</i>	<i>(-1.26)</i>	<i>(-0.43)</i>	<i>(-0.41)</i>	<i>(-0.88)</i>	<i>(-0.21)</i>	<i>(-0.99)</i>
CROSSB	23.902	40.053	28.569	38.322	28.423	28.932	9.042	3.979	25.784
<i>(t-value)</i>	<i>(3.52)***</i>	<i>(1.97)*</i>	<i>(1.66)</i>	<i>(1.62)</i>	<i>(0.92)</i>	<i>(0.87)</i>	<i>(0.67)</i>	<i>(0.38)</i>	<i>(1.17)</i>
TOEHOLD	-0.632	-0.620	-0.426	-0.476	-0.411	-0.406	-0.265	-0.199	-0.228
<i>(t-value)</i>	<i>(-2.44)**</i>	<i>(-1.31)</i>	<i>(-1.15)</i>	<i>(-1.21)</i>	<i>(-0.84)</i>	<i>(-0.79)</i>	<i>(-0.78)</i>	<i>(-0.74)</i>	<i>(-0.73)</i>
ROETARG		0.169	0.505	0.864	1.174	1.188			0.901
<i>(t-value)</i>		<i>(0.23)</i>	<i>(0.63)</i>	<i>(0.84)</i>	<i>(0.98)</i>	<i>(0.94)</i>			<i>(1.07)</i>
FCFTARG			-212.128	-205.525	-157.670	-159.333	-259.950	-212.388	-227.288
<i>(t-value)</i>			<i>(-2.68)**</i>	<i>(-2.48)**</i>	<i>(-1.11)</i>	<i>(-1.05)</i>	<i>(-3.72)***</i>	<i>(-3.84)***</i>	<i>(-3.53)***</i>
DETARG				5.962	9.933	10.160			11.602
<i>(t-value)</i>				<i>(-0.55)</i>	<i>(0.75)</i>	<i>(0.72)</i>			<i>(1.18)</i>
EPSG					-0.659	-0.578			
<i>(t-value)</i>					<i>(-0.04)</i>	<i>(-0.03)</i>			
EPSSTD						0.100			
<i>(t-value)</i>						<i>(0.07)</i>			
BETA							-9.940		-8.820
<i>(t-value)</i>							<i>(-1.15)</i>		<i>(-0.92)</i>
BANKRUPTCY								0.366	0.275
<i>(t-value)</i>								<i>(4.67)***</i>	<i>(2.49)**</i>
Constant	57.232	61.965	62.317	64.802	23.590	24.150	73.749	32.386	21.767
<i>(t-value)</i>	<i>(2.25)**</i>	<i>(1.54)</i>	<i>(1.86)*</i>	<i>(1.85)*</i>	<i>(0.59)</i>	<i>(0.57)</i>	<i>(2.42)**</i>	<i>(1.25)</i>	<i>(0.85)</i>
N	140	42	37	35	27	27	36	39	32
F-statistic	2.340	1.580	2.300	2.100	0.780	0.670	2.640	5.330	4.100
P-value	0.007***	0.152	0.039**	0.062*	0.675	0.770	0.021**	0.000***	0.004***
R2	0.195	0.396	0.565	0.566	0.477	0.477	0.610	0.735	0.794
Adj. R2	0.112	0.146	0.319	0.297	-0.134	-0.237	0.379	0.597	0.600

**Table 7.** Earnings management: private and public targets

C.EM is the cumulative earnings management figure for the two semi-annual periods preceding the deal announcement as proxied by the abnormal current accrual coefficient. EM (t-1) represents the abnormal current accruals one period before the deal announcement. The symbols \*\*\*, \*\* and \* denote significance at the 1, 5 and 10 percent levels respectively.

	Total (N=141)			Private (N=84)			Public (N=57)		
	Mean	Med.	STD	Mean	Med.	STD	Mean	Med.	STD
C.EM	0.0831	0.0099	0.5080	0.0998	0.0017	0.6229	0.0586	0.0252	0.2631
(t-value)	(1.96)	**		(1.47)	*		(1.68)	**	
EM (t-1)	0.0581	0.0028	0.3629	0.1349	0.0001	1.4475	0.0017	-0.0134	0.1858
(t-value)	(1.94)	**		(1.58)	*		(0.07)		

The paper offers answers to three major questions. The first question is whether European acquirers near M&As manage their earnings and whether this practice changes in accordance with the listing status of the target firm. The second research question aims to offer an answer to whether this pre-merger earnings management has a significant influence on the non-cash acquisition premium offered.

From a methodological point of view, this study employs a cross-sectional model of accruals to detect the level of abnormal accruals in European acquiring firms at the time of estimation. The results indicate that the average stock-for-stock acquirer engages in significant and positive earnings management prior to M&A deal announcements. Furthermore, European acquirers feature roughly the same characteristics as their US peers – a significant and positive earnings management can be detected up to half a year before announcement of the transaction. Moreover, this research offers an answer to a research question raised in Alsharairi (2012) by revealing that firms that acquire private targets differ significantly from the ones acquiring public ones. Due to the different levels of information asymmetry, acquirers of private companies engage in more aggressive upwards earnings management. This fact suggests that acquiring firms let target shareholders implicitly participate in bearing the post-merger risks.

Furthermore, the results documented in this paper suggest that a very significant and robust positive relationship exists between the acquirer's earnings management prior to negotiating a deal and the agreed upon non-cash acquisition premium – confirming the hypotheses constructed. This evidence is obtained from a sample of non-cash M&A deals, which holds under different sets of control variables. A concurrent analysis of cash transactions documents no evidence for a possible impact of the earnings management coefficient on the cash acquisition premium, as the acquirer's management team lacks the motivation to inflate their earnings.

These results can be interpreted in two ways. On the one hand, it can be argued that well-informed target shareholders uncover the pre-merger earnings inflation and the results indicate that they demand a higher premium as compensation for the potential overvaluation of the bidder's market valuation. As Alsharairi (2012) argues, this procedure helps to mitigate a possible adverse selection problem. On the

other hand, it can be seen as a procedure that implicitly enables higher bids such that it may appear to the target shareholders that a high premium is being offered, but in effect it is done at no extra real cost. In summary, a higher (nominal) premium can be offered to target shareholders or a higher (nominal) premium than the one of competitive bidders can be offered in order to successfully complete the M&A deal. Besides this, the study further documents a highly significant and negative relationship between non-cash acquisition premia and the acquirer's pre-merger toehold investment and free cash flow as well as a significant and negative relation for the acquirer's market-to-book-ratio as a proxy for internal growth opportunities. The results reinforce the commonly created hypothesis that managers use equity to pay for transactions when their stock is overvalued. Furthermore, it can even be argued that managers artificially overvalue their own stock before acquisitions in order to lower the real takeover premium paid.

In terms of potential limitations, concerns regarding data, generalizability and scope as well as heterogeneous reporting standards and ongoing changes in accounting principles besides intervening merger waves can be outlined herein. This study uses a sample of M&A transactions comprising companies of the major five European economies and, hence, extending generalisations to other countries should be done with extra care. Further, it is noteworthy to remember that countries throughout Europe still feature rather heterogeneous corporate reporting standards – the lack of appropriate quarterly accounting data for most countries may be noted here. Moreover, further research is encouraged to look into the relationship between earnings management and bidder characteristics besides payment structure and target listing status.

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