VNIVERSITAT DE VALÈNCIA

Facultat d' Economia

DEPARTAMENT DE COMPTABILITAT

DOCTORADO EN CONTABILIDAD Y FINANZAS CORPORATIVAS (R.D. 99/2011)

TESIS DOCTORAL

THREE ESSAYS ON MERGERS AND ACQUISITIONS AND EARNINGS MANAGEMENT IN EUROPE

DOCTORANDO:

Héctor Fabio Perafán Peña

DIRECTORAS:

Dra. Begoña Giner Inchausti

Dra. Belén Gill de Albornoz Noguer

Valencia, mayo de 2020

AGRADECIMIENTOS

Quiero expresar mis agradecimientos a todas aquellas personas que me motivaron y apoyaron para continuar con mi formación académica. De un modo u otro, ustedes han sido parte del desarrollo de este trabajo, así como de su finalización.

Deseo empezar por agradecer a mis directoras de tesis, Begoña Giner Inchausti y Belén Gill de Albornoz Noguer. Su apoyo, sus sabios consejos, así como la dedicación y la rigurosidad de su tutela, han sido fundamentales para culminar este trabajo, que, como hemos reflexionado varias veces, es tan solo el inicio de mi desarrollo profesional como investigador.

También quiero agradecer a mi familia. A mis padres, a mi hermana, a mis abuelos, a mis tíos y a mis primos, gracias por todo su cariño, su apoyo y por velar siempre por mi bienestar. Mi familia siempre ha sido un eje central para mi desarrollo personal y a ellos les estoy eternamente agradecido porque la perseverancia y la dedicación que me han inculcado me permiten concluir con éxito este proyecto. A mi prometida, le agradezco su amor, su paciencia y su apoyo en todo este proceso.

Asimismo, agradezco al Departamento de Contabilidad de la Universidad de Valencia, así como a su programa de Doctorado, por haberme aportado grandes enseñanzas y saberes acerca de la investigación en Contabilidad. A mis compañeros de doctorado, gracias por su amistad y por hacer de mis estancias en España momentos que atesoraré en mi memoria.

Mi agradecimiento también a mis colegas y amigos de la Universidad Icesi, así como al Departamento de Estudios Contables y Financieros y a la Facultad de Ciencias Administrativas y Económicas por la confianza depositada en mí. En especial, al decano anterior Héctor Ochoa y a mi jefe Julián Benavides por haber creído en este proyecto y apoyar la realización de mis estudios doctorales. A la Fundación Carolina, gracias por toda su valiosa ayuda a través de la beca para estudios doctorales en España (convocatoria año 2017). Al Instituto de Contabilidad y Auditoría de la Universidad de Humboldt, gracias por brindarme todo su soporte durante mi estancia de investigación en Berlín.

INDEX – CONTENT

INDEX OF FIGURES

INDEX OF TABLES

LIST OF ABBREVIATIONS

AR	Accounts Receivable
CEO	Chief Executive Officer
CFO	Cash Flow from Operations
DA	Discretionary Accruals
EC	European Commission
EM	Earnings Management
EQ	Earnings Quality
ETD	European Takeover Directive
EU	European Union
FRQ	Financial Reporting Quality
GDP	Gross Domestic Product
IFRS	International Financial Reporting Standards
M&A	Mergers and acquisitions
MTB	Market To Book
OLS	Ordinary Least Squares
P/E	Price to Earnings
PPE	Property, Plant and Equipment
PROD	Level of Production: Cost of Goods Sold plus the change in Inventory
R&D	Research and Development
RA	Real activities manipulation
RL	Rule of Law index of WGI
ROA	Return on Assets
ROE	Return on Equity
SIC	Standard Industrial Classification
TA	Total Accruals
UK	United Kingdom
US	United States of America
USA	United States of America
USD	United States Dollar
VIF	Variance Inflation Factor
WGI	Worldwide Governance Indicators

INTRODUCCIÓN

Las fusiones y adquisiciones (F&A) son una de las decisiones más transcendentales que toma una empresa en materia de inversión, con consecuencias para sus empleados, sus accionistas y la economía en general (Martin y Shalev, 2017; Raman, Shivakumar y Tamayo, 2013). Un informe reciente revela que la inversión en F&A a nivel global alcanzó la cuantía de 4,1 billones de dólares (USD) en 2018 (PwC, 2019), lo que representa el 4,8% del producto interno bruto (PIB) mundial.[1]

El mercado de F&A de Europa llama la atención por su tamaño y dispersión geográfica. Respecto a su tamaño, el volumen de F&A en Europa es similar al de los EEUU, que es el mercado dominante a nivel global; pero a diferencia de ese mercado, en Europa conviven varias jurisdicciones no sólo con distintos mercados financieros, sino con diferentes contextos institucionales y regulatorios, lo que le convierte en un escenario muy rico y complejo para la investigación académica (Faccio y Masulis, 2005; Moschieri, Ragozzino y Campa, 2014). Es por ello que la presente tesis doctoral se centra en las F&A celebradas en Europa, y puesto que se defiende en el marco del Programa de Doctorado de Contabilidad y Finanzas Corporativas, en ella se contempla el papel de la información financiera en el planteamiento de este tipo de operaciones, lo que sin duda condiciona su éxito o fracaso.

Sin duda, un aspecto clave a considerar es si las F&A se tornan o no exitosas. Desde la perspectiva de los adquirientes, una operación se considera exitosa cuando la disminución en costes y/o el aumento de ingresos derivados de la combinación de negocios compensan los costes de adquisición. Sin embargo, esto no siempre es así, y, según algunos estudios, más de la mitad de las F&A termina fracasando, lo cual conlleva importantes pérdidas para los accionistas de la empresa adquiriente (Kumar, 2019; Nguyen y Kleiner, 2003; PwC, 2016; Riad, 2007). Entre las razones que subyacen a este fenómeno, la literatura indica que los adquirentes frecuentemente sobrevaloran las sinergias y ganancias derivadas de las F&A, lo que se materializa en un pago excesivo por la empresa objetivo.

Así, Martynova y Renneboog (2008) observan que los rendimientos bursátiles en torno a los anuncios de F&A son positivos para las empresas adquiridas, pero en el mejor de los casos insignificantes para las adquirentes; y estudios como el de Guest, Bild y Runsten (2010) o el de Tuch y O'Sullivan (2007) indican que las adquirentes tienen rendimientos negativos en el largo plazo.

Son varios los casos anecdóticos que ilustran este escenario. La adquisición de la empresa estadounidense *Monsanto* (objetivo), por parte de la alemana *Bayer* (adquiriente), es uno de ellos. Las negociaciones entre ambas partes llevaron a la firma de un acuerdo por 63.000 millones de dólares

[1] Esto representa 85.91 trillones de dólares (USD), según los datos del Banco Mundial. Fuente: https://data.worldbank.org/indicator/NY.GDP.MKTP.CD?end=2018&locations=1W&start=1960.

(USD) en 2018, en que el *Bayer* adquirió las acciones de *Monsanto* pagando una prima del 44% sobre su valor de mercado.[2] Más tarde, algunos han afirmado que este es el peor acuerdo corporativo en la historia reciente,[3] pues Bayer podría tener que pagar millones de dólares en compensaciones debido a las acusaciones de que el glifosato, un principio activo de uno de los herbicidas estrella de *Monsanto* (*Roundup*), pudo provocar el cáncer en algunos demandantes. Sin duda, este caso refleja lo expuesto con anterioridad. Probablemente la empresa adquiriente, *Bayer*, subestimó los riesgos derivados de la adquisición de la empresa objetivo, *Monsanto*; o, en otras palabras, sobreestimó su valor.

Cuando se sobrevalora la empresa objetivo, sus accionistas reciben un pago que incluye una prima sobre el valor de mercado de sus acciones, beneficiándose de la operación. Sin embargo, los accionistas de la empresa adquiriente experimentan cuantiosas pérdidas en el valor de sus acciones años después de la transacción, como por ejemplo denuncia la prensa especializada en el caso *Bayer-Monsato*.[4]

Lo anterior contrasta con las considerables inversiones en tiempo y dinero que realizan normalmente las empresas adquirientes al analizar la operación, en el llamado proceso de *due diligence* (o de diligencia debida). El objetivo de este proceso es determinar el valor de la empresa objetivo teniendo en cuenta los riesgos y beneficios asociados a la transacción, antes de que la operación se lleve a cabo (Ahammad y Glaister, 2013; Angwin, 2001; McNichols y Stubben, 2015; Very y Schweiger, 2001). Wangerin (2019) indica que este proceso tiene como objetivo reducir la desventaja informativa que tienen los adquirientes en las F&A, ya que desconocen información crucial sobre las compañías objetivo, tales como sus riesgos, recursos económicos y obligaciones. Para ello, según Angwin (2001), el *due diligence* supone una revisión detallada de las empresas objetivo a través del análisis de su información financiera.[5] Sin embargo, parece que el resultado de este proceso no siempre es satisfactorio, lo que explicaría casos como el descrito con anterioridad. En definitiva, uno de los mayores obstáculos con los que se enfrenta la empresa adquirente es la recopilación y análisis de la información concerniente a las finanzas de la compañía objetivo, como los ingresos, costes,

[2] "*Bayer urged by Monsanto shareholders to raise bid further," Financial Times*, *6* septiembre 2016. Fuente: https://www.ft.com/content/9219b46c-7422-11e6-b60a-de4532d5ea35

[3] "*Bayer's acquisition of Monsanto could easily turn out to be the worst deal ever," The Telegraph,* 15 mayo 2019, Fuente: https://www.telegraph.co.uk/business/2019/05/15/bayers-acquisition-monsanto-could-easily-turn-worst-deal-ever/; "*How Bayer-Monsanto Became One of the Worst Corporate Deals—in 12 Charts". The Wall Street Journal*, 28 agosto, 2019. Fuente: https://www.wsj.com/articles/how-bayer-monsanto-became-one-of-the-worst-corporate-dealsin-12-charts-11567001577

[4] "*Bayer shares sag after U.S. jury verdict in Roundup cancer trial*", *Reuters, 28* marzo 2019. Fuente: https://www.reuters.com/article/us-bayer-glyphosate-lawsuit/bayer-shares-sag-after-us-jury-verdict-in-roundup-cancer-trial-idUSKCN1R917E; "*Bayer Takes the Hit After Monsanto Loses Roundup Cancer Trial*", *Bloomberg*, 13 agosto 2018. Fuente: https://www.bloomberg.com/news/articles/2018-08-13/bayer-drops-after-monsanto-loses-verdict-in-roundup-cancer-trial

[5] Aquí se incluye la información de los estados financieros, políticas contables, valor de los activos, sistemas de información, posición frente a la industria y competidores directos, así como obligaciones legales y fiscales.

necesidades de inversión, activos, y pasivos (Very y Schweiger, 2001).

Un ejemplo de fracaso claro del *due diligence* lo tenemos en la adquisición de la británica *Autonomy* por parte de la americana *HP*. En 2011, *HP* invirtió 11.100 millones de dólares en el acuerdo, pagando una prima del 64% por *Autonomy* y sólo un año después registró una pérdida por deterioro de 8.800 millones de dólares derivada de esa adquisición. Posteriormente, *HP* alegó que fue engañada por la gerencia de *Autonomy* porque su información financiera había sido deliberadamente manipulada antes del acuerdo. De hecho, *HP* inició acciones legales contra varios altos mandos de *Autonomy* - incluido su ex director y cofundador Mike Lynch - ante las autoridades en EEUU y Reino Unido. Todo esto ocurrió pese a que *HP* realizó un exhaustivo proceso de análisis previo a la operación que contó con un nutrido grupo de abogados, expertos contables y banca de inversión, entre los que figuran nombres de prestigio como *KPMG*, *Barclays* y *Perella Weinberg*.[6]

Resulta por tanto evidente la importancia que tiene la información financiera de las empresas objetivo para los adquirientes en las F&A. Si esta información es de baja calidad ello puede conducir a resultados no deseados para los adquirientes, incluso si se hace un proceso de análisis previo exhaustivo, como sucedió en el caso *HP-Autonomy*.

En este contexto, es importante considerar que las prácticas de manipulación, o gestión, del resultado contable por parte de las empresas son práctica habitual. En efecto las empresas utilizan su información financiera para competir por los recursos financieros provenientes del mercado de capitales (Bagnoli y Watts, 2000). Si bien es cierto que el que el caso de *HP-Autonomy* constituye un ejemplo extremo de posible fraude contable, es importante tener en cuenta que la gestión del resultado no necesariamente implica que se violen las normas contables. Por el contrario, habitualmente se entiende que son prácticas realizadas en el marco de la normativa contable establecida, ya que en la medida en que su aplicación requiere utilizar el juicio profesional, existe discrecionalidad a la hora de preparar la información financiera (Dechow y Skinner, 2000; Healy y Wahlen, 1999; Walker, 2013).

Por lo tanto, teniendo en cuenta que la gestión del resultado contable es una práctica común en el mundo corporativo, puede ocurrir que la información financiera de las empresas objetivo previa a las

[6] "*How Autonomy Fooled Hewlett-Packard*", *Fortune*, 15 diciembre 2016. Fuente: http://fortune.com/2016/12/14/hewlett-packard-autonomy/; "*Hewlett-Packard ignored red flags ahead of Autonomy misstep*", *The Guardian*, 21 noviembre 2012. Fuente: https://www.theguardian.com/commentisfree/2012/nov/21/hewlett-packard-red-flags-autonomy; "*How a desperate HP suspended disbelief for Autonomy deal*", *Reuters*, 30 noviembre, 2012. Fuente: http://www.reuters.com/article/2012/11/30/us-hp-autonomy-idUSBRE8AT09X20121130; "*UK entrepreneur to face charges in US over Hewlett-Packard takeover*", *The Guardian*, 30 noviembre 2018. Fuente: https://www.theguardian.com/business/2018/nov/30/autonomy-co-founder-to-face-us-files-criminal-charges-mike-lynch-hewlett-packard

F&A sea de mala calidad, y ello podría afectar negativamente a las adquirientes. Esta tesis se enfoca en este escenario y propone el siguiente objetivo general: analizar si las empresas adquirientes tienen en cuenta la gestión del resultado contable de las compañías objetivo en la negociación de los términos de las F&A, en Europa.

Asimismo, se proponen los siguientes objetivos específicos:

1. Analizar el contexto de las F&A en Europa.
2. Analizar la relación entre la gestión del resultado contable de la empresa objetivo y la prima ofrecida por la adquiriente en el anuncio de la F&A.
3. Analizar la relación entre la gestión del resultado contable de la empresa objetivo y el porcentaje de propiedad que pretende obtener la adquirente.

Esta tesis se centra en el mercado europeo de F&A. A diferencia de la mayoría de estudios previos que se centran en un único país, como EEUU o Reino Unido, Europa es un contexto interesante para la investigación académica, pues, como se ha indicado antes, es una región en la que confluyen varios entornos legales y mercados financieros. Asimismo, en esta zona geográfica se han puesto en marcha distintas iniciativas normativas para propiciar la integración económica (Faccio y Masulis, 2005; Moschieri y Campa, 2009, 2014). Por ello, como primer objetivo específico, en la tesis se realiza un análisis de las características de los anuncios de F&A en Europa, a fin de entender mejor sus dinámicas particulares. Una vez se examinan las idiosincrasias de estas transacciones en Europa, los objetivos segundo y tercero de la tesis plantean examinar cómo las empresas adquirientes incorporan el resultado contable de la objetivo a la hora de definir las primas y el porcentaje de propiedad a adquirir.

Esta investigación se encuadra en la literatura reciente que estudia el impacto que tiene la calidad de la información financiera de las empresas objetivo en los procesos de F&A. Algunos trabajos indican que, frente a la baja calidad de la información financiera de estas empresas, los adquirientes optan por retirar los anuncios de F&A, usar pagos contingentes, como por ejemplo el intercambio de acciones, o disminuir el precio de adquisición de sus ofertas iniciales (Marquardt y Zur, 2015; Raman y otros, 2013; Skaife y Wangerin, 2013). No obstante, hasta la fecha, las investigaciones empíricas de este tipo son escasas, por lo que se sabe muy poco sobre cómo influye la calidad de la información financiera de la empresa objetivo en las negociaciones que anteceden las F&A (Anagnostopoulou y Tsekrekos, 2015; Campa y Hajbaba, 2016); lo cual contrasta con la importancia que tiene esta información para los adquirientes en el proceso de *due diligence*. Esta tesis aporta evidencia adicional a esta línea de investigación en ciernes.

Después de esta introducción, los siguientes tres capítulos que componen la tesis abordan cada uno de los objetivos específicos. Así, el capítulo 1 presenta un análisis descriptivo de las características y peculiaridades de los anuncios de F&A en Europa, tomando como referencia el mercado de EEUU. En el capítulo 2 se estudia la asociación que existe entre las primas ofrecidas por las empresas adquirientes y la gestión del resultado contable de las empresas objetivo, teniendo en cuenta si el hecho de que objetivo y adquiriente se encuentren en la misma industria afecta dicha relación. Por su parte, el capítulo 3 explora la relación entre el nivel de propiedad que buscan obtener los adquirientes y la gestión del resultado contable de los objetivos. Finalmente, el último capítulo expone las conclusiones de los tres capítulos, así como las limitaciones de la investigación realizada y las futuras líneas de investigación.

Referencias

Ahammad, M. F., & Glaister, K. W. (2013). The pre-acquisition evaluation of target firms and cross border acquisition performance. *International Business Review*, *22*(5), 894–904. https://doi.org/10.1016/j.ibusrev.2013.01.001

Anagnostopoulou, S. C., & Tsekrekos, A. E. (2015). Earnings management in firms seeking to be acquired. *The British Accounting Review*, *47*(4), 351–375. https://doi.org/10.1016/j.bar.2014.07.001

Angwin, D. (2001). Mergers and acquisitions across European borders: National perspectives on preacquisition due diligence and the use of professional advisers. *Journal of World Business*, *36*(1), 32–57. https://doi.org/10.1016/S1090-9516(00)00053-5

Bagnoli, M., & Watts, S. G. (2000). The Effect of Relative Performance Evaluation on Earnings Management: A Game-theoretic Approach. *Journal of Accounting and Public Policy*, *19*(December), 377–397. https://doi.org/https://doi.org/10.1016/S0278-4254(00)00005-3

Campa, D., & Hajbaba, A. (2016). Do targets grab the cash in takeovers: The role of earnings management. *International Review of Financial Analysis*, *44*, 56–64. https://doi.org/10.1016/j.irfa.2016.01.008

Dechow, P. M., & Skinner, D. J. (2000). Earnings Management: Reconciling the Views of Accounting Academics, Practitioners, and Regulators. *Accounting Horizons*, *14*(2), 235–250. https://doi.org/10.2308/acch.2000.14.2.235

Faccio, M., & Masulis, R. W. (2005). The Choice of Payment Method in European Mergers and Acquisitions. *The Journal of Finance*, *60*(3), 1345–1388.

Guest, P. M., Bild, M., & Runsten, M. (2010). The effect of takeovers on the fundamental value of acquirers. *Accounting and Business Research*, *40*(4), 333–352. https://doi.org/10.1080/00014788.2010.9663409

Healy, P. M., & Wahlen, J. M. (1999). A Review of the Earnings Management Literature and Its Implications for Standard Setting. *Accounting Horizons*, *13*(4), 365–383. https://doi.org/10.2308/acch.1999.13.4.365

Kumar, B. R. (2019). Mergers and Acquisitions. In *Wealth Creation in the World's Largest Mergers and Acquisitions: Integrated Case Studies* (pp. 1–15). https://doi.org/10.1007/978-3-030-02363-8_1

Marquardt, C., & Zur, E. (2015). The Role of Accounting Quality in the M&A Market. *Management Science*, *61*(3), 604–623. https://doi.org/10.1287/mnsc.2013.1873

Martin, X., & Shalev, R. (2017). Target Firm-Specific Information and Acquisition Efficiency. *Management Science*, *63*(3), 672–690. https://doi.org/10.1287/mnsc.2015.2371

Martynova, M., & Renneboog, L. (2008). A century of corporate takeovers: What have we learned and where do we stand? *Journal of Banking and Finance*, *32*(10), 2148–2177. https://doi.org/10.1016/j.jbankfin.2007.12.038

McNichols, M. F., & Stubben, S. R. (2015). The effect of target-firm accounting quality on valuation in acquisitions. *Review of Accounting Studies*, *20*(1), 110–140. https://doi.org/10.1007/s11142-014-9283-x

Moschieri, C., & Campa, J. M. (2009). The European M&A Industry: A Market in the Process of Construction. *Academy of Management Perspectives*, *23*(4), 71–87. https://doi.org/10.5465/AMP.2009.45590141

Moschieri, C., & Campa, J. M. (2014). New trends in mergers and acquisitions: Idiosyncrasies of the European market. *Journal of Business Research*, *67*(7), 1478–1485. https://doi.org/10.1016/j.jbusres.2013.07.018

Moschieri, C., Ragozzino, R., & Campa, J. M. (2014). Does Regional Integration Change the Effects

of Country-Level Institutional Barriers on M&A? The Case of the European Union. *Management International Review*, *54*(6), 853–877. https://doi.org/10.1007/s11575-014-0206-7

Nguyen, H., & Kleiner, B. H. (2003). The effective management of mergers. *Leadership & Organization Development Journal*, *24*(8), 447–454. https://doi.org/10.1108/01437730310505876

PwC. (2016). *Mergers & Acquisitions*. Retrieved from https://www.pwc.nl/nl/assets/documents/pwc-mergers-acquisitions.pdf

Raman, K., Shivakumar, L., & Tamayo, A. (2013). Target's earnings quality and bidders' takeover decisions. *Review of Accounting Studies*, *18*(4), 1050–1087. https://doi.org/10.1007/s11142-013-9224-0

Riad, S. (2007). Of mergers and cultures: "What happened to shared values and joint assumptions?" *Journal of Organizational Change Management*, *20*(1), 26–43. https://doi.org/10.1108/09534810710715261

Skaife, H. A., & Wangerin, D. D. (2013). Target financial reporting quality and M&A deals that go bust. *Contemporary Accounting Research*, *30*(2), 719–749. https://doi.org/10.1111/j.1911-3846.2012.01172.x

Tuch, C., & O'Sullivan, N. (2007). The impact of acquisitions on firm performance: A review of the evidence. *International Journal of Management Reviews*, *9*(2), 141–170. https://doi.org/10.1111/j.1468-2370.2007.00206.x

Very, P., & Schweiger, D. M. (2001). The acquisition process as a learning process: Evidence from a study of critical problems and solutions in domestic and cross-border deals. *Journal of World Business*, *36*(1), 11–31. https://doi.org/10.1016/S1090-9516(00)00052-3

Walker, M. (2013). How far can we trust earnings numbers? What research tells us about earnings management. *Accounting and Business Research*, *43*(4), 445–481. https://doi.org/10.1080/00014788.2013.785823

Wangerin, D. (2019). M&A Due Diligence, Post-Acquisition Performance, and Financial Reporting for Business Combinations. *Contemporary Accounting Research*, *36*(4), 2344–2378. https://doi.org/10.1111/1911-3846.12520

CHAPTER 1. THE IDIOSYNCRASIES OF THE EUROPEAN M&A MARKET

1.1. Introduction

Mergers and acquisitions (M&A) are one of the most crucial investment decisions that a company makes, with consequences for its employees, shareholders, and the economy in general (Martin & Shalev, 2017; Raman, Shivakumar, & Tamayo, 2013). A recent report reveals that global M&A reached investment for 4.1 trillion dollars (USD) in 2018 (PwC, 2019), which represents 4.8% of the world gross domestic product (GDP).[7] The European market of M&A has a prominent role in terms of its size and geographical dispersion since its volume is similar to the one in the USA, which is the dominant market worldwide. In contrast, Europe comprises several jurisdictions with different legal systems and financial markets, which makes this setting attractive from an academic perspective (Faccio & Masulis, 2005; Moschieri & Campa, 2014; Moschieri, Ragozzino, & Campa, 2014).

This paper presents a descriptive analysis of the European M&A market. Firstly, we discuss the nature of M&A, what factors motivate these transactions, and how firms involved carry out the due diligence process that takes part before completing the deal. Secondly, we analyze the evolution of the European market over time and its main characteristics. Over the analysis, we use the US market as a reference, to identify similarities and divergences between both markets.

The study is based on a sample of 29,317 M&A announcements between companies located in the group of 28 EU members during the period 1990-2017. The analysis over time reveals that there are some similarities between the European and US markets. For example, activity in both markets is grouped in the form of waves —characterized by the constant growth of transactions up to a maximum—, followed by a decrease of similar magnitude. Peaks of activity overlap with moments of high stress for stock markets, such as the ".com" (1999-2000) and the "subprime" mortgage crisis (2007-2008). After 2009, there is a recovery of the activity in both markets, suggesting the presence of a new wave.

The analysis reveals that the vast majority of European M&A are completed, paid in cash and take place between companies located in the same country; hostile deals are relatively scarce, as well as competitive offers (i.e., deals with two or more bidders). Besides, M&A between companies in the same industry (intra-industry) are more common than those between companies in different industries (inter-industry), with a relation of 60/40. Usually, acquirers have a zero, or a minority stake in the best case, in the target company before the M&A announcement, but seek to acquire the control. Moreover,

[7] This is 85.91 USD trillion, according to World Bank data. Source: https://data.worldbank.org/indicator/NY.GDP.MKTP.CD?end=2018&locations=1W&start=1960. Taken on 2/22/2020.

the vast majority of the acquiring firms are public, while the target firms are mainly private.

Overall, the evidence presented in this study is consistent with the results of prior research (Martynova & Renneboog 2011, Moschieri & Campa 2009, 2014), which looks at different periods, countries, and characteristics of M&A in Europe. This paper is structured into seven sections. The following section provides a theoretical description of M&A, the motivations behind them, and the due diligence procedure that takes place in these operations. The third section describes the sample and presents an analysis of the time trends in the market activity. Section four details the analysis of the characteristics of M&A. Finally, section five summarizes and discusses the results of the research, and section six concludes.

1.2. Motivations for M&A and the due diligence process

The term M&A includes two types of operations, mergers and acquisitions, in which two (or more) companies end being just one larger entity. A merger happens when, as a consequence of the combination of the two companies, both cease operations when the deal completes, and a new one emerges. An acquisition, or takeover, is a more general type of transaction, in which the acquirer buys the target, and the target might disappear or not. Despite the differences, both terms are used interchangeably in practice (Gaughan, 2017; Kumar, 2019).

Several factors explain why M&A occur. Haleblian, Devers, McNamara, Carpenter, and Davison (2009) classify these factors into four categories: 1) value creation, 2) managerial self-interest, 3) environmental factors, and 4) firm characteristics. The first category includes motivations that seek to maximize the shareholders' wealth, such as increasing the market power, improving efficiency, or disciplining non-efficient managers, which implies that the targets have deficient management teams that are removed after completing the business combination. However, M&A do not always pursue to create wealth for shareholders. On the contrary, the deals included in the second category serve management's self-interests, such as compensation and hubris, and likely end up destroying value.[8] The third category refers to environmental factors such as uncertainty and regulation. Companies are more prone to carry out M&A as a strategy to cope with uncertainty and regulatory changes. Finally, the fourth category refers to the characteristics of companies that increase their propensity to

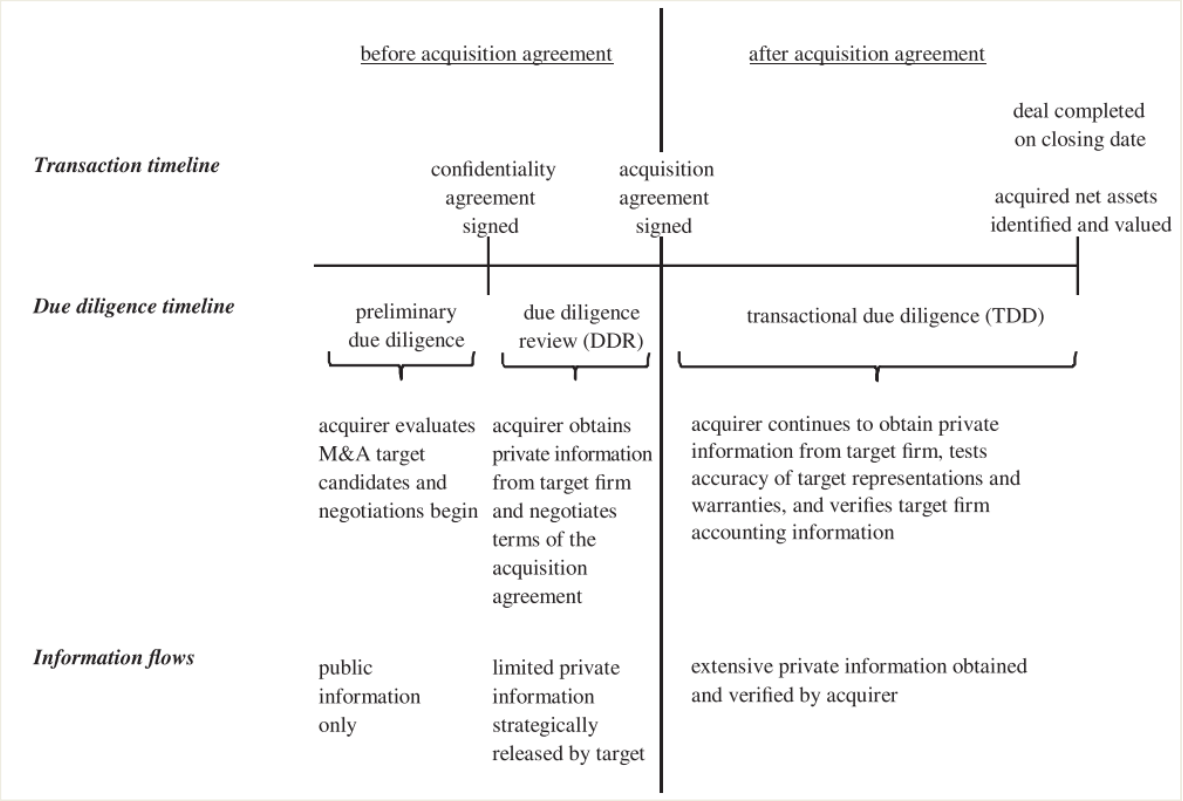
[8] In the case of compensation, managers benefit from the larger size of the resulting company, since normally their compensation also increases. Regarding hubris, it is argued that the managers' over-confidence increases their propensity to perform M&A, since controlling a larger entity increases their egos.

participate in M&A, such as management experience in M&A and company strategy.

M&A are complex transactions where the information about the target is limited. Thus, decisions are made after a long negotiation process. Negotiations depend on several factors, such as the number of potential acquirers, the level of confidentiality in the negotiations, and the public or private status of the target company (Vernimmen, Le Fur, Dallochio, Salvi, & Quiry, 2017). In general, acquirers face an information disadvantage in valuing targets, which have privileged information about their economic resources and obligations. Consequently, acquirers should cope with adverse selection issues while also facing uncertainty about future cash flows from the deal (Wangerin, 2019). Because of this, the acquirers carry out a due diligence process, where they conduct a comprehensive review of the target. This review is focused on areas such as financial performance, with particular attention to the analysis of financial statements and accounting policies, the value of assets, information systems, industry and competition, as well as legal and tax issues. This process aims to give the acquirer a complete understanding of the value and risks associated with the target (Angwin, 2001). One major challenge for the acquirers in this process involves the collection and analysis of reliable information about targets such as revenues, costs, investment needs, assets, and liabilities (Very & Schweiger, 2001).

Figure 1 summarizes the due diligence process, as in Wangerin (2019). In brief, according to this author, the process begins when the acquirer undertakes the search for potential targets. The next steps include the signing of the confidentiality agreement and the acquisition agreement, and the process ends when the M&A is completed or withdrawn. It should be noted that before the acquisition agreement is signed, the due diligence review is done with the company's public information, which includes the financial statements and some private information delivered by the target after signing the confidentiality agreement (preliminary due diligence). However, in general, the access to private information about the target is limited because target firms seek to retain valuable competitive information, as well as to maximize the purchase price and the likelihood of signing the acquisition agreement. The two parties negotiate the terms of the transaction, such as the value to be paid and the method of payment, until they sign the acquisition agreement. After that, the transaction is announced to the general public, and the acquirer enters into the final stage of the due diligence, thus having access to more private information about the target. At this stage, the acquirer is allowed to carry out a further complete review process of the target than before, eventually leading to the completion or withdrawal of the agreement (Marquardt & Zur, 2015; Wangerin, 2019).

Figure 1. The due diligence process in M&A



Source**:** The M&A due diligence process (Wangerin, 2019).

This work focuses on M&A announcements. This choice is motivated by the fact that the next chapters of the thesis aim to analyze how bidders include the manipulation of the target's financial reports into the deal negotiations, and at this stage of the due diligence, the targets' financial reports are essential to acquirers. Indeed, Lajoux and Elson (2010) suggest that much of the valuation made by acquirers, when M&A become publicly announced, is based on public information obtained from the target's financial statements.[9]

1.3. Sample and time trends of the market activity

The sample of this study is based on the deal announcements available in the Thomson ONE Banker's M&A module for the period 1990 to 2017,[10] which includes completed and withdrawn operations. Following related studies (e.g., Marquardt & Zur, 2015; McNichols & Stubben, 2015), the minimum value of the transactions considered is USD 1 million. M&A are limited to transactions between firms

[9] From now on, the terms deal announcements, deals, and M&A are used interchangeably.
[10] The sample period begins in 1990 because the information before this date for M&A in Europe is scarce in the database.

located in the EU (28 members), and transactions in which the necessary information was not available in the database are not included. In particular, observations were excluded if: (1) the status of the acquirer or the target companies is "Unknown"; (2) the board's attitude about the announcement is "Not apply"; or 3) the payment method is "Unknown". This selection process resulted in a final sample of 29,317 deals, worth USD 7,278.8 billion.

Table 1 shows the descriptive statistics of the value of the M&A announcements included in the sample. The transaction with the highest value corresponds to the acquisition of the German Mannesmann AG by the British firm Vodafone (11/14/1999), through a stock swap valued at USD 202.8 billion. The lowest value corresponds to the transaction between two British firms, Sertec Birmingham Ltd and MRX Automotive Ltd, for USD 1 million (12/23/2008). The dispersion measures reveal that deal values are biased to the right. Thus, the average is USD 248 million, substantially higher than the median, which is only 18 million. Furthermore, considering that the 95th percentile is USD 808 million, we infer that transactions such as the one of Vodafone and Mannesmann are the exception in this market. Despite this, the data indicate that the so-called mega deals -those exceeding USD 10 billion in the terminology of Moschieri and Campa (2009)- account for 30% of the value of the European market, with investments of USD 2.192 trillion.

Table 1. Descriptive statistics for the values of M&A announcements in the EU

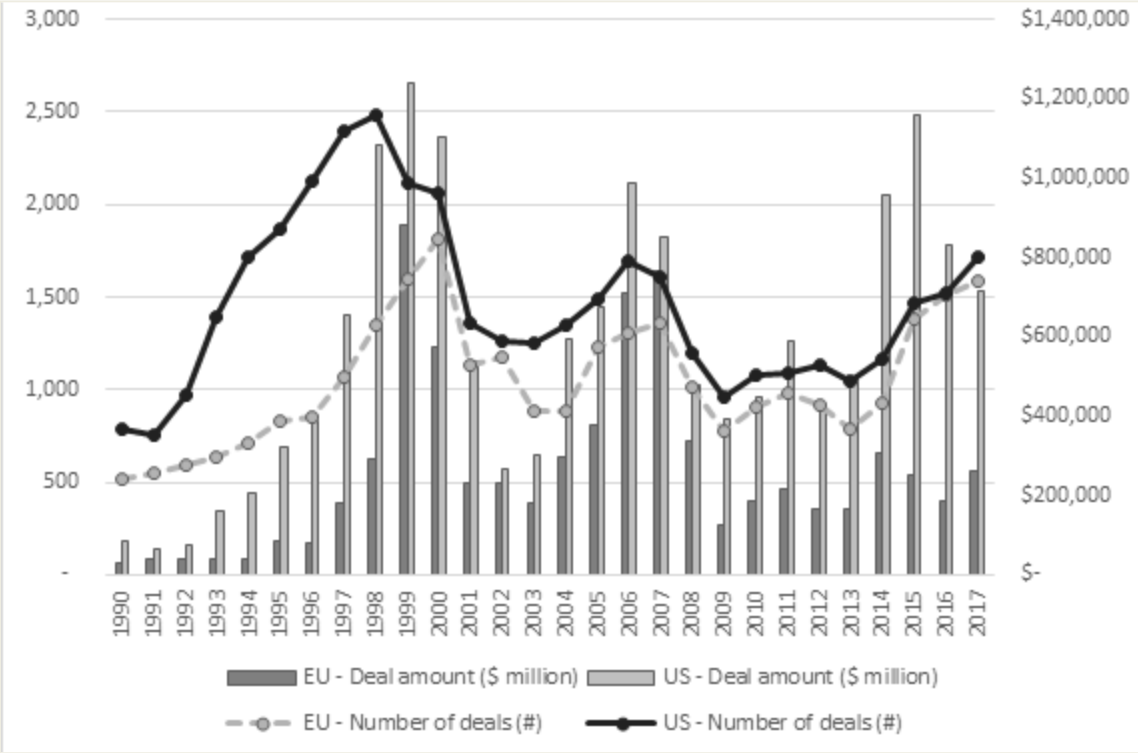
Statistics	**($ million)**
Mean	$248
Median	$18
Min	$1
Max	$202,785
Standard deviation	$2,083
Percentile - 5%	$2
Percentile - 25%	$5
Percentile - 75%	$83
Percentile - 95%	$808

N = 29,317
($ million).

Figure 2 shows the number and value of M&A in the sample over the period analyzed, 1990-2017. For comparison purposes, the chart also includes US market data, which is the dominant market globally (Moschieri & Campa, 2009). In particular, we use a sample of 41,070 announcements in the USA, with a value of USD 16,074 billion. The selection process of the US data follows the same criteria used to collect the European sample, as described above. In general, the evolution of both markets is similar, with ups and downs of the activity in the same periods, which is especially important in periods of macroeconomic shocks, such as the ".com" bubble (1999-2000), or the "subprime" mortgage

financial crisis (2007-2008).

Figure 2. Number and value of M&A in the EU and the USA



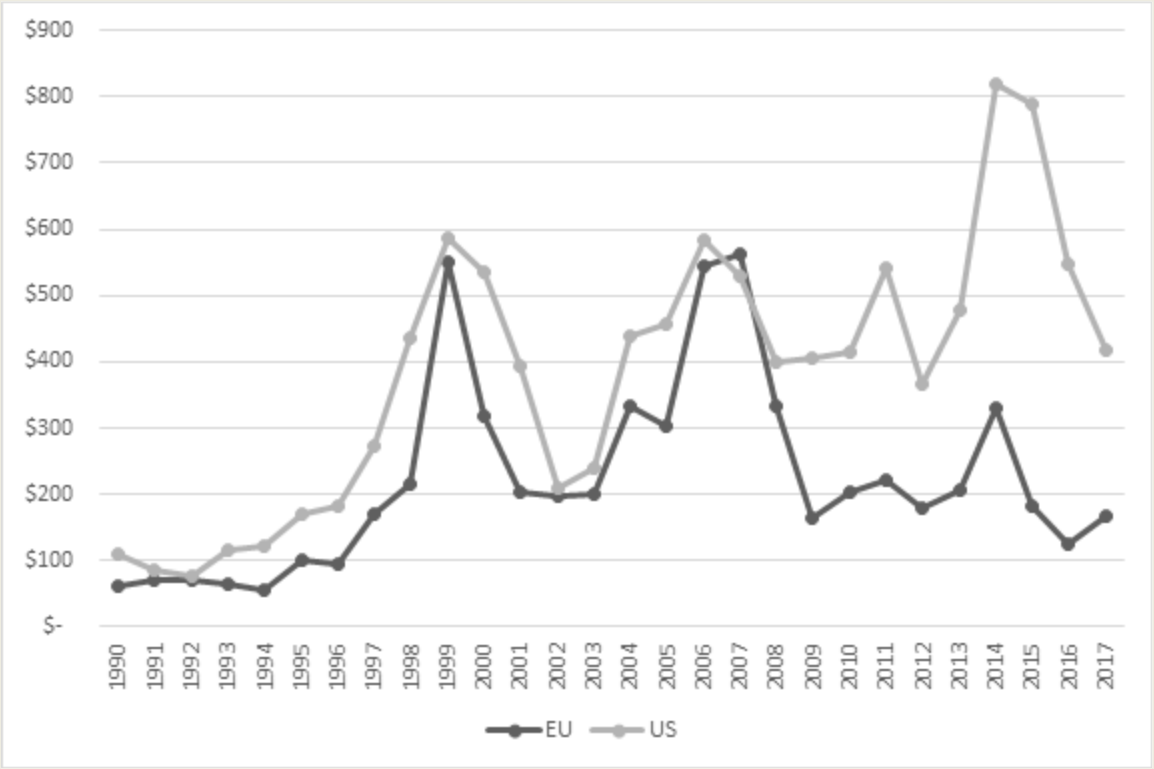
Ending the 1990s, the activity of both markets soared, with substantial annual increases in the number and value of the transactions. In the EU, between 1990 and 2000, the number of deals rose from an average of 500 announcements per year to almost 2,000 at the highest level of activity, an increase of almost 250%. In a similar period, the average annual growth of the US market was around 20% to 2,479 announcements at its peak. Regarding the value of the deals, the 1990s also recorded sustained growth. Both markets peaked in 1999, where M&A were worth nearly USD 1 billion in the EU and 1.2 trillion in the US. After reaching their peak levels of activity, both markets shrank until 2004, with sharp decreases in the number and value of transactions. In Europe, there was a 51% reduction in the number of announcements per year between 2000 and 2004; and in the US, there was a 49% fall between 1998 and 2003. The value of the deal announcements also showed a significant decline, over 50%, in both markets.

Previous literature labels the pattern of growth and contraction of the M&A market described above as “wave”, which refers to a concentration of such operations in periods (Andrade & Stafford, 2004; Harford, 2005; Mitchell & Mulherin, 1996; Rhodes-Kropf, Robinson, & Viswanathan, 2005). Figure 2 suggests the existence of M&A waves in the EU and the USA, spanning much of the 1990s, as well

as the early years of the new millennium until 2004 (or 2003 in the US case), with a peak between 1998 and 2000 depending on the market and how the activity is measured. The wave-shaped pattern repeats around 2006 and 2007. After 2003, the European market experiences a substantial recovery, not only in the number of deals but also in the value invested in such transactions, to a peak in activity in 2007 with 1,359 announcements valued at USD 763 trillion, followed by a similar contraction ending in 2009. The US market exhibits similar behaviour, peaking in 2006, reaching USD 988 trillion and 1,694 announcements.

After 2009, we cannot identify a wave in any of the markets. In the case of the EU, while there is a bulge around 2011 (with 982 announcements worth USD 217 trillion between 2009 and 2013), the market development is not comparable with the two previous waves, neither in terms of activity nor in duration. There is a similar situation in the US market. However, the data suggest that a new wave might begin to emerge after 2009, as the number of deals in both markets recovers significantly to breach the 1,500 announcements barrier in 2017. It should be noted that during this period, 2009-2017, there is a considerable difference in the yearly values of announcements between both markets. Considering that the number of M&A is similar in both markets after 2009, the average value of M&A in the USA is larger than in Europe. That can be seen better in Figure 3, where we show the average value of M&A per year in both markets. Until approximately 2008, the average value of operations in both markets is similar, while later, the US figures remain well above those of Europe. Between 2009 and 2017, a typical M&A in the European market is USD 213 billion, while this figure is USD 459 billion in the USA. Indeed, a *t*-test confirms that the difference is significant since we reject the null that the US M&A average is equal or less than in the EU with a significance level of 1% ($t = 5.42$) after 2009.

Figure 3. The average annual value of M&A in the EU and the USA



($ million).

The main conclusions of the analysis presented in this section can be summarized as follows:

- The evolution of the number of M&A in the EU and the USA between 1990 and 2017 is similar.
- The M&A activity in Europe and in the USA is grouped in waves, which usually occurs around economic shocks.
- After 2009, the number of announcements in both markets might suggest the start of a new wave.
- After 2009, the average value of a deal is significantly larger in the USA than in Europe.

1.4. Features of the M&A

In this section, we discuss the main characteristics of the European M&A. In particular, we analyze the following aspects of the announcement:

- if the deal was completed or withdrawn;
- the geographical location of the acquirer and the target companies;

- the industry to which the acquirers and targets operate;
- the target's attitude towards the announcement and if there is more than one bidder;
- the payment method offered;
- the public versus the private status of the companies that intervene;
- and if the acquirer owns shares of the target before the announcement and how much it seeks to obtain through the transaction.

We compare the European data with that of the US market but, for the sake of brevity, detailed figures are not included.[11]

1.4.1. Completed versus withdrawn deals

The data reveals that most deals are completed, although withdrawn deals are of higher value. Out of the 29,317 M&A included in the sample, 28,554 (97%) were completed. This high proportion of completed transactions is similar throughout the whole period under analysis.[12] When considering the value of these deals, completed transactions account for 83% (USD 6,078.6 billion), compared to 17% of withdrawals (USD 1,200.2 billion).

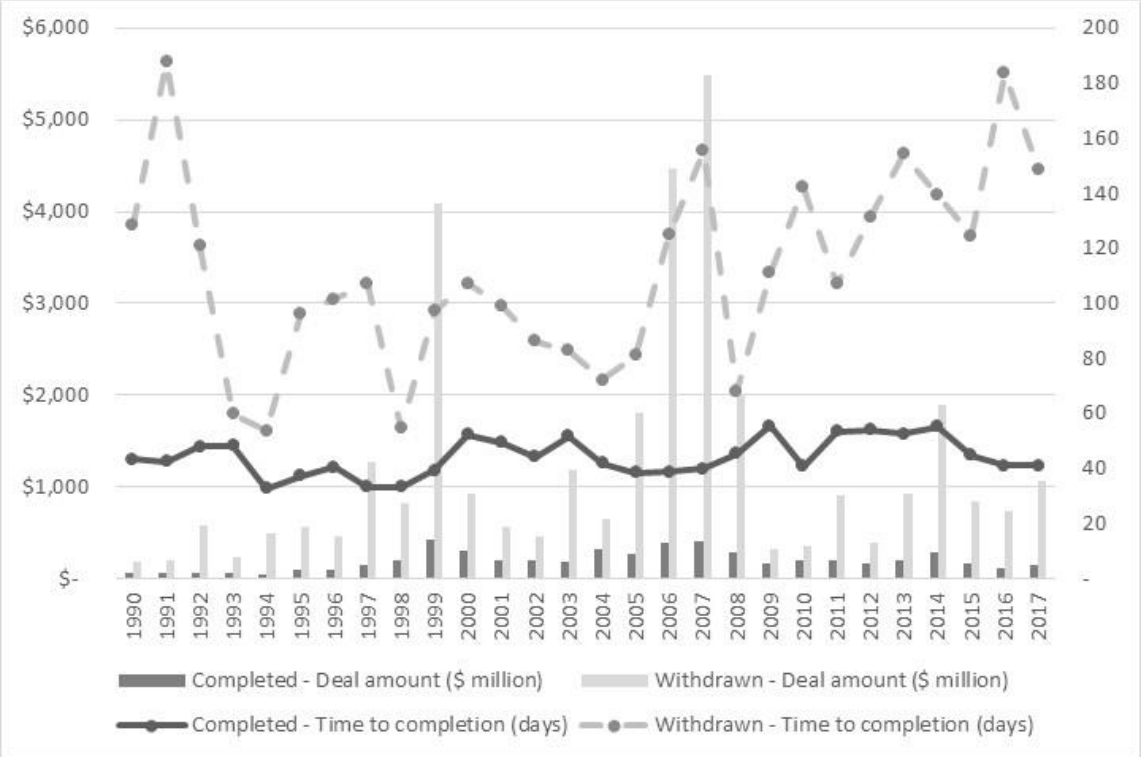
Figure 4 shows the average value of withdrawn and completed M&A by year, as well as the average number of days that each transaction requires to be completed or withdrawn. Indeed, withdrawn deals are worth nearly six times more than those that were completed. A *t*-test confirms that the average size of withdrawn M&A is significantly higher than that of completed ones (t = 4.28). Interestingly, the difference in size between the two types of deals is exacerbated in the waves' peaks of activity. For example, in 1999, a completed M&A has an average size of USD 415 million, while that of a withdrawn operation is 4 billion. Also, between 2006 and 2007, a typical withdrawn deal is between 11 and 14 times larger than a completed one.

Figure 4 also shows the average time that the acquirer and target companies take to complete or withdraw their plans to carry out the M&A. On average, withdrawn deals require more time of negotiation between the parties than completed deals, being the difference statistically significant at 1% level (t = 9.35). In general, the length of the negotiations for completed deals, with 44 days on average, is lower compared to withdrawn transactions, with 115 days on average. Similarly, the

[11] They are available to interested readers upon request.
[12] This proportion is relatively higher than in Moschieri and Campa (2009), where only 63% of deals are completed. However, their study is not directly comparable to ours because the period and filters of the samples are substantially different.

duration of negotiations is more stable over time for completed deals, with a range between 33 and 55 days, compared with withdrawn operations, with a range between 54 and 188 days. This evidence is consistent with withdrawn deals typically involving larger investments than those that are completed, which suggests it could be more challenging to agree on the conditions of the transaction.

Figure 4. Annual average value of completed and withdrawn M&A and average length of negotiations (days) in each type of deal in the EU



In short, the evidence presented in this section reveals that:

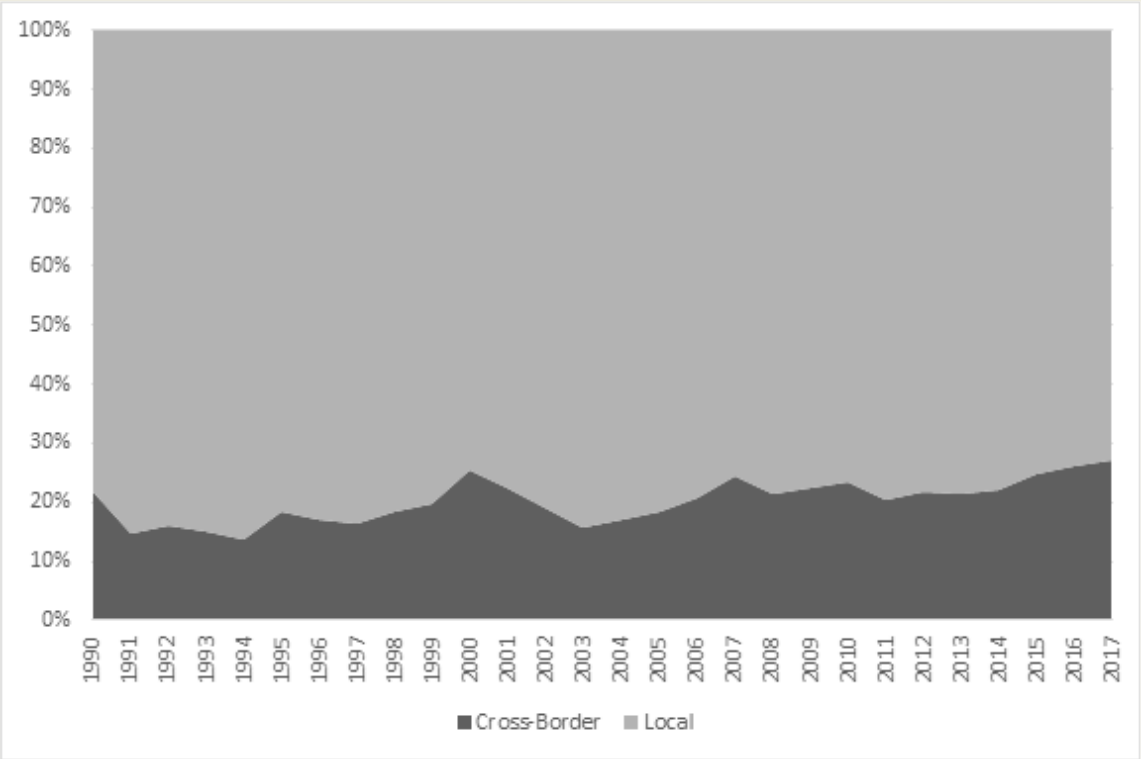
- The vast majority of M&A in Europe are completed.
- On average, withdrawn M&A are of higher value than completed ones.
- Negotiations take more than twice as long on withdrawn deals as on completed ones.

In general, these results are similar to the US sample. The proportion of completed transactions in the US sample is 94%; the average of withdrawn deals is USD 1 billion, while it is 353 million for completed transactions. Also, the number of days that the parties take to complete the transaction is 68, compared to 136 days if they do not agree and withdraw the deal announcement.

1.4.2. Geographical scope

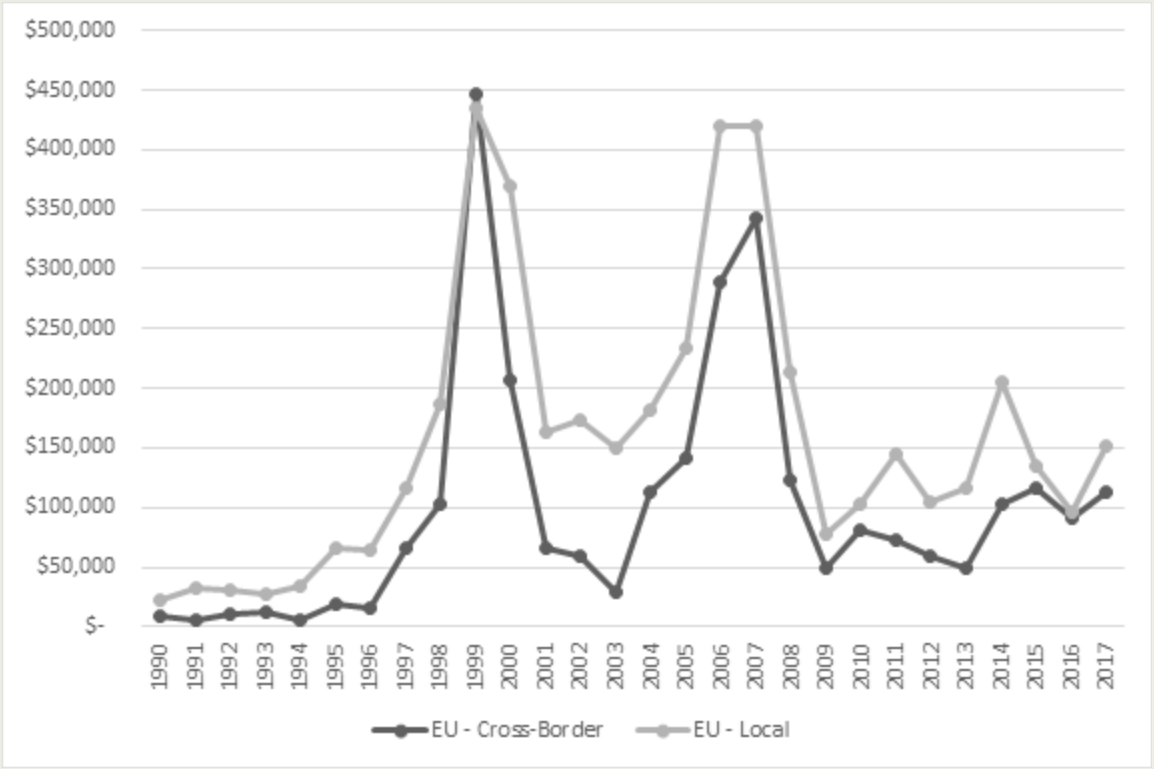
This section analyzes M&A based on the geographical location of the acquirer and the target companies, which allows identifying local and cross-border deals, depending on whether or not both firms are located in the same country. Figure 5 reveals the distribution of transactions over time. Local deals are the majority, accounting for 79% of the M&A included in the sample, with 23,201 transactions (compared to 21% of cross-border deals with 6,116). However, it is also worth noting that cross-border deals increased from 16% in 2003 (139 out of 889 M&A) to 27% in 2017 (432 out of 1,592 M&A).

Figure 5. Annual proportion of local and cross-border M&A in the EU



The average value of local and cross-border deals per year is shown in Figure 6. We observe that annual average investments in cross-border deals are significantly larger than local ones (except in 1999). Acquirers invest USD 458 million in a typical cross-border M&A while USD 193 million in a local one. A t-test indicates that this difference is statistically significant at 1% level (t = 3.38).

Figure 6. Annual average value of local and cross-border M&A in the EU



($ million).

Focusing on local deals, Panel A in Table 2 indicates the total value of M&A according to the country of domicile of the target company. Seven countries, namely the UK, France, Italy, Germany, Spain, the Netherlands and Sweden, concentrate 90% of the M&A activity in Europe with deals totalling USD 4,124 billion. Indeed, the UK is by far the most active market in the region, with deals totalling more than USD 1,500 billion, representing 35% of the total value in the region, and also more than double its nearest competitor, France, with USD 730 billion in M&A.

Table 2. Total value of M&A in the EU per country

Panel A. Local deals

Target nation	**Deal value**
United Kingdom	1,580,320
France	730,207
Italy	548,022
Germany	467,503
Spain	310,634
Netherlands	282,982
Sweden	123,203
Denmark	81,464
Belgium	74,759
Portugal	54,362
Finland	44,526
Ireland-Rep	41,781
Poland	38,343
Greece	38,327
Austria	33,909
Cyprus	8,772
Hungary	7,269
Luxembourg	3,957
Czech Republic	2,971
Bulgaria	1,517
Estonia	889
Romania	737
Lithuania	688
Malta	538
Slovenia	406
Latvia	162
Croatia	138
Slovak Rep	42
Total	4,478,429

Panel B. Cross-border deals

Target nation	Deal value	Acquirer nation	Deal value
United Kingdom	471,315	United Kingdom	877,653
Germany	448,798	Germany	467,217
Netherlands	354,578	France	466,934
Italy	276,189	Netherlands	307,784
France	259,148	Italy	120,859
Spain	252,518	Spain	108,018
Sweden	189,220	Sweden	85,776
Belgium	129,127	Luxembourg	84,996
Luxembourg	83,594	Belgium	84,102
Finland	56,603	Finland	48,471
Denmark	50,177	Ireland-Rep	37,052
Ireland-Rep	49,306	Denmark	30,441
Austria	35,047	Austria	28,148
Poland	29,932	Cyprus	17,617
Czech Republic	28,269	Greece	16,798
Greece	20,203	Czech Republic	6,671
Portugal	18,997	Portugal	3,930
Hungary	18,297	Poland	3,791
Cyprus	13,955	Hungary	1,656
Slovak Rep	4,740	Estonia	1,460
Bulgaria	2,892	Malta	398
Lithuania	2,328	Lithuania	260
Romania	2,028	Romania	172
Malta	1,226	Croatia	54
Estonia	669	Slovak Rep	47
Latvia	668	Latvia	40
Slovenia	460	Slovenia	6
Croatia	68	Bulgaria	1
Total	2,800,352	**Total**	2,800,352

($ million)

Regarding cross-border deals, Panel B in Table 2 presents M&A value according to the country of domicile of both companies. The ten countries with the highest market activity are the UK, Germany, the Netherlands, Italy, Spain, France, Sweden, Belgium, Luxembourg, and Finland. These countries concentrate 90% (95%) of the value of deal announcements by target (acquirer) firms. The UK is the most attractive country as receiver of investments, with deals of more than USD 471 billion, but Germany closely follows with USD 448.8 billion. The UK also ranks first as the issuer of M&A investments, with USD 877.7 billion, almost double the value of those from German companies with USD 467 billion. For the rest of the countries, the ranking position slightly changes depending on the perspective adopted. For example, in analyzing target companies, the Netherlands ranks third, with

USD 354.6 billion, while this country is the fourth largest buyer, with deal announcements of USD 307.8 billion.

Overall, the data indicate that European local and cross-border deals are highly concentrated in a few countries, especially in the UK. Table 3 presents the value of the deals between the ten most dynamic countries. This represents 87% of all cross-border deals value, with USD 2,427.3 billion. An examination of the investment flows indicates that the vast majority of M&A corresponds to companies located in the United Kingdom, Germany, and the Netherlands. Deals from British firms interested in acquiring companies located in Germany and the Netherlands are 288.7 and USD 167.9 billion, respectively, which is more than 50% of the total investment by British companies. In turn, investments targeting UK businesses from companies in those two countries accrue USD 233.1 billion, with 128 billion from Dutch companies and 105 billion from German companies, which is more than 50% of the total funds received by the UK. Negotiations between these three countries alone account for 25% of the value of the cross-border deals (USD 689.7 billion).

The descriptive evidence presented in this section can be summarized as follows:

- M&A in Europe are primarily local, although the number of cross-border deals has grown considerably in the last years.
- The average value of cross-border M&A is higher than that of local M&A.
- The local and cross-border M&A are concentrated in a few countries, being the UK the most important.

Table 3. Total value of cross-border M&A between countries with the most activity in the EU

COUNTRY	**Acquirer**										**Total**
Target	Belgium	Finland	France	Germany	Italy	Luxemb.	Netherl.	Spain	Sweden	UK	
Belgium		24	49,325	3,445	38	1,924	36,263	69	2,055	34,052	127,193
Finland	84		796	434	6	11,056	786		23,569	11,491	48,223
France	20,743	15,037		57,149	15,467	9,880	21,136	18,559	3,634	87,340	248,944
Germany	9,065	5,664	58,808		33,318	10,294	17,824	5,756	11,469	288,697	440,894
Italy	623	676	76,118	97,420		4,396	34,393	28,394	3,282	29,572	274,874
Luxemb.	2,803		5,028	18,239	1,803		37,801	9	2,002	13,736	81,423
Netherl.	26,618	1,657	75,416	32,230	8,558	9,707		8,220	15,306	167,903	345,616
Spain	1,517		28,096	70,620	44,640	1,434	6,725		578	94,857	248,467
Sweden	167	22,064	44,945	41,035	39	744	2,843			71,120	182,957
UK	20,099	2,003	99,872	104,887	11,632	17,294	128,252	34,650	10,002		428,692
Total	81,719	47,125	438,405	425,460	115,500	66,730	286,023	95,656	71,898	798,768	2,427,284

($ million)

1.4.3. Industry

Table 4 presents the value of M&A according to the industry to which the companies intervening in the transaction belong. The industry is defined using the SIC classification, as reported in Thomson ONE Banker. The main sectors involved in the sample M&A are: 1) Finance, insurance, and real estate; 2) Transport, communications, electricity, gas, and sanitary services; and 3) Manufacturing. Regardless of the perspective, acquirer or target, these three industries concentrate more than 75% of the value of M&A in the European market during the period analyzed; more precisely 79% of the targets and 86% of the acquirers.

Table 4. Total value of M&A by industry in the EU

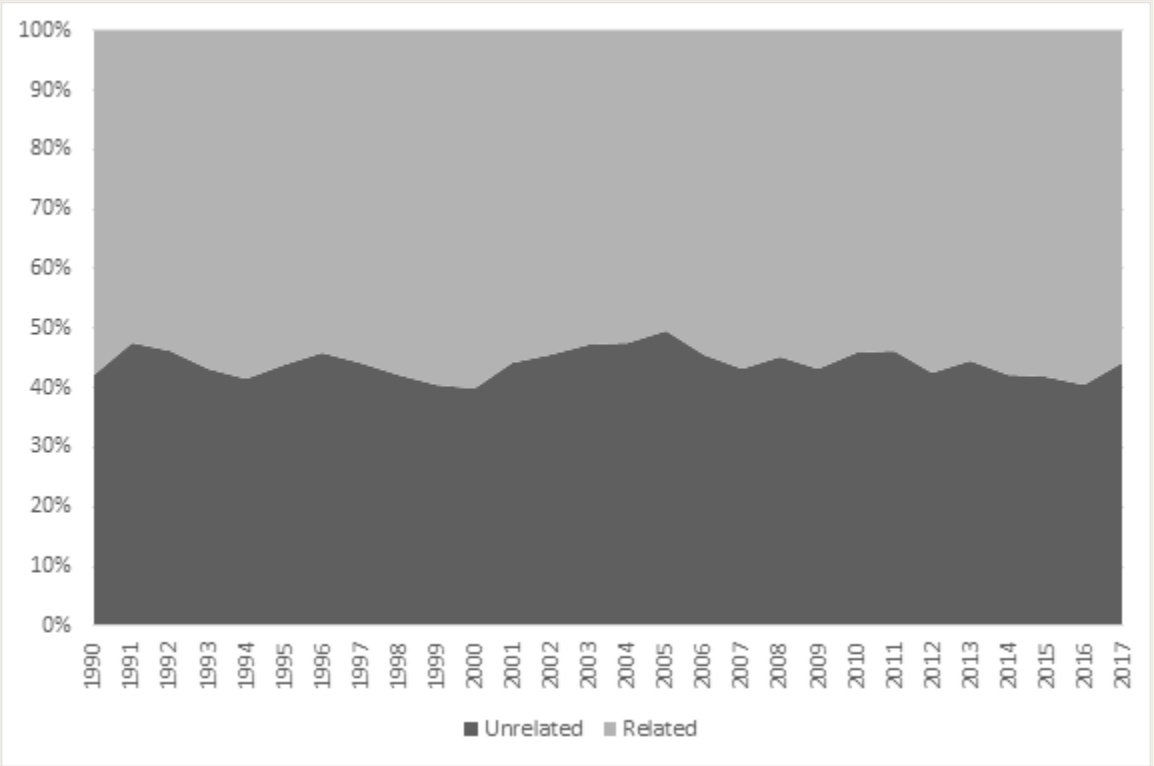
Industry of target firms	
Finance, Insurance, And Real Estate	2,058,128
Transportation, Communications, Electric, Gas, And Sanitary Services	2,040,545
Manufacturing	1,657,198
Services	723,767
Retail Trade	312,786
Mining	224,990
Wholesale Trade	127,913
Construction	118,904
Agriculture, Forestry, And Fishing	11,371
Public Administration	3,178
Total	**7,278,781**

Industry of acquirer firms	
Finance, Insurance, And Real Estate	3,458,136
Transportation, Communications, Electric, Gas, And Sanitary Services	1,608,123
Manufacturing	1,167,739
Services	345,771
Mining	318,804
Retail Trade	174,819
Construction	89,836
Public Administration	59,977
Wholesale Trade	50,867
Agriculture, Forestry, And Fishing	4,710
Total general	**7,278,781**

Note: The industry is defined by the division of each company's SIC code as reported in Thomson ONE Banker.
($ million)

The results reported in Table 4 suggest that there could be a concentration of transactions within the same industry. We have analyzed this in-depth and differentiated between related (intra-industry) and unrelated M&A (inter-industry). Related deals refer to M&A in which the target and acquirer companies belong to the same industry. Otherwise, they are labelled as industry-unrelated M&A. In particular, according to the previous literature, if the first two digits of the SIC code of both companies match, we consider that they are related (e.g., Hubbard & Palia, 2002; Maquieira, Megginson, & Nail, 1998; Moeller & Schlingemann, 2005; Skaife & Wangerin, 2013; Walker, 2000). Figure 7 captures the proportion of industry-related and unrelated deals for each year of the period analyzed. On average, 44% (12,873) of the deals correspond to inter-industry M&A, while 56% (16,444) corresponds to intra-industry transactions.

Figure 7. Proportion of industry-related and -unrelated M&A in the EU

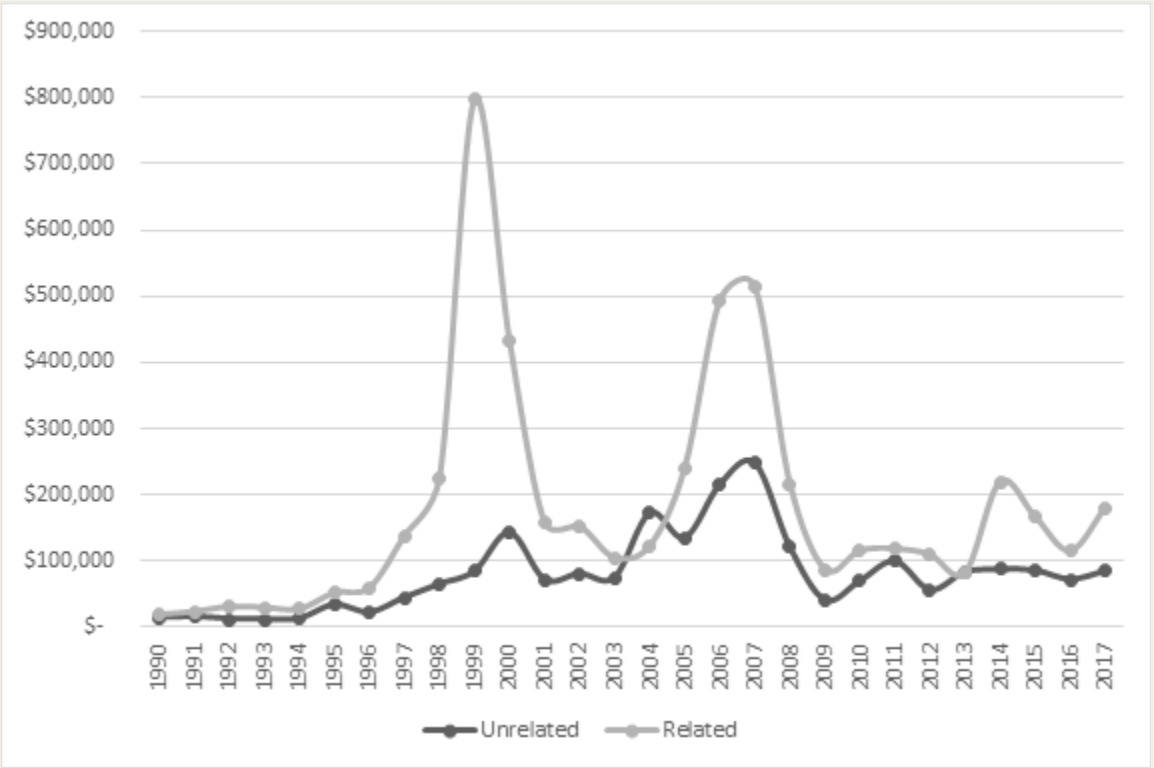


Note: Industry-related M&A are deals where the first two digits of the target and acquirer SIC codes are the same. Otherwise, they are classified as unrelated.

In Figure 8, we provide evidence on the average value of the investments for the inter- and intra-industry deals per year. The distribution of the deals between inter- and intra-industry is similar both in terms of number and value, except in periods of high market dynamism. Indeed, around 1999 and 2007, coinciding with the M&A waves around the

".com" bubble and the "subprime" mortgage crisis, the average investments in related deals are much larger than in unrelated deals. For example, in 1999, at the peak of the activity, the average value of an industry-related M&A is more than 6.4 times (USD 797 billion) that of an unrelated M&A (130 billion). Similarly, in 2007, industry-related deals are 2.1 times bigger (USD 514 billion) than unrelated deals (249 billion).

Figure 8. Average annual value of industry-related and -unrelated M&A in the EU



Note: Industry-related M&A are deals where the first two digits of the target and acquirer SIC codes are the same. Otherwise they are classified as unrelated.
($ million)

In short, the following results stand out in this section:

- M&A in the European market are concentrated in specific industries.
- Over half of M&A take place between companies in the same economic sector.
- The average level of investment in related deals increases at the peak of the M&A waves.

With regard to the US market, it should be noted that while there is a similar distribution among the most active industries in M&A, with Finance, Transport and Manufacturing in the first place; deals between companies in the same economic sector are more

frequent, with a nearly 70% of the total number of M&A in that market. Out of the 41,070 M&A announcements in the US sample, 27,368 are between companies operating in the same economic sector.

1.4.4. Deal attitude of the target and competitive offers

Table 5 explores the interrelationship between the target company's attitude to the deal announcement -friendly, neutral, or hostile- and the existence of competitive offers in the European market. Competitive offers are those where there is more than one company interested in buying the target firm. Panel A shows that less than 1% of the deals (248) are hostile, meaning that the target company, through its management or board of directors, does not agree with the offer. That is, in the vast majority of M&A in the EU, the target company's attitude towards bids is positive (27,886) or neutral (1,183). Similarly, there is a low proportion of deals with competitive offers in Europe. In particular, less than 2% of the sample deal announcements (449) have more than one bidder.

Table 5. Deal attitude and competitive offers in the EU

Panel A. Number of M&A

Attitude	Without competing bids	With competing bids	Total
Friendly	27,528	358	27,886
Neutral	1,167	16	1,183
Hostile	173	75	248
Total	**28,868**	**449**	**29,317**

Panel B. Average value of M&A

Attitude	Without competing bids	With competing bids	Total
Hostile	1,980	5,078	2,917
Neutral	241	1,905	264
Friendly	202	1,898	224
Total	**214**	**2,429**	**248**

($ million)

Panel B of Table 5 presents the average value of M&A, where we see a different scenario in which two aspects stand out. First, despite its small number, competing M&A are of a considerably larger amount, with a ratio of almost 10 to 1. Second, hostile M&A, averaging $3 trillion, are greater than friendly and neutral deals, which, on average, are

around USD 264 million and USD 224 million, respectively.

In short, in terms of the attitude towards announcements and the number of bidders, we stand out the following results:

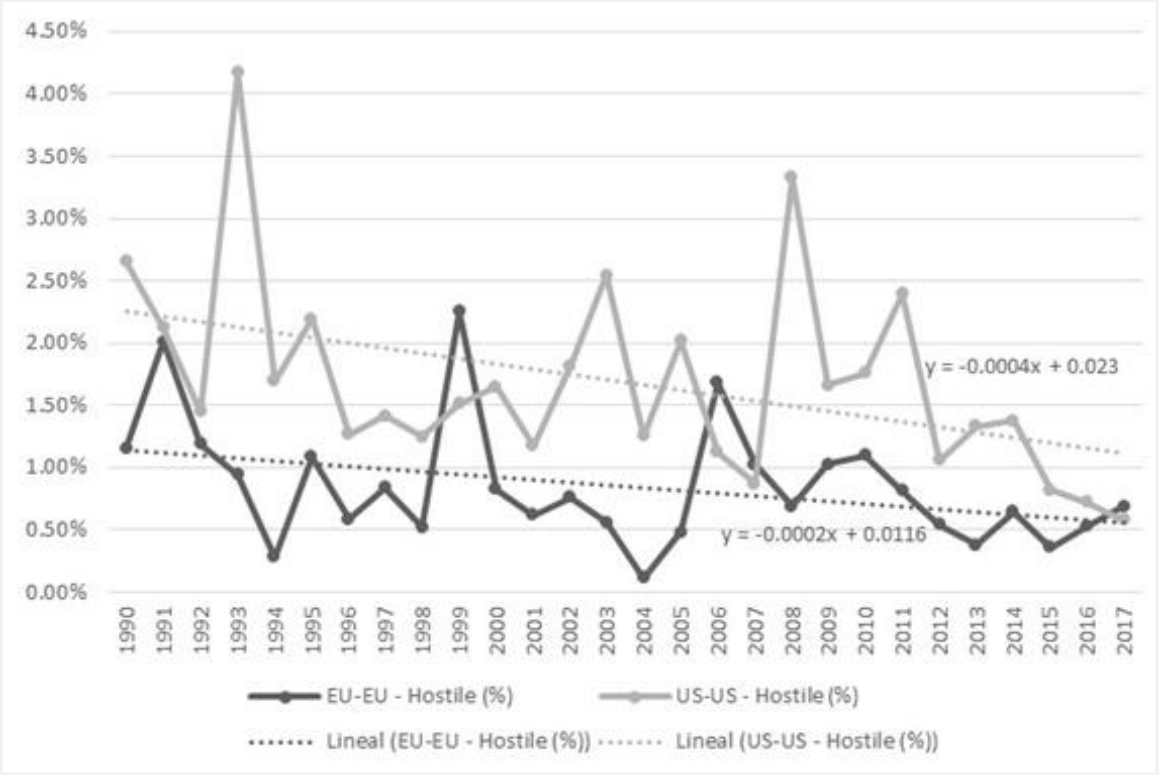
- In Europe, M&A tend to be mostly friendly and do not usually involve more than one bidder.
- Despite its limited number, hostile M&A commit substantially larger investments than the rest.

As a reference, the market in the USA shows similar results regarding the issues studied in this section. However, as Figure 9 shows, it is crucial noting that hostile M&A are less common in the European than in the US market, which is in line with prior literature on M&A in the European context (Moschieri & Campa, 2009). A statistical *t*-test validates that the proportion of hostile deals is lower in Europe than in the USA, where it accounts for 1.6% of the sample while, as mentioned above, it is lower than 1% in Europe (t = -4.75). Besides, it should be noted that the proportion of hostile deals has decreased in both markets over time, as the trend lines show, where we observe a negative slope between the y-axis (% hostile M&A) and the x-axis (time).

1.4.5. Payment method

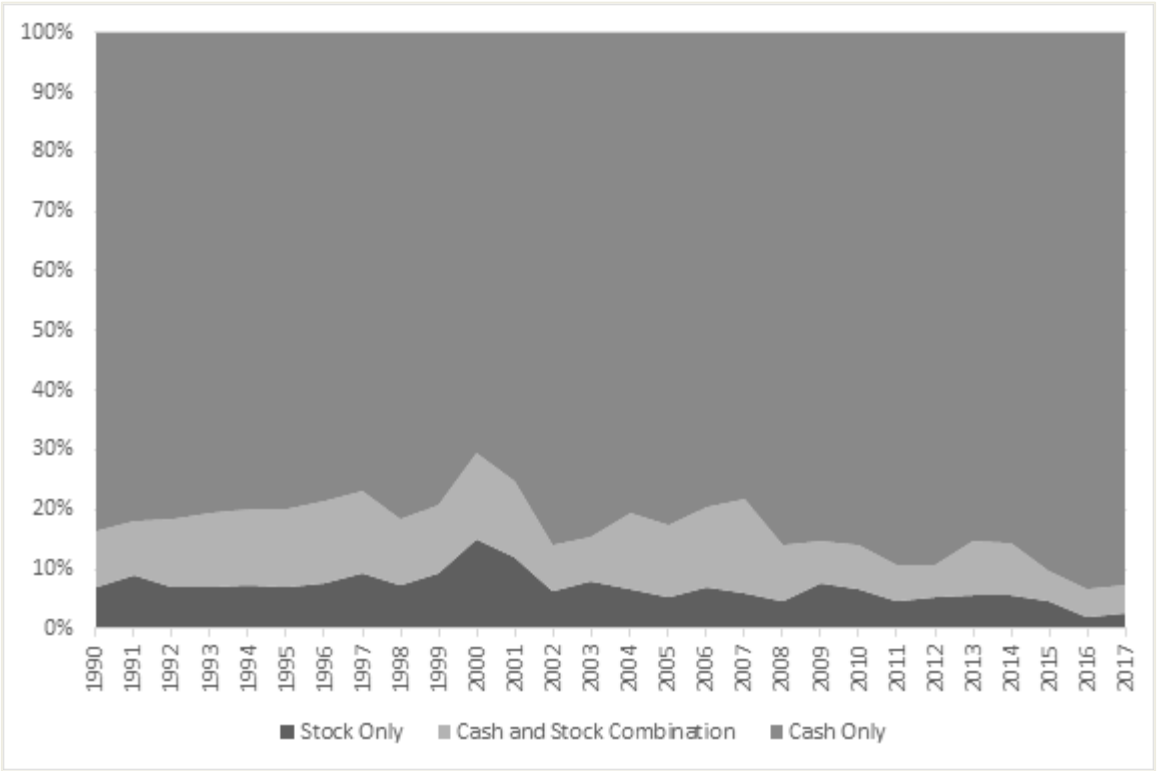
Figure 10 exhibits the percentage distribution of the M&A based on the payment method per year. Cash is the most common way of payment, although there are others, such as the exchange of shares (i.e., stock swaps), or combinations between cash and shares. In 2000, payments with shares only and a combination of cash and stocks reached a maximum, 15% and 14% respectively. The figure also reveals that after 2000, cash gained even more ground over the other means of payment. Between 2000 and 2017, the proportion of M&A using cash increased from 71 to 93%.

Figure 9. Hostile deals proportion in the EU and the USA



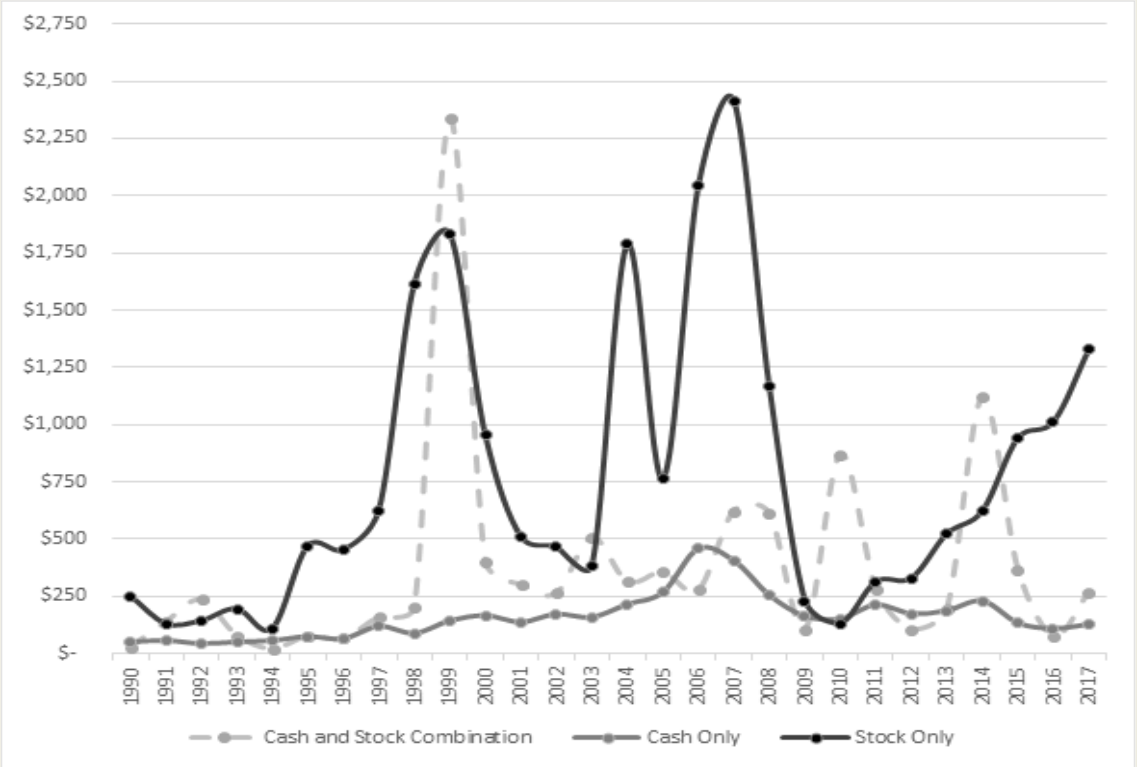
Note: Dot lines represent linear regressions of hostile deals participation (y) over time (x).

Figure 10. Annual percentage distribution of M&A by payment method in the EU



From a different perspective, Figure 11 shows the annual average value of the M&A that use each payment method. Despite being a few, the deals that are paid with stocks account, on average, for more resources than those paid exclusively in cash. This is especially evident in the most dynamic years of the market when waves occur. For example, between 1995 and 2001, cash deals do not reach USD 250 million on average, while for those held in stock the minimum price is around USD 500 million and the maximum exceeds even USD 1.75 billion in 1999. Also, we highlight that as of 2011, the value of stock deals shows an upward trend, increasing from USD 313 to 1.328 million; while the value of cash deals tends to remain stable, below USD 250 million.[13]

Figure 11. Average annual value of M&A announcements by payment method in the EU



($ million)

The analysis presented in this section yields two main results:

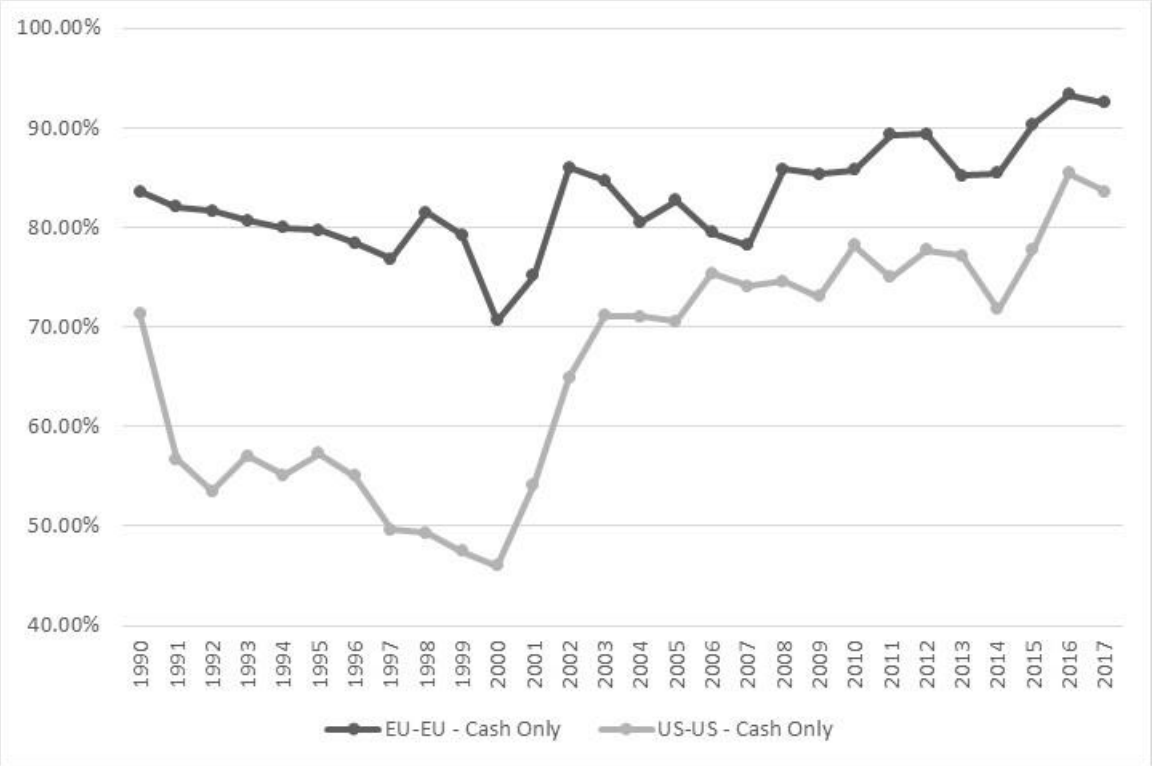
- Most of M&A in the European market are paid in cash.

[13] Concerning M&A using a combination of stocks and cash, the separation from deals in cash is not so clear, and it seems to be limited to certain years such as 1999, 2010 and 2014.

- The value of M&A using stock as the payment method is substantially higher than those using cash, particularly in periods of intense market activity.

Although cash is also the most used method of payment in the US market, its use is lower than in the EU, as evidenced in Figure 12. On average, the annual proportion of M&A that use cash is 83% in Europe, while in the USA it is only 66%. The difference in proportions is statistically significant at 1% level (t = 6.85). Indeed, that is the case in the 1990s, where stocks play a unique role in the US market of M&A, and even displace cash as the primary means of payment between 1997 and 2000.

Figure 12. Annual percentage distribution of M&A using cash as the payment method in the EU and the USA



1.4.6. Public versus private status of acquirer and target companies

The three panels of Table 6 present the number (Panel A), value (Panel B), and average value (Panel C) of M&A by the status of the acquirer and target companies. We consider two categories: public and private. Regarding the origin of investments, the proportion of public and private firms is quite balanced, with 15,441 deals from private firms, representing 53% of the sample. However, considering the destination of investments,

private firms dominate, accounting for the vast majority of the deals, 81% of the sample (23,986 deals). As a result, the most common deals are those where both companies are private, with 12,516 M&A, followed by public acquirers buying private targets, with 11,470 M&A.

From the perspective of value, Panel B of Table 6 reveals that a bit more than USD 3,000 billion of the resources go to acquire private companies, which is 42% of the total resources invested in the European M&A market. Regarding investments in public firms, USD 4,265 billion represents 58% of the total value. As Panel C exhibits, the average value of deals aiming to acquire public companies is USD 800 million, while this figure is only USD 126 million for private companies. Public firms are also those that invest the largest amount of resources in the M&A market, with USD 4,351 billion, that is, 60% of total investments. Therefore, it is not surprising that public-to-public deals concentrate the greatest amount of resources, with USD 2,968 billion. Something similar occurs when analyzing the average value of these transactions with USD 1.2 billion, while private-to-public deals total USD 443 million, as shown in Panel C.

Table 6. Public vs private status of the acquirer and target firm in the EU*

Panel A. Number of M&A

STATUS	**Target**						**Total**		
Acquirer	Private			Public					
Private	12,516	(82%)	[53%]	2,925	(18%)	[55%]	15,441	(100%)	[53%]
Public	11,470	(83%)	[47%]	2,406	(17%)	[45%]	13,876	(100%)	[47%]
Total	**23,986**	(81%)	[100%]	**5,331**	(19%)	[100%]	**29,317**	(100%)	[100%]

Panel B. Value of M&A

STATUS	**Target**						**Total**		
Acquirer	Private			Public					
Private	1,629,993	(56%)	[55%]	1,297,094	(44%)	[30%]	2,927,087	(100%)	[40%]
Public	1,383,409	(30%)	[45%]	2,968,285	(70%)	[70%]	4,351,694	(100%)	[60%]
Total	**3,013,402**	(42%)	[100%]	**4,265,379**	(58%)	[100%]	**7,278,781**	(100%)	[100%]

($ million)

Panel C. Average value of M&A

STATUS	**Target**		**Total**
Acquirer	Private	Public	
Private	130	443	190
Public	121	1,234	314
Total	126	800	248

($ million)

*****Note: Values in parentheses (brackets) represent proportions per each row (column)

The results of the analysis presented in this section can be summarized as follows:

- The acquiring companies are mostly public.
- It is also public companies that invest the most in M&A.
- Although M&A in the EU mainly seek to acquire private firms, investments are mainly directed at public companies, so the average value of these deals is higher than that of others.

Generally speaking, the results observed in this section for the European market are similar in the US market, where public acquirers are present in 65% of the deals and contribute to 75% of the investments in M&A. Furthermore, although the majority of M&A correspond to non-public targets (73%), the majority of the investments are made to public targets (70%).

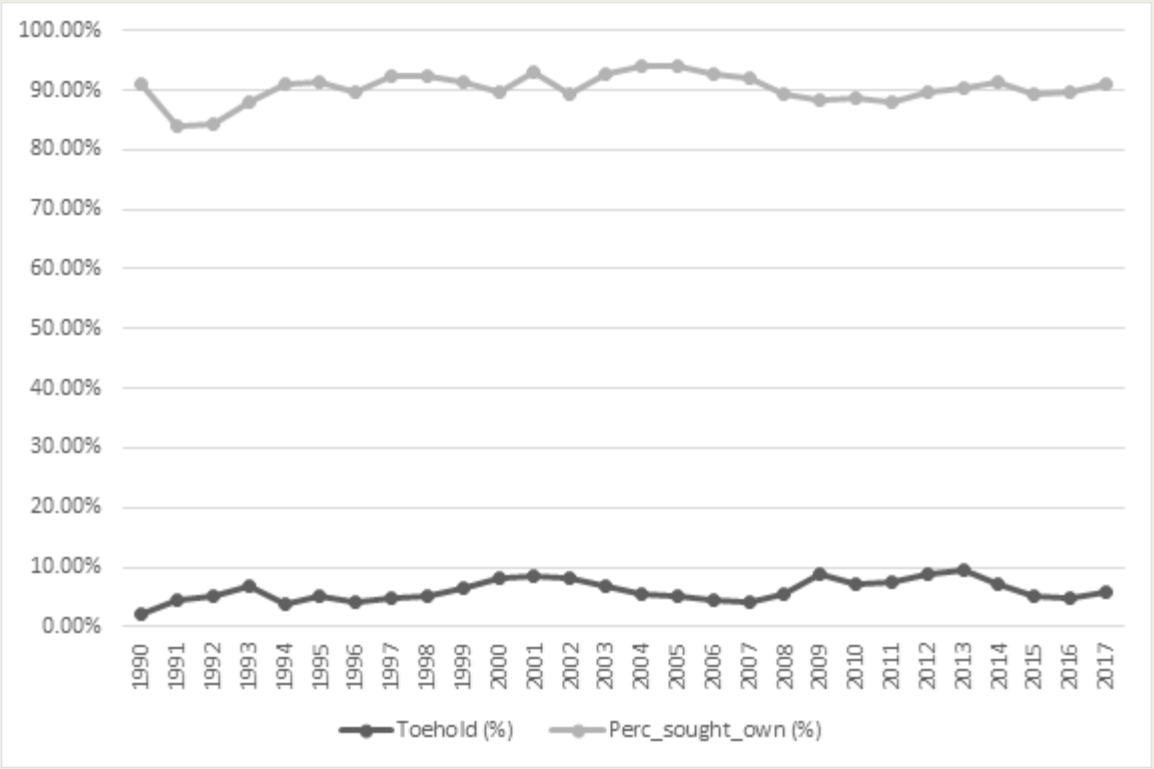
1.4.7. Ownership of the acquirers before and after the M&A

Figure 13 provides evidence on the last characteristic studied, and shows the annual average ownership of the target held by the acquirers at the time of the deal announcement, as well as the average ownership the acquirer seeks to obtain after the M&A. On average, acquirers have a very low level of ownership in target companies before the deal announcement; and toehold is less than 10% (6.1% on average). At the same time, they seek to get a very high percentage of ownership and offer around 90% of the target's ownership on average.

A more detailed analysis indicates that in 88% of the announcements, the acquirer does not own shares of the target. Similarly, data reveal that in 91% of the sample, the acquirer pursues to take control of the target, making bids equal to, or greater than, 50% of the shares of target firms.[14] M&A in which the acquirer seeks to obtain 100% ownership of the target is overwhelmingly high, with 82% of the sample.

[14] Previous literature on M&A suggests that acquirers need to obtain at least 50% of ownership of the target to gain control (e.g., Contractor, Lahiri, Elango, & Kundu, 2014; Dang & Henry, 2016; Ouimet, 2013).

Figure 13. Annual average percentage of the ownership of the acquirer over the target before and after the M&A in the EU



Note: Toehold: average percentage of shares of the target that the acquirer owns at the moment of the deal announcement. Perc_sought_own: average percentage of shares of the target that the acquirer is seeking to own after the transaction.

In short, it follows that in the European M&A market:

- Most of the acquiring firms do not have any ownership over the target when making the deal announcement.
- In most cases, the acquirer seeks to gain control of the target after M&A, through total M&A.

Regarding the evidence presented in this section for the European market, the US market shows similar results. In the US sample, acquirers have, on average, 1.94% of the target's shares at the time of announcing the deal and seek to acquire 92.94% of the ownership after the M&A.

1.5. Summary and discussion of the results

This study makes a detailed description of the European M&A market, using a sample of deal announcements during the period 1990-2017. As a reference, we use a sample of M&A announcements in the USA, since this is the most studied market in the literature so far. The European setting has certain particularities, such as a diversity of legal systems and financial markets, that make it especially relevant for the M&A research (Faccio & Masulis, 2005).

We show that activity volumes are similar in both markets, confirming that the European market is also a relevant exponent of the global M&A market. The number of M&A in both markets is clustered in the form of waves, where two stages, boom and decline, separated by a year of peak of activity, can be distinguished. These waves tend to cluster around certain critical moments, such as the ".com" crisis (1999-2000) and the "subprime" mortgage crisis (2007-2008). These findings are consistent with prior empirical work that accounts for the existence of M&A waves until 2007, not only in the European market, but also in the US market (e.g., Alexandridis, Mavrovitis, & Travlos, 2012; Martynova & Renneboog, 2011; Moschieri & Campa, 2009; Rau & Stouraitis, 2010).

However, after 2009, data do not allow to identify the existence of any wave. Indeed, only one boom stage is distinguished in both markets, while the size of M&A in the USA is much larger. Future research could look at the conditions that explain such situations, for instance, monetary and fiscal policies adopted in both markets after the 2008 financial crisis, as well as the implementation of reforms to incentivize the M&A markets. In this regard, the EU is an interesting setting to explore because in 2006 European regulators fully implemented the 2004 M&A Directive,[15] but to date, its benefits to the market are still questioned, and there is a shortage of empirical evidence on its effects over M&A activity (Alcalde & Pérez-Soba, 2016; Clarke, 2009; Humphery-Jenner, 2012). That could be partly explained by the closeness between the implementation of the Directive and the 2007-2008 financial crisis, as it becomes difficult to isolate the effects of each event. Indeed, because of this, the results of the few studies on the implementation of the Directive should be interpreted with caution (Alcalde & Pérez-Soba, 2016; Clerc,

[15] Takeover Directive 2004/25/EC, hereinafter "M&A Directive" or "Directive".

Demarigny, Valiante, & de Manuel Aramendía, 2012).

This study provides a detailed analysis of the features of the M&A in Europe and compares them with the US market, from which several conclusions are drawn. In general, the vast majority of these operations are completed; however, the data also suggest that, although rare, the withdrawn deals are very large. Similarly, the times of negotiations between acquirers and targets are different, and withdrawn deals exhibit longer negotiations, more than twice as long as the completed deals. This could indicate that the decision to withdraw the deal is not an easy one, considering the amount of resources at stake. Hence, it seems that the acquirer and target firms try to continue the negotiations, and they choose to abandon the planned transaction only as a last resource.

Information from the geographical focus of M&A indicates that in Europe M&A are mainly carried out within the countries' borders, although in recent years the number of cross-border deals has increased considerably. Moreover, the average value of cross-border investments is usually quite high compared to domestic M&A. An interpretation of this scenario is that industrial consolidation processes within each country force acquirers to undertake larger cross-border deals given a shortage of target firms available in the local markets (Moschieri & Campa, 2009). The data also reveal that there is a high degree of concentration of local and cross-border deals in the European market, with the United Kingdom topping the list of acquirers and targets. The fact that the UK is a vibrant market for M&A could be explained by the high protection for investors of its legal system -the common-law system-, as well as by other features, such as better accounting standards,[16] more dynamic and competitive markets, as well as a more dispersed ownership structure (Moschieri & Campa, 2009).

In addition, the distribution of M&A between cross-border and local could suggest some positive effects of the implementation of the EU Directive on the M&A market. Taking into consideration that this reform aims to boost the common M&A market, facilitating the flow of capitals between EU member countries (European-Commission, 2007), the fact that the participation of cross-border M&A has increased since 2006 could be considered as evidence pointing in that direction. However, as suggested above, more

[16] For public targets this could be the case before 2005 only, since countries followed different accounting standards before that year. Regarding private firms, it should be analyzed country by country even after 2005, since IFRS are not used everywhere.

robust evidence would be required to distinguish between the effects attributable to the Directive and those which may be associated with other reasons. For example, it could be argued that the emergence of M&A waves relates to changes in the business environment (Martynova & Renneboog, 2008). Under this perspective, the cyclical pattern of M&A could be related with macroeconomic cycles, such as the implementation of expansive economic policies -e.g., easing interest rates- that seek to alleviate the adverse effects of the 2008 financial crisis. Recent work in the US market validates that the M&A wave between 2003 and 2007 can be directly attributed to the availability of liquidity in the US economy (Alexandridis et al., 2012).

Continuing with the analysis of the characteristics of the M&A, this paper shows that (1) cash is the most popular means of payment in the European market, although (2) deals in which shares or a combination of shares with cash are used are often of higher value, especially in the M&A waves peaks. The first is in line with prior literature denoting that acquirers prefer to use cash rather than stocks, as the latter is associated with a high risk of expropriation in low investor protection countries, as is the case in many countries from continental Europe (Rossi & Volpin, 2004; Hagendorff, Colluns, & Keasey, 2008). The second could be related to the theories of market timing for M&A waves (Martynova & Renneboog, 2008). Under these lenses, from time to time, acquirers strategically seek to minimize the costs related to the acquisition of targets by paying with their shares, which would be temporarily overvalued in periods of equity markets booming (Rhodes-Kropf & Viswanathan, 2004; Shleifer & Vishny, 2003). Here, it is assumed that the targets accept the shares of the acquirers, either because management has difficulties determining whether those shares are overpriced according to market conditions (Rhodes-Kropf & Viswanathan, 2004); or because management benefits from the operation and makes the rational decision to accept the shares as a means of payment (Shleifer & Vishny, 2003).

As for the industries involved in M&A, the information from the European market shows that deals are mainly concentrated in the financial sector and that more than half involve companies in the same industry. The first feature would be in accordance with the previous literature that confirms a consolidation of European banking in recent years (Asimakopoulos & Athanasoglou, 2013; Ekkayokkaya, Holmes, & Paudyal, 2009). Through this concentration, acquirers seek benefits such as increasing the centralization of functions (economies of scale), improving customer selection (information

economies), increasing their market power, and increasing geographical and portfolio diversification (risk reduction), among others (Beltratti & Paladino, 2013). The second feature is not strange for the European market. Indeed, the wave of M&A between 2003 and 2007 reflects a similar trend, which could be due to the integration processes of national economies and the deregulation of some industries (Moschieri & Campa, 2009). Besides the previous literature argues that more benefits are commonly associated with related M&A compared to unrelated deals, such as greater transaction synergies, economies of scope and scale, lower information asymmetries, and reducing the risk of overestimating the target value (Balakrishnan & Koza, 1993; Capron & Shen, 2007; Shen & Reuer, 2005; Singh & Montgomery, 1987). In this regard, given the persistence of this trend in Europe, future research could deepen on how M&A processes are carried out when acquirers and objectives belong to the same industry.

This work shows how different is the target's ownership that acquirers have before and after the M&A. A typical scenario is that the acquirer does not have any ownership in the target or at best have a minority stake, but at the same time, it usually seeks majority control through a total M&A. At first glance, this could fit within the approach to the tunneling problem, since, if the acquirer only gets a minority stake after the M&A, it could easily suffer from the expropriation of wealth by the target's majority shareholders. Johnson, La Porta, Lopez-de-Silanes, and Shleifer (2000) indicate that this problem afflicts not only emerging countries but also some developed countries with legal systems based on civil-law, as is the case in continental Europe. Here, tunneling is legal, contrary to what happens in emerging countries, and has its origins in the laws and in the way they are interpreted in the courts. Thus, acquirers may decide to perform majority M&A to gain control of the objectives, —in many cases via total M&A, — to avoid this scenario. However, a preliminary analysis of this idea does not appear to fit with the fact that about half of the M&A are between UK companies, where the common-law system would protect minority shareholders from tunneling. Future research could, therefore, deepen in the knowledge about the factors that explain the level of ownership that acquirers seek to achieve after M&A in Europe.

About the attitude towards deal announcements in the EU, and the existence of multiple bidders, the data indicate that most M&A tend to be friendly and with only one bidder. According to Moschieri and Campa (2009), the prevalence of friendly deals is due to the high level of ownership concentration in many European companies, particularly in

continental Europe. Similarly, the lack of hostile M&A could be directly associated with the lack of competition in such operations, what has its roots in the fact that deals tend to be mostly local, as well as with the strong presence of industrial and financial conglomerates in Europe.

Finally, considering the private versus the public status of acquirers and objectives, we find that the majority of announcements in the EU are from private firms seeking to acquire private firms, albeit, in monetary terms, investments between public firms are substantially larger. The M&A literature provides explanations of certain benefits of acquirers participating in deals where targets are private, including that these companies tend to be undervalued compared with their public peers, which acquirers use to their advantage (Capron & Shen, 2007).

1.6. Conclusions

We draw several conclusions from this work. In general, the number of M&A in the EU is clustered as waves over time. Also, the vast majority are completed. However, despite their low frequency, withdrawn deals are generally larger than those completed, which is consistent with the average duration of negotiations between the parties. Similarly, M&A are mostly local, although the average value of cross-border investments is larger. Local and cross-border deals are concentrated in a few countries, being the UK the one that concentrates the most substantial activity in the block.

We also find that M&A in the region are mostly focused on the finance, transportation, and manufacturing industries. Additionally, more than half of the deals are made between companies in the same economic sector. Regarding the deal attitude and competition, our evidence indicates that M&A tend to be mostly friendly and do not involve more than one bidder. Here, hostile deals concentrate substantially higher investments even though they are less common than the rest.

In the same vein, we also find that, while in most of the deals acquirers use cash, in larger deals, acquirers use stocks or a combination of stocks and cash as payment method. Besides, public firms have a large market share in M&A in the EU market, both as acquirers and as targets. Evidence also shows that on the one hand acquirers do not have

any type of ownership in targets, but on the other hand, they seek to gain full control over the targets after completing M&A.

In general, most of these features are similar to the US market of M&A, except for the use of cash as the payment method (higher in the EU) and the frequency of hostile deals (lower in the EU), which can be attributed to many factors of the European context. In particular, it could be explained by the risk of expropriation in low investor protection countries, the high ownership concentration, and the presence of large industrial and financial conglomerates.

To conclude, we refer to future avenues of research that derive from the analysis, which are specific to the European setting. For example, the increase in cross-border deals, the high presence of industry-related deals, or the ownership levels to acquire, are among some of the research opportunities in the EU M&A market.

References

Alcalde, N., & Pérez-Soba, I. (2016). Has the EU Takeover Directive Improved Minority Shareholder Protection? The Spanish Evidence. *European Business Organization Law Review*, *17*(3), 261–283. https://doi.org/10.1007/s40804-016-0049-8

Alexandridis, G., Mavrovitis, C. F., & Travlos, N. G. (2012). How have M&A changed? Evidence from the sixth merger wave. *The European Journal of Finance*, *18*(8), 663–688. https://doi.org/10.1080/1351847X.2011.628401

Andrade, G., & Stafford, E. (2004). Investigating the economic role of mergers. *Journal of Corporate Finance*, *10*(1), 1–36. https://doi.org/10.1016/S0929-1199(02)00023-8

Angwin, D. (2001). Mergers and acquisitions across European borders: National perspectives on preacquisition due diligence and the use of professional advisers. *Journal of World Business*, *36*(1), 32–57. https://doi.org/10.1016/S1090-9516(00)00053-5

Asimakopoulos, I., & Athanasoglou, P. P. (2013). Revisiting the merger and acquisition

performance of European banks. *International Review of Financial Analysis*, *29*, 237–249. https://doi.org/10.1016/j.irfa.2012.08.010

Balakrishnan, S., & Koza, M. P. (1993). Information asymmetry, adverse selection and joint-ventures: Theory and evidence. *Journal of Economic Behavior & Organization*, *20*(1), 99–117. https://doi.org/https://doi.org/10.1016/0167-2681(93)90083-2

Beltratti, A., & Paladino, G. (2013). Is M&A different during a crisis? Evidence from the European banking sector. *Journal of Banking & Finance*, *37*(12), 5394–5405. https://doi.org/10.1016/j.jbankfin.2013.02.004

Capron, L., & Shen, J. C. (2007). Acquisitions of private vs. public firms: Private information, target selection, and acquirer returns. *Strategic Management Journal*, *28*(9), 891–911. https://doi.org/10.1002/smj.612

Clarke, B. (2009). The Takeover Directive: Is a Little Regulation Better Than No Regulation? *European Law Journal*, *15*(2), 174–197. https://doi.org/10.1111/j.1468-0386.2008.00457.x

Clerc, C., Demarigny, F., Valiante, D., & de Manuel Aramendía, M. (2012). *A legal and economic assessment of European takeover regulation*. Brussels.

Contractor, F. J., Lahiri, S., Elango, B., & Kundu, S. K. (2014). Institutional, cultural and industry related determinants of ownership choices in emerging market FDI acquisitions. *International Business Review*, *23*(5), 931–941. https://doi.org/10.1016/j.ibusrev.2014.02.005

Dang, M., & Henry, D. (2016). Partial-control versus full-control acquisitions: Does target corporate governance matter? Evidence from eight East and Southeast Asian countries. *Pacific Basin Finance Journal*, *40*, 251–265. https://doi.org/10.1016/j.pacfin.2015.12.011

Ekkayokkaya, M., Holmes, P., & Paudyal, K. (2009). The euro and the changing face of European banking: Evidence from mergers and acquisitions. *European Financial Management*, *15*(2), 451–476. https://doi.org/10.1111/j.1468-036X.2007.00411.x

European-Commission. (2007). *Report on the implementation of the Directive on Takeover Bids*. Brussels.

Faccio, M., & Masulis, R. W. (2005). The Choice of Payment Method in European Mergers and Acquisitions. *The Journal of Finance*, *60*(3), 1345–1388.

Gaughan, P. A. (2017). Introduction. In *Mergers, Acquisitions, and Corporate Restructurings* (pp. 1–39). https://doi.org/10.1002/9781119380771.ch1

Hagendorff, J., Collins, M., & Keasey, K. (2008). Investor protection and the value effects of bank merger announcements in Europe and the US. *Journal of Banking & Finance*, *32*(7), 1333–1348. https://doi.org/10.1016/j.jbankfin.2007.11.008

Haleblian, J., Devers, C. E., McNamara, G., Carpenter, M. A., & Davison, R. B. (2009). Taking Stock of What We Know About Mergers and Acquisitions: A Review and Research Agenda. *Journal of Management*, *35*(3), 469–502. https://doi.org/10.1177/0149206308330554

Harford, J. (2005). What drives merger waves. *Journal of Financial Economics*, *77*(3), 529–560.

Hubbard, R. G., & Palia, D. (2002). A Reexamination of the Conglomerate Merger Wave in the 1960s: An Internal Capital Markets View. *The Journal of Finance*, *54*(3), 1131–1152. https://doi.org/10.1111/0022-1082.00139

Humphery-Jenner, M. (2012). The impact of the EU takeover directive on takeover performance and empire building. *Journal of Corporate Finance*, *18*(2), 254–272. https://doi.org/10.1016/j.jcorpfin.2011.12.004

Johnson, S., La Porta, R., Lopez-de-Silanes, F., & Shleifer, A. (2000). Tunneling. *American Economic Review*, *90*(2), 22–27. https://doi.org/10.1257/aer.90.2.22

Kumar, B. R. (2019). Mergers and Acquisitions. In *Wealth Creation in the World's Largest Mergers and Acquisitions: Integrated Case Studies* (pp. 1–15). https://doi.org/10.1007/978-3-030-02363-8_1

Lajoux, A. R., & Elson, C. M. (2010). *The Art of MA Due Diligence: Navigating Critical Steps Uncovering Crucial Data* (2nd ed.). New York: McGraw-Hill Education.

Maquieira, C. P., Megginson, W. L., & Nail, L. (1998). Wealth creation versus wealth redistributions in pure stock-for-stock mergers. *Journal of Financial Economics*, *48*(1), 3–33. https://doi.org/https://doi.org/10.1016/S0304-405X(98)00002-6

Marquardt, C., & Zur, E. (2015). The Role of Accounting Quality in the M&A Market. *Management Science*, *61*(3), 604–623. https://doi.org/10.1287/mnsc.2013.1873

Martin, X., & Shalev, R. (2017). Target Firm-Specific Information and Acquisition Efficiency. *Management Science*, *63*(3), 672–690. https://doi.org/10.1287/mnsc.2015.2371

Martynova, M., & Renneboog, L. (2008). A century of corporate takeovers: What have we learned and where do we stand? *Journal of Banking and Finance*, *32*(10), 2148–2177. https://doi.org/10.1016/j.jbankfin.2007.12.038

Martynova, M., & Renneboog, L. (2011). The Performance of the European Market for Corporate Control: Evidence from the Fifth Takeover Wave. *European Financial Management*, *17*(2), 208–259. https://doi.org/10.1111/j.1468-036X.2009.00497.x

McNichols, M. F., & Stubben, S. R. (2015). The effect of target-firm accounting quality on valuation in acquisitions. *Review of Accounting Studies*, *20*(1), 110–140. https://doi.org/10.1007/s11142-014-9283-x

Mitchell, M. L., & Mulherin, J. H. (1996). The impact of industry shocks on takeover and restructuring activity. *Journal of Financial Economics*, *41*(2), 193–229. https://doi.org/10.1016/0304-405X(95)00860-H

Moeller, S. B., & Schlingemann, F. P. (2005). Global diversification and bidder gains: A comparison between cross-border and domestic acquisitions. *Journal of Banking and Finance*, *29*(3), 533–564. https://doi.org/10.1016/j.jbankfin.2004.05.018

Moschieri, C., & Campa, J. M. (2009). The European M&A Industry: A Market in the Process of Construction. *Academy of Management Perspectives*, *23*(4), 71–87. https://doi.org/10.5465/AMP.2009.45590141

Moschieri, C., & Campa, J. M. (2014). New trends in mergers and acquisitions: Idiosyncrasies of the European market. *Journal of Business Research*, *67*(7), 1478–

1485. https://doi.org/10.1016/j.jbusres.2013.07.018

Moschieri, C., Ragozzino, R., & Campa, J. M. (2014). Does Regional Integration Change the Effects of Country-Level Institutional Barriers on M&A? The Case of the European Union. *Management International Review*, *54*(6), 853–877. https://doi.org/10.1007/s11575-014-0206-7

Ouimet, P. P. (2013). What motivates minority acquisitions? the trade-offs between a partial equity stake and complete integration. *Review of Financial Studies*, *26*(4), 1021–1047. https://doi.org/10.1093/rfs/hhs125

PwC. (2019). Deals year-end review and 2019 outlook. Retrieved March 10, 2019, from https://www.pwc.com/us/en/services/deals/year-end-review-and-2019-outlook.html

Raman, K., Shivakumar, L., & Tamayo, A. (2013). Target's earnings quality and bidders' takeover decisions. *Review of Accounting Studies*, *18*(4), 1050–1087. https://doi.org/10.1007/s11142-013-9224-0

Rau, P. R., & Stouraitis, A. (2010). Patterns in the Timing of Corporate Event Waves. *Journal of Financial and Quantitative Analysis*, *46*(01), 209–246. https://doi.org/10.1017/S0022109010000694

Rhodes-Kropf, M., Robinson, D. T., & Viswanathan, S. (2005). Valuation waves and merger activity: The empirical evidence. *Journal of Financial Economics*, *77*(3), 561–603. https://doi.org/10.1016/j.jfineco.2004.06.015

Rhodes-Kropf, M., & Viswanathan, S. (2004). Market Valuation and Merger Waves. *Journal of Finance*, *59*(6), 2685–2718. https://doi.org/10.1111/j.1540-6261.2004.00713.x

Rossi, S., & Volpin, P. F. (2004). Cross-country determinants of mergers and acquisitions. *Journal of Financial Economics*, *74*(2), 277–304. https://doi.org/10.1016/j.jfineco.2003.10.001

Shen, J. C., & Reuer, J. J. (2005). Adverse selection in acquisitions of small manufacturing firms: A comparison of private and public targets. *Small Business*

Economics, *24*(4), 393–407. https://doi.org/10.1007/s11187-005-5332-y

Shleifer, A., & Vishny, R. W. (2003). Stock market driven acquisitions. *Journal of Financial Economics*, *70*(3), 295–311. https://doi.org/10.1016/S0304-405X(03)00211-3

Singh, H., & Montgomery, C. A. (1987). Corporate Acquisition Strategies and Economic Performance. *Strategic Management Journal*, *8*(4), 377–386.

Skaife, H. A., & Wangerin, D. D. (2013). Target financial reporting quality and M&A deals that go bust. *Contemporary Accounting Research*, *30*(2), 719–749. https://doi.org/10.1111/j.1911-3846.2012.01172.x

Vernimmen, P., Le Fur, Y., Dallochio, M., Salvi, A., & Quiry, P. (2017). Taking Control of a Company. In *Corporate Finance: Theory and Practice* (pp. 796–818). https://doi.org/10.1002/9781119424444.ch44

Very, P., & Schweiger, D. M. (2001). The acquisition process as a learning process: Evidence from a study of critical problems and solutions in domestic and cross-border deals. *Journal of World Business*, *36*(1), 11–31. https://doi.org/10.1016/S1090-9516(00)00052-3

Walker, M. M. (2000). Corporate Takeovers, Strategic Objectives, and Acquiring-Firm Shareholder Wealth. *Financial Management*, *29*(1), 53–66.

Wangerin, D. (2019). M&A Due Diligence, Post-Acquisition Performance, and Financial Reporting for Business Combinations. *Contemporary Accounting Research*, *36*(4), 2344–2378. https://doi.org/10.1111/1911-3846.12520

CHAPTER 2. EARNINGS MANAGEMENT OF TARGET FIRMS AND DEAL PREMIUMS: THE ROLE OF INDUSTRY RELATEDNESS

2.1. Introduction

The global merger and acquisitions (M&A) activity reached 4.1 trillion USD in deal announcements in 2018, the third highest volume since 2002 (J.P. Morgan, 2019: 2).[17] Not even the uncertainties regarding Brexit have discouraged investors from carrying on M&A. On the contrary, they have prompted overseas buyers to take advantage of a sliding pound, and the deals involving UK firms reached 275 billion USD in 2018, the highest of this century (PwC, 2019).

Despite the growing appetite for M&A, many deals fail.[18] Specifically, while shareholders of target companies usually receive a significant premium for their shares, these investments do not always benefit acquirers. Indeed, overpayment is one common reason for M&A failure (PwC, 2016). Often, the acquirers overvalue the synergies and expected gains arising from the deal, which subsequently entail harmful consequences for their shareholders, as several studies suggest. For example, Martynova and Renneboog (2008) find that stock returns surrounding deal announcements are positive for target firms, but at best insignificant for acquirers; and studies, such as Guest, Bild, and Runsten (2010) or Tuch and O'Sullivan (2007), provide evidence that the acquirers suffer negative share returns in the long run.

The evidence of opportunistic earnings management (EM) practices by target firms before M&A is scarce and inconclusive, and some studies suggest that these practices are not always at the expense of the acquirer. Nevertheless, there is evidence that poor financial reporting quality (FRQ) of the target before the takeover positively relates to the deal failure (Marquardt & Zur, 2015; Skaife & Wangerin, 2013). Also, there is anecdotal evidence suggesting that misunderstanding the manipulated financial statements of the target underlies the overvaluation of some M&A. An example is the acquisition of the UK firm *Autonomy* in the corporate software and services sector by the US hardware business *HP*. In 2018, the US Department of Justice filed a criminal investigation against Mike Lynch, the former CEO and co-founder of *Autonomy*. As alleged by *HP*, he and

[17] As usual in the literature, we use the terms mergers, acquisitions, deals, takeovers and M&A interchangeably (e.g., Weitzel & Berns, 2006).

[18] A deal is considered successful if the lower costs and/or the increase in revenues derived from the business combination compensate the premium paid. This is not always the case, and the failure rate of M&A is over 50% (see Chang, Curtis, & Jenk, 2002; Child, Faulkner, & Pitkethly 2001; Nguyen & Kleiner, 2003; or Riad, 2007).

other executives engaged in financial mismanagement before the deal completion in 2011 (Jolly, 2018). *HP* invested USD 11.1 billion in the deal, paying a premium of 64% for *Autonomy* and just one year later booked an impairment loss of USD 8.8 billion (Ciesielski, 2016; Gupta, Damouni, & Sandle, 2012). This occurred even though *HP* performed an intensive due diligence before the deal (Moore, 2012). Indeed, this is an extreme case of, likely, accounting fraud by the target company, and it could be argued that it is rare to find. Nevertheless, given that earnings management practices are a pervasive and widespread strategy of firms (Bagnoli & Watts, 2000), and that the acquirers have obviously incentives to hide this type of (non-efficient) decisions, the chances are that cases of (less extreme) manipulation of accounting numbers underlying M&A overvaluation are more frequent than the anecdotal evidence would lead to expect.

The current growth trend of M&A activity along with the critical consequences of overvaluation highlight the need for a better understanding of how acquirers fix the premium in the due diligence process. In such a process, the analysis of the target's financial statements is a significant input (Angwin, 2001; Very & Schweiger, 2001). This paper aims to shed light on one of the critical factors that might help bidders to be aware of the EM practices by the target before the deal, namely industry relatedness. In particular, we investigate the role of industry relatedness in the association between the target's EM practices and the premium offered by the acquirer.

Several studies report benefits for acquirer firms involved in intra-industry deals. In contrast, inter-industry takeovers are associated with higher agency costs that result in managers performing more value-destroying deals. Mainly, overvaluation is found to be lower in intra-industry deals (Gregory, 1997; Maquieira, Megginson, & Nail, 1998; Moeller and Schlingemann, 2005; Singh & Montgomery, 1987; Walker, 2000). This can be a consequence of acquirers in the same industry being able to understand the target's EM practices to boost earnings, and discount them in the premium offered, more easily than in industry unrelated M&A. The argument is consistent with the results of the research in the financial reporting literature suggesting that firms in the same industry are more likely to follow similar accounting policy choices and procedures (Ballas & Hevas, 2005; Gu, Lee, & Rosett, 2005; Jaafar & McLeay, 2007).

We test our prediction in a sample of 913 M&A announced in Europe in the period 1997-2017. The European market for corporate control is a growing and dynamic market that

is relatively under-explored. Moreover, in comparison with the USA, on which most research is based, Europe is an attractive setting for the global M&A research, as it comprises several jurisdictions with different law systems and financial markets (Faccio & Masulis, 2016; Humphery-Jenner, 2012; Moschieri & Campa, 2009, 2014).

In the empirical tests, we express the premium offered as a function of several characteristics of the deal and the target's financial condition before the announcement, including its EM practices, which is our variable of interest. We employ discretionary accruals, estimated using the performance-matched model proposed by Kothari, Leone, and Wasley (2005), to proxy for accounting manipulation, and the measures of sales manipulation and overproduction proposed by Roychowdhury (2006) as proxies of EM via real activities.

The results indicate that, on average, none of the EM measures considered are significantly related to the bid premium. However, a more refined cross-sectional analysis where we assess the role of industry relatedness on the association reveal that the target's discretionary accruals are negative (positive) and significantly associated with the bid premium in industry-related (industry-unrelated) takeovers. Additionally, none of our estimations validate a significant association between bid premiums and the proxies of EM via real activities. These results are robust to several alternative model specifications.

Overall, the evidence confirms our prediction. It seems that in industry-related deals, acquirers can take advantage of their knowledge of the industry, detect the upward earnings manipulation via discretionary accruals and reduce the premium offered to the targets accordingly. Thus, industry familiarity helps acquirers untangle the complex mix between the real economic value of synergies and the noise that management discretion incorporates in the financial statements of the targets. In other words, our results imply that the due diligence is a useful tool to identify accounting manipulation, since acquirers diminish bid premiums due to upwards earnings manipulation through accruals, but only when the acquirer has a good knowledge of the target's industry. On the contrary, the evidence suggests that the target's real activities manipulation does not relate to the premium offered by the acquirer. This result is in line with the widespread belief that real EM practises are less pervasive than accounting manipulation because they affect cash flows and therefore, are more costly (e.g., Bagnoli & Watts, 2000; Graham, Harvey, & Rajgopal, 2005; Cohen, Dey, & Lys, 2008).

This paper contributes to the literature in a number of ways. Firstly, although prior research widely confirms that acquirers perform EM before stock-for-stock deals to lower their acquisition costs (Botsari & Meeks, 2008; Erickson & Wang, 1999; Higgins, 2013; Louis, 2004), little is known about the effects of the target's EM activity on M&A negotiations (Anagnostopoulou & Tsekrekos, 2015; Campa & Hajbaba, 2016). This contrasts with two facts: 1) EM is a widespread phenomenon, which companies carry on in a pervasive manner (Bagnoli & Watts, 2000); and 2) although acquirers invest plenty of resources in the due diligence process (Angwin, 2001; Very & Schweiger, 2001), flaws still take place. This paper provides new insights into the due diligence process, as it delves into the target's accounting information, which is a key source to estimate the benefits of the takeover but could be contaminated with EM practices (Raman, Shivakumar, & Tamayo, 2013). Disentangling this complex mix is a desirable goal of the pre-acquisition process that enhances its value for acquirers. In this sense, this paper relates to recent research examining the economic value of the due diligence (Cumming & Zambelli, 2017), but differs from prior US papers that refer to the impact of FRQ on the bid premium, since it focuses on EM and considers the role of industry relatedness.

Secondly, our results are linked to some of the intriguing outcomes concerning the post-acquisition performance of M&A, which indicate that acquirers do not benefit from those deals. Our findings suggest that the knowledge of the business accounting practices may help acquirers to achieve a better position to negotiate the terms of the deal and diminish the risk of overestimating the target's value.

Finally, this study is related to the literature on the role of industry in evaluating the economic effects of accounting information. Although this role has already been studied in the equity valuation setting (Ballas & Hevas, 2005; Barth, Beaver, Hand, & Landsman, 1999), it has not been considered in M&A so far. Furthermore, the paper contributes to the calls claiming for more research on industry-related accounting differences (Jaafar & McLeay, 2007).

The remainder of the study is as follows. Next section reviews the related literature and develops the hypotheses. Section 1.3 presents the methodology, section 1.4 discusses the results, and section 1.5 synthesizes the conclusions.

2.2. Literature review and hypotheses development

2.2.1. Related literature

The literature review is structured in three parts. First, we refer to studies that investigate EM in M&A. Next, we summarize papers that deal with the impact of industry-relatedness in M&A. Finally, we review studies concerned with the role of industry-relatedness in financial reporting.

2.2.1.1. Earnings management and M&A

Although neither the incentives nor the ability of the acquirers or the targets to manipulate earnings before a M&A are clear a priori, some studies have investigated this issue.

Several US-based studies provide evidence that acquirers manipulate earnings before takeovers. Erickson and Wang (1999) show that acquiring firms increase the price of their stock through upward EM in stock-for-stock transactions, and Louis (2004) suggests that the negative post-takeover returns of acquiring companies could be attributable to the reversal in share prices of prior EM practices. Based on these studies, Baik, Cho, Choi, and Kang (2007) provide evidence that acquirers performing stock-for-stock deals are more prone to carry out EM before the deal when acquiring private companies; and Gong, Louis, and Sun (2008) find that EM performed by the acquirer before the deal is positively related to post-takeover lawsuits. However, Heron and Lie (2002) do not confirm that the payment method correlates with the acquirer's EM activity before the deal, nor with its subsequent underperformance. More recently, Baik, Cho, Choi, and Kang (2015) find that in cross-border stock swaps, US acquirers manipulate earnings before the deal as a strategy to offset risks from targets located in lower institutional quality settings. Besides, Louis and Sun (2016) show that bidders with inflated earnings are more likely to announce stock swaps on Fridays, when markets are distracted; otherwise, they are penalized by investors who anticipate that their shares are overvalued.

Although more scarce, the US-based literature has also studied the EM activity of target firms. Early studies support the thesis that acquired companies perform EM before hostile transactions (Easterwood, 1998) and stock-for-stock deals (Erickson & Wang, 1999). More recently, Campa and Hajbaba (2016) show that targets carry out real EM activities before cash deals, and that this activity is related to the subsequent poor performance of

the acquirer.[19] Additionally, Chen, Thomas, and Zhang (2016) suggest that the target's EM activity before the deal is not always at the expense of the acquirer, since they provide evidence of downward EM to transfer profits to future years, which helps bidders justify the premium paid.

A few related papers show that the FRQ of the target influences the terms and the completion of the takeover. Skaife and Wangerin (2013) corroborate that when the target FRQ is poor, the probability that the deal is not completed increases. These authors use an index that entails different dimensions of FRQ,[20] and find that the target's poor FRQ is associated with higher premiums, which in turn are usually renegotiated in a later stage of the M&A process. Raman et al. (2013) find that bidders prefer negotiated deals when the target's FRQ is poor, and that the private information arising in the negotiations leads to higher bid premiums. Additionally, they show that acquirers prefer to pay with equity when faced with low FRQ targets. Marquardt and Zur (2015) show that targets with low FRQ are more prone to be involved in auctions, and that high FRQ targets require less time to reach an agreement and are more likely to complete the M&A. Finally, McNichols and Stubben (2015) analyze the stock returns around the deal's announcement and observe that the better the target's FRQ, the larger the acquirer's returns.

There are also some studies in non-US settings that focus on EM practices in M&A. Koumanakos, Siriopoulos, and Georgopoulos (2005) find that Greek acquirers exhibit signs of EM before cash-financed takeovers. Ben-Amar and Missonier-Piera (2008) observe that target firms perform downward EM before friendly M&A in Switzerland. Regarding stock-for-stock deals, Francoeur, Ben-Amar, and Rakoto (2012) confirm that acquirers carry out EM in Canada. Botsari and Meeks (2008) show that UK bidders artificially increase earnings through the working capital component of accruals up to one year before the deal's announcement. Higgins (2013) suggests that Japanese acquirers do the same in stock swaps, but they use long-term accruals (e.g., depreciation, deferred taxes, among others) due to the low level of scrutiny around such items in the country. Also, in the UK, Lehmann (2015) provides evidence contrary to the common claim that

[19] The literature differentiates between EM and real EM (see for example, Healy & Whalen, 1999; Dechow & Skinner, 2000). The former refers to earnings manipulation using accruals, while the second is done by manipulating cash flows through economic transactions, such as delaying research and development activities or cutting discretionary expenses.

[20] The index comprises the absolute value of discretionary accruals, the weakness of internal control, the off-balance-sheet liabilities, and the absolute value and the dispersion of the analyst forecast errors.

good governance constraints EM practices. He finds that UK well-governed acquirers are more prone to carry out EM in stock swaps. Finally, for stock deals with private targets in Europe, Alsharairi, Black, Hofer, and Al-Hamadeen (2015) show that EM practices of acquirers have a positive effect on their abnormal stock returns.

In sum, most of the EM-related literature in M&A focuses on acquirers performing stock swaps in the US. Additionally, despite the growing interest in analyzing the target's EM activity before the takeover, most of the evidence on this issue is setting-specific (i.e., negotiated deals, auctions, or stock swaps).

2.2.1.2. Industry relatedness in M&A

The more similar the firms involved in an M&A, the easier it would be to integrate knowledge and combine operations. Therefore, the expected synergies such as economies of scale and cost cuts are higher (Ahuja & Katila, 2001; Capron, 1999; Helfat & Eisenhardt, 2004; Nesta & Saviotti, 2005). The literature has found that the acquirers' market value is higher after M&A in intra-industry deals (Maquieira et al., 1998), and that industry relatedness positively affects the success of M&A (PwC, 2016). Accordingly, prior studies reveal higher bid premiums for intra-industry than for inter-industry deals (Walkling & Edmister, 1985; Tuch & O'Sullivan, 2007). Also, some studies indicate that the overvaluation is lower in intra-industry deals, as they achieve higher returns than inter-industry takeovers, both in the short and in the long term (Gregory, 1997; Maquieira et al., 1998; Moeller & Schlingemann, 2005; Singh & Montgomery, 1987; Walker, 2000).

The role of industry relatedness in mitigating information asymmetries and adverse selection problems concerning the target's value influences also the choice between the joint-venture and M&A. Given the difficulties of valuing the targets' assets, the most efficient solution to exploit the synergies might be to perform a joint venture instead of a takeover. However, if the acquirer and the target are industry-related, the information asymmetries, and in particular the adverse selection problem, might be less severe than the conflicts arising from administering the joint venture (Balakrishnan & Koza, 1993). Similarly, there is evidence that public acquirers avoid buying private targets in unrelated industries due to the risk of overvaluation, which is aggravated by the private status of the targets (Capron & Shen, 2007; Shen & Reuer, 2005).

The literature has also explored the role of industry relatedness in reducing the information risk in M&A. As indicated by Raman et al. (2013), when targets have low earnings quality, bidders make decisions intending to share the information risk with them, such as choosing negotiated deals or paying with equity; and these results are stronger in inter-industry takeovers. These authors posit that concerns about asymmetric information are greater in inter-industry than in intra-industry takeovers; in the latter, bidders have a better understanding of the key risks and the economic drivers of targets. This is because both companies compete in the same business, have access to confidential industry reports, and regularly share information that keeps them well informed about the activities of their industry peers (e.g., industry association conferences, CEO-level meetings).

In brief, the literature referred to the role of industry relatedness in M&A suggests that determining the target's value is easier in industry-related takeovers, which benefits acquirers.

2.2.1.3. Industry and financial reporting

The academic literature supports the notion that industry affiliation is one of the main drivers of accounting policy choices and, therefore, of FRQ. In other words, firms tend to follow their industry pairs when adopting accounting practices (Reppenhagen, 2010).

Bagnoli and Watts (2000) develop a theoretical model that leads to conclude that firms commonly engage in EM. The rationale underlying their thesis is that companies compete for resources, and investors compare the financial statements of potential investments to allocate their funds. To the extent that industry peers are the natural comparison, these authors argue that the industry is relevant to explain EM choices because a firm incurs in EM depending on its rivals' choices. Their reasoning relies on two assumptions: 1) firms in similar industries face similar costs of EM practices; and 2) investors/creditors focus on specific components of earnings when analyzing an industry.

Gu et al. (2005) examine the variability of accounting accruals and its implications for EM, and find that the accepted accounting procedures and management choices (e.g., inventory valuation or bad debt provisions) vary across industries. These authors also state that the volatility of some financial figures depends on the industry. In this line, Barth et al. (1999) find considerable variation of the earnings components —accruals and

cash flows— between industries, which has different implications for firm valuation. Thus, the ability of acquirers to detect the target's EM probably depends on their understanding of the industry dynamics regarding accruals. More recently, Chen, Collins, Kravet, and Mergenthaler (2018) conclude that the ability to compare the target's financial statements improves M&A efficiency, which is not likely in inter-industry acquisitions.

In Europe, Ballas and Hevas (2005) use a valuation framework to examine how the perception about some figures from the financial reports differ in four capital markets, namely France, Germany, the Netherlands, and the UK. They conclude that industry-specific valuation multiples are more accurate than country-specific ones when using accounting variables to forecast market values. In line with this rationale, their results show convergence in financial reporting practices within industries, including timeliness and conservatism. In the same vein, Jaafar and McLeay (2007) examine the accounting policies concerning inventory, depreciation, and goodwill in a sample of European companies before IFRS implementation, concluding that country differences are more significant than industry differences.

Finally, research shows that auditors tend to specialize in specific industries (Rhode, Whitsell, & Kelsey, 1974); and that auditors who are industry specialists better constrain EM and financial fraud (Balsam, Krishnan, & Yang, 2003; Carcello & Nagy, 2004; Krishnan, 2003).

In sum, academic research supports the notion that the accounting policies are similar for companies in the same industry and differ among industries, and that the techniques used to perform EM are pretty similar among firms in the same industry.

2.2.2. Hypotheses

This study investigates how acquirers incorporate the target's EM when deciding the deal premium to be offered. The bid premium is determined during the due diligence preliminary review, before the acquisition agreement is signed.[21] This is why we focus on M&A announcements. At this stage of the negotiations, although acquirers could have obtained limited private information from the targets, their valuation relies primarily on

[21] For an in-depth review of the acquisition due process see Chen et al. (2018), Marquardt and Zur (2015), or Skaife and Wangerin (2013).

the publicly available financial statements (Lajoux & Elson, 2009).[22]

We do not make any assumption about the potential incentives of target companies to carry out EM due to the M&A. Instead, we assume that the target's EM before the takeover is exogenous, since there are many other motivations that may underlie these practices. Bagnoli and Watts (2000) provide support to this assumption: they consider EM as a non-cooperative game where similar firms compete for funding using financial information, prompting them to engage in EM regularly. Similarly, Dechow, Ge, and Schrand (2010) sustain that external factors such as capital requirements or earnings-based objectives induce firms to engage in EM practices. Moreover, despite those potential motivations, the targets are not usually the deal initiators (Anagnostopoulou & Tsekrekos, 2015), so that they generally lack the time to window-dress their financial statements.

The association between the target's EM practices and the bid premium offered by the acquirer is not clear a priori. As argued by Skaife and Wangerin (2013), it depends on the ability of the acquirer to detect or not the upward EM of the target with the limited resources and time available during the due diligence process. We build on this argument and pose that industry relatedness is a crucial determinant of such ability, so we expect that the relation differs between inter-industry and intra-industry transactions. In particular, we argue that acquirers operating in the targets' industry have an advantage derived from their knowledge of the industry; indeed, they are aware of the accounting practices, as well as the standard techniques to carry out EM. Accordingly, they should be able to detect EM practices in the target's financial statements before the deal announcement and bid lower for its shares the higher their income-increasing EM practices. The opposite is expected in inter-industry deals, where acquirers are not expected to disentangle the EM practices, thus offering higher premiums to targets with higher EM. Therefore, we formulate the two following alternative hypotheses:

H1: In inter-industry M&A, the greater the target's income-increasing EM practices (before the deal announcement), the larger the deal premium offered by the acquirer

[22] The due diligence does not conclude at this point. Acquirers can request more (private) information from targets subsequently, which may lead to complete, withdraw or renegotiate their initial bid. Nonetheless, our focus on deal announcements allows us to analyze how acquirers use publicly available financial information in the M&A process.

H2: In intra-industry M&A, the greater the target's income-increasing EM practices (before the deal announcement), the smaller the deal premium offered by the acquirer

2.3. Methodology

In this section, we discuss the variables measurement, the empirical model employed to test the hypotheses, and describe the sample under study.

2.3.1. Earnings management measures

The vast majority of M&A studies analyzing EM employ measures of accruals quality. Discretionary accruals (*DA*) estimated through the performance-matched model proposed by Kothari et al. (2005) is the most commonly used measure (e.g., Alsharairi et al., 2015; Baik et al., 2015, 2007; Botsari & Meeks, 2008; Chen et al., 2016; Francoeur et al., 2012; Gong et al., 2008; Lehmann, 2015; Louis, 2004). Related studies focused on FRQ of target firms also use *DA* adjusted to performance (Skaife & Wangerin, 2013).

Following prior studies, we measure accounting EM in year *t*-1 (i.e., one year before the deal announcement) by estimating the model in equation (2.1) for each combination of industry and year, where samples (industry-year) comprise targets and peer firms listed in the leading stock exchanges in the EU, and we require a minimum of 15 observations per regression. In accordance with our definition of industry-related deals, industries are defined using the Fama-French 48-industry classification. The adjusted discretionary accruals (DA_{pa}) are the residuals of the OLS estimation of equation (2.1), and we use the quintile ranks of DA_{pa} as the EM proxy via discretionary accruals (*EM-Accruals*).

$$TA_{i,t-1}/Assets_{i,t-2} = \beta_0 + \beta_1(\frac{1}{Assets_{i,t-2}}) + \beta_2(\Delta Rev_{i,t-1} - \Delta AR_{i,t-1})/ Assets_{i,t-2} + \beta_3 PPE_{i,t-1}/Assets_{i,t-2} + \beta_3 ROA_{i,t-2} + \varepsilon_{i,t-1} \quad (2.1)$$

where: TA stands for total accruals (i.e., net income less cash flow from operations); ΔRev is the change in net sales; ΔAR is the change in accounts receivable; PPE is the level of property, plant and equipment; ROA is the return on assets (i.e., net income over total assets); and $Assets$ is total assets.

For the sake of completeness, we also include two proxies of EM through real activities. Following Roychowdhury (2006), we calculate sales manipulation (RA_{sales}) and overproduction (RA_{prod}) using a cross-sectional approach consistent with our DA_p measure, as expressed in equations (2.2) and (2.3).

$$CFO_{i,t-1}/Assets_{i,t-2} = \beta_0 + \beta_1(\frac{1}{Assets_{i,t-2}}) + \beta_2 Rev_{i,t-1}/Assets_{i,t-2} + \beta_3 \Delta Rev_{i,t-1}/Assets_{i,t-2} + \varepsilon_{i,t-1} \quad (2.2)$$

$$PROD_{i,t-1}/Assets_{i,t-2} = \beta_0 + \beta_1(\frac{1}{Assets_{i,t-2}}) + \beta_2 Rev_{i,t-1}/Assets_{i,t-2} + \beta_3 \Delta Rev_{i,t-1}/Assets_{i,t-2} + \beta_4 \Delta Rev_{i,t-2}/Assets_{i,t-2} + \varepsilon_{i,t-1} \quad (2.3)$$

where: CFO stands for cash flow from operations; Rev is the net sales; and $PROD$ is the level of production, which is equivalent to the cost of goods sold plus the change in inventory; the remaining variables are detailed in equation (2.1).

The levels of sales manipulation (RA_{sales}) and overproduction (RA_{prod}) are the residuals of the OLS estimation of equations (2.2) and (2.3), and we use their quintile ranks as the EM proxies via real activities (*EM-Sales* and *EM-Overproduction*).

2.3.2. Empirical model

To test the hypotheses, we estimate the model specified in equation (2.4), where the bid premium is expressed as a function of the target's EM practices before the M&A. We also include a set of control variables identified in prior literature as determinants of the premium, they capture several characteristics of the deal and the target firm.

$$Premium_t = \alpha_0 + \sum_{i=1}^{3} \alpha_i EM_{i,t-1} + \sum_{j=1}^{11} \beta_j Deal.Controls_{j,t} + \sum_{k=1}^{7} \gamma_k Target.Controls_{k,t-1} + \varepsilon_t \quad (2.4)$$

where: *Premium* is the ratio of the price offered to the target's share price four weeks before the deal's announcement date minus one; EM_i stands for *EM-Accruals*, *EM-Sales* or *EM-Overproduction*, which are calculated as described in section 2.3.1; control variables are explained below, and also refer the year before the deal.

In line with our first (second) hypothesis, we expect a negative (positive) coefficient for *EM-Accruals* and *EM-Overproduction* in intra-industry (inter-industry) transactions, while for *EM-Sales* we expect the opposite sign, since lower RA_{sales} indicate increases in sales. We split the sample into inter-industry and intra-industry transactions to test our hypotheses, where we consider that the acquirer and the target are industry-related if both belong to the same industry using the Fama-French 48-industry classification, in other words if they are horizontal M&A. The reasoning of not considering vertical M&A (between suppliers and clients) as intra-industry is that they usually involve the combination of businesses with different activities that probably do not have similar accounting procedures.[23]

The model includes two sets of controls: the characteristics of the deal (*Deal.Controls*), and those of the target firm (*Target.Controls*).

Regarding the deal controls, consistent with prior research, we expect that the bid premium is higher when the acquirer is public (*Public-Bidder*), the deal is hostile (*Hostile*), there are multiple bidders (*Multibid*), the offer is public (*Tender*) and the deal is financed with cash (*Cash*); whereas the prior acquirer's ownership on the target (*Toehold*), the stock swaps (*Stock*) and the size of the target (*Size*) are expected to lower the premium (Bargeron, Schlingemann, Stulz, & Zutter 2008; Betton & Eckbo, 2000; Schwert, 2000; Walkling & Edmister, 1985). The set of controls also includes a dummy representing cross-border takeovers (*Cross-Border*); in line with prior evidence for Europe finding that premiums are higher in cross-border compared to local deals (e.g., Moschieri & Campa, 2009; Bozos Ratnaike, & Alsharairi, 2014), we expect a positive sign. Furthermore, recent empirical studies indicate that the institutional characteristics (such as governance and regulation) of target and acquirer countries exert an effect on the bid premium offered (Hagendorff, Hernando, Nieto, & Wall, 2012; Rossi & Volpin, 2004). Consequently, the model considers the institutional differences between the countries of the two firms. To do so, we follow prior literature (Andriosopoulos & Yang,

[23] Let us consider the hypothetical scenario where *Volkswagen* (German automaker) is planning the acquisition of *Toyota* (Japanese automaker) or *Bridgestone* (Japanese tire manufacturer). Likely, before the M&A announcement, *Volkswagen* might have a good picture of the financial position and performance of *Toyota* by analyzing its financial statements, due to its knowledge of the automaker industry and the particular accounting practices (e.g., bad debt provisions or impairment of inventories). This should not be the case with *Bridgestone*, since no matter the degree of interrelation, the cost structure, profit margin, financing policies, and accounting practices, significantly differ between the two industries.

2015; Baik et al., 2015; Humphery-Jenner, 2012), and use the Worldwide Governance Indicators (WGI) developed by the *World Bank*.[24] Specifically, we perform a principal component analysis to cluster the six WGI into a single index —first principal component— per country and then calculate the difference between the acquirer and the target indexes, which is included as an additional variable in the model (*Institutional-Differences*).[25]

The literature also indicates that some financial characteristics of the target firm determine the bid premium (Bargeron et al., 2008; Schwert, 2000; Walkling & Edmister, 1985). Hence, the following variables are our set of target controls: market to book (*MTB*), liquidity (*Liquidity*), return on equity (*ROE*), price to earnings (*P/E*), sales growth (*Growth*), and leverage (*Leverage*). In turn, prior research finds that profitability, leverage, and growth also affect the firm's FRQ (Dechow et al., 2010). We do not expect a specific effect of these variables on the deal premium because the findings in prior literature are non-conclusive.

Additionally, we pay attention to the differences between the UK and continental Europe in terms of investors' protection and M&A activity (La Porta, Lopez-de-Silanes, Shleifer, & Vishny, 1998; Rossi & Volpin, 2004; Moschieri & Campa, 2009), thus we include an indicator variable that takes the value of 1 if the target is located in the UK, and 0 otherwise (*UK-Indicator*). Finally, the model includes year fixed effects (*Year-Indicators*).

Table 7 summarizes the definitions of the variables used in the study; deal controls are taken from *Thomson One Banker*, while the remaining variables are collected from *Worldscope* and the *World Bank*.

[24] The WGI project provides information for six indexes of institutional governance: 1) voice and accountability; 2) political stability; 3) government effectiveness; 4) regulatory quality; 5) rule of law; and 6) control of corruption (Kaufmann, Kraay, & Mastruzzi, 2009).

[25] This procedure provides a comprehensive measure of the institutional environment per country to help us cope with the high correlations among the WGI indexes (Baik et al., 2015; Dang, Henry, Nguyen, & Hoang, 2018; Davies, Desbordes, & Ray, 2018; Hur, Parinduri, & Riyanto, 2011).

Table 7. Variable definitions for Chapter 2

Variable	Definition
Dependent variable	
Premium	Ratio of the offer price to the target's share price four weeks before the deal's announcement date, minus one
Experimental variables	
EM	See sub-section 3.1. for details
Deal characteristics	
Intra-Industry	Takes the value of 1 if acquirer and target industries are the same (using the Fama-French 48-industry classification) (0 otherwise)
Hostile	Takes the value of 1 if the deal is classified as hostile or unsolicited (0 otherwise)
Multibid	Takes the value of 1 if there are multiple bidders (0 otherwise)
Toehold	% of common shares outstanding held by the acquirer at the date of announcement
Tender	Takes the value of 1 if a tender offer for the target is made (0 otherwise)
Stock	Takes the value of 1 for transactions in which the only consideration offered is stock (0 otherwise)
Cash	Takes the value of 1 for transactions in which the only consideration offered is cash (0 otherwise)
Cross-Border	Takes the value of 1 if the acquirer and target countries are the same (0 otherwise)
Inst-Diff	Difference between the first principal components, from the principal component analysis of the *World Governance Indicators* (from the *World Bank*), of the acquirer and target nations in year t
Public-Bidder	Takes the value of 1 if the acquiring firm is a public company (0 otherwise)
Size	Natural log of the market capitalization of the target in year t-1
Target characteristics	
MTB	Market to book ratio in year t-1
Liquidity	Ratio between the working capital (current assets - current liabilities) over assets in year t-1
ROE	Return on equity ratio in year t-1
P/E	Price to earnings ratio in year t-1
Growth	Natural logarithm of the ratio between sales in year t-1 and sales in year t-2
Leverage	Ratio between total debt and common equity in year t-1

Note: *t* stands for the year of the deal announcement.

2.3.3. Sample

We collected all the deals, completed and withdrawn, announced in Europe (28 member states) between 1997 and 2017 from the *Thomson One Banker* M&A database. WGI were gathered from the *World Bank*. Financial information of target companies comes from

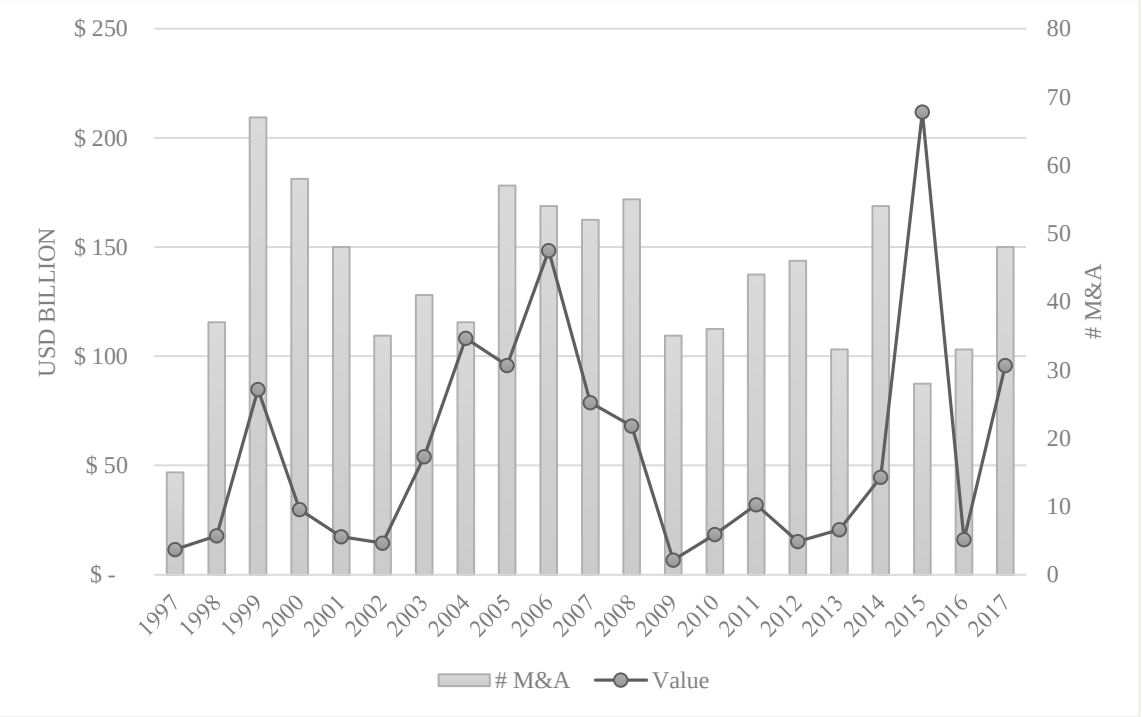
Worldscope, therefore targets are public companies. Following prior studies (e.g., Botsari & Meeks, 2008; Chen et al., 2016; Marquardt & Zur, 2015; McNichols & Stubben, 2015; Raman et al., 2013; Skaife & Wangerin, 2013), the transactions included in the sample meet the following criteria:

1. Neither the targets nor the acquirers belong to the utilities or financial industries.
2. The deal value is higher than 1 million USD.
3. Acquirers seek to gain control of the target after the completion of the deal (i.e., own at least 50%).

The sample selection process described resulted in a final sample of 913 observations.[26] Figure 14 shows the number and average value of the M&A per year in our sample. The average deal is USD 1.3 billion, and deal announcements are clustered over time in waves. Coinciding with the burst of the *.com* bubble, the number of deals dropped by 40% (from 67 to 35) after 1999, while their value suffered an even sharper decrease (83%) in 2002, from 84 to less than USD 15 billion. Later, M&A activity recovered and gradually grew to reach a peak in 2006, with 54 announcements priced at USD 148 billion. Around 2008, the *subprime* crisis smashed takeovers, and in 2013 the activity was comparable to that of 2002 (33 deals priced at USD 20.7 billion). The number of deals exhibited a slight recovery in 2014 with 54 announcements. Yearly values also improved and climbed to a new peak with USD 211 billion in 2015. This evidence is consistent with prior research on takeovers and business environment shocks in Europe (Martynova & Renneboog, 2008, 2011).

[26] The sample size is smaller than in US-based studies but is in line with EU-based ones. Concerning the US studies, McNichols and Stubben (2015) have 2,427 observations corresponding to 1990-2010, Raman et al. (2013) use 4,716 observations corresponding to 1977-2005 and Skaife and Wangerin (2013) have the smallest sample, consisting of 1,468 observations for the period 2002-2008. However, related research in Europe exhibits smaller sample sizes. For instance, Botsari and Meeks (2008) use 147 British observations for the period 1997-2001, and Bozos et al. (2014) analyze a sample of 973 observations corresponding to European M&A during 2000-2011.

Figure 14. Number and value of deal announcements in the sample over time for Chapter 2



2.4. Results

2.4.1. Descriptive statistics and correlations

Table 8 provides information on the country of origin of acquirers and targets, while Table 9 shows the distribution of the sample according to the target's industry. Targets from the UK (39%) and France (16%) comprise more than half of the sample, followed by Germany (13%), Sweden (6%), the Netherlands (6%), and Italy (4%). These five countries represent more than 80% of the targets. This is similar for the acquirers, where these six countries represent 82% of the sample. As for the industry distribution, Table 9 shows that three sectors concentrate half of the sample: business equipment (23.6%), manufacturing (16%), and wholesale and retail (11.2%).

Table 8. Sample distribution by acquirer's and target's domicile country for Chapter 2

Panel A. Acquirer country

Country	Freq.	Percent	Cum.
United Kingdom	322	35.3	35.3
France	156	17.1	52.4
Germany	128	14.0	66.4
Netherlands	55	6.0	72.4
Italy	43	4.7	77.1
Sweden	43	4.7	81.8
Finland	27	3.0	84.8
Spain	22	2.4	87.2
Belgium	18	2.0	89.2
Denmark	17	1.9	91.0
Ireland-Rep	17	1.9	92.9
Poland	16	1.8	94.6
Luxembourg	15	1.6	96.3
Austria	12	1.3	97.6
Greece	11	1.2	98.8
Portugal	5	0.6	99.3
Cyprus	2	0.2	99.6
Czech Republic	1	0.1	99.7
Estonia	1	0.1	99.8
Hungary	1	0.1	99.9
Malta	1	0.1	100.0
Total	*913*	*100.0*	

Panel B. Target country

Country	Freq.	Percent	Cum.
United Kingdom	356	39.0	39.0
France	150	16.4	55.4
Germany	116	12.7	68.1
Sweden	58	6.4	74.5
Netherlands	52	5.7	80.2
Italy	37	4.1	84.2
Poland	22	2.4	86.6
Finland	21	2.3	88.9
Spain	20	2.2	91.1
Belgium	19	2.1	93.2
Denmark	14	1.5	94.7
Greece	13	1.4	96.2
Austria	7	0.8	96.9
Czech Republic	6	0.7	97.6
Ireland-Rep	6	0.7	98.3
Portugal	6	0.7	98.9
Luxembourg	4	0.4	99.3
Hungary	3	0.3	99.7
Lithuania	2	0.2	99.9
Malta	1	0.1	100.0
Total	*913*	*100.0*	

Table 9. Sample distribution by the target's industry for Chapter 2

Description	Freq.	Percent	Cum.
Consumer Non-Durables -- Food, Tobacco, Textiles, Apparel, Leather, Toys	77	8.4	8.4
Consumer Durables -- Cars, TV's, Furniture, Household Appliances	27	3.0	11.4
Manufacturing -- Machinery, Trucks, Planes, Off. Furn., Paper, Com. Printing	146	16.0	27.4
Oil, Gas, and Coal Extraction and Products	14	1.5	28.9
Chemicals and Allied Products	37	4.1	33.0
Business Equipment -- Computers, Software, and Electronic Equipment	215	23.6	56.5
Telephone and Television Transmission	44	4.8	61.3
Wholesale, Retail, and Some Services (Laundries, Repair Shops)	102	11.2	72.5
Healthcare, Medical Equipment, and Drugs	49	5.4	77.9
Other	202	22.1	100.0
Total	*913*	*100.0*	

Table 10 provides the descriptive statistics of the research variables for the full sample and for the inter-industry and intra-industry subsamples, together with the differences between the two. All the continuous variables are winsorized at 1%. The average premium of the deal announcement in the sample is about 33%, most transactions are tender offers (67%) and are made by public acquirers (60%), targets belong to the same industry as bidders in 61% of the sample deals, and acquirers are willing to pay all in cash in 64% of the transactions. Furthermore, M&A in Europe are not often cross-border (28%), or hostile (6%), and on average acquirers own about 22% of the target's shares before the deal. These sample characteristics are similar to those of recent research on M&A in Europe (e.g., Alcalde & Pérez-Soba, 2016; Humphery-Jenner, 2012; Martynova, Oosting, & Renneboog, 2007; Martynova & Renneboog, 2011; Moschieri & Campa, 2014).

Focusing on our measures of manipulation, DA_{pa} exhibits a mean value close to zero (-0.0062) and has a standard deviation of 0.1039, which is quite similar to RA_{prod}. The average of RA_{sales} is 0.0113 and the standard deviation is 0.1133. Regarding the characteristics of the target firms, on average, sales growth is 7.5%, return on equity is 0.3%, and MTB and price-to-earnings ratios are 2.5 and 14.4 respectively. Additionally, an average target in the sample has 0.51 cents in debt per each dollar in common equity, and its working capital represents almost 15% of total assets. These figures compare well with those in prior related studies (e.g., Raman et al., 2013; Skaife & Wangerin, 2013; Campa & Hajbaba, 2016).

As for the comparison between inter-industry and intra-industry deals, the last column of Table 10 provides the *t*-statistic of the corresponding *t*-test. Results show that the difference in the average bid premium of the two samples is not statistically significant. However, the two subsamples show significant differences in some characteristics of both the deal and the target. In particular, acquirers in industry-unrelated deals use significantly more cash than stocks to make bids compared to those involved in industry-related deals. Conversely, acquirers in intra-industry takeovers bid for larger targets, have more competition and are more prone to perform cross-border deals compared with acquirers in inter-industry deals. In terms of target features, targets in intra-industry M&A are significantly more leveraged but exhibit less liquidity than inter-industry targets.

Table 10. Descriptive statistics of the research variables for Chapter 2

	Full Sample [N=913]		Inter-industry [N=353]		Intra-industry [N=560]		Inter-industry vs. Intra-industry	
Dependent variable	**Mean**	**Std. Dev.**	**Mean**	**Std. Dev.**	**Mean**	**Std. Dev.**	**Difference**	**t**
Premium	0.3263	0.3833	0.3231	0.3824	0.3283	0.3842	-0.0052	-0.2016
Interest variables	**Mean**	**Std. Dev.**	**Mean**	**Std. Dev.**	**Mean**	**Std. Dev.**	**Difference**	**t**
EM-Accruals	2.9978	1.4150	3.0283	1.4749	2.9786	1.3769	0.0498	0.5092
DA_{pa}*	-0.0062	0.1039	-0.0031	0.1022	-0.0081	0.1050	0.0051	0.7223
EM-Sales	2.9978	1.4150	3.1161	1.4185	2.9232	1.4090	0.1929 [b]	2.0066
RA_{sales}*	0.0113	0.1133	0.0182	0.1117	0.0069	0.1142	0.0113	1.4797
EM-Overproduction	2.9967	1.4146	3.0142	1.4010	2.9857	1.4242	0.0285	0.2969
RA_{prod}*	-0.0000	0.2856	0.0065	0.2620	-0.0042	0.2997	0.0107	0.5687
Intra-Industry	0.6134	0.4872	0.0000	0.0000	1.0000	0.0000		
Deal characteristics	**Mean**	**Std. Dev.**	**Mean**	**Std. Dev.**	**Mean**	**Std. Dev.**	**Difference**	**t**
Hostile	0.0635	0.2440	0.0680	0.2521	0.0607	0.2390	0.0073	0.4332
Multibid	0.1030	0.3041	0.0822	0.2750	0.1161	0.3206	-0.0339 [a]	-1.7007
Toehold	0.2238	0.3229	0.2360	0.3274	0.2162	0.3201	0.0198	0.8954
Tender	0.6725	0.4696	0.6629	0.4734	0.6786	0.4674	-0.0157	-0.4898
Stock	0.1588	0.3657	0.1360	0.3433	0.1732	0.3788	-0.0372	-1.5331
Cash	0.6364	0.4813	0.6997	0.4590	0.5964	0.4911	0.1033 [c]	3.2222
Cross-Border	0.2815	0.4500	0.2323	0.4229	0.3125	0.4639	-0.0802 [c]	-2.6870
Inst-Diff	-0.0012	1.6850	-0.0295	1.5013	0.0167	1.7923	-0.0463	-0.4203
Public-Bidder	0.5991	0.4903	0.5722	0.4955	0.6161	0.4868	-0.0438	-1.3106
Size	12.2339	1.9821	11.9478	1.7774	12.4143	2.0823	-0.4665 [c]	-3.6107
Target characteristics	**Mean**	**Std. Dev.**	**Mean**	**Std. Dev.**	**Mean**	**Std. Dev.**	**Difference**	**t**
MTB	2.5189	2.6611	2.4612	2.3852	2.5552	2.8227	-0.0940	-0.5395
Liquidity	0.1464	0.2092	0.1667	0.2130	0.1336	0.2060	0.0331 [b]	2.3137
ROE	0.0031	0.4885	0.0243	0.3989	-0.0102	0.5373	0.0346	1.1118
P/E	14.3539	34.1879	14.2669	36.7813	14.4088	32.4808	-0.1419	-0.0593
Growth	0.0746	0.2458	0.0734	0.2428	0.0754	0.2479	-0.0020	-0.1192
Leverage	0.5065	0.9170	0.4426	0.8413	0.5468	0.9601	-0.1043 [a]	-1.7253

Note: * descriptive statistics of DA_{pa}, RA_{sales}, and RA_{prod} are reported just for information purposes since these variables are used to estimate the EM measures. a, b, c denote significance at 10%, 5% and 1% respectively. See Table 1 for variable definitions.

Table 11 shows the Pearson product-moment and the Spearman rank-order pair correlations between the variables of interest, as well as the characteristics of the deal and the target. Since both offer similar results, we focus the discussion on Pearson product-moment correlations. Bidder premiums are positively correlated with tender offers and the presence of multiple bids, while negatively correlated with the acquirer's toeholds, stock payments, and public bidders. Premiums are also significantly correlated with some characteristics of the targets such as *Liquidity* (+), *Size* (-), *MTB* (-), *Leverage* (-), and *EM-Sales* (-). The last aspect implies that observations with larger EM based on sales are associated with lower bid premiums.

Concerning *EM-Accruals*, Table 11 indicates that the larger the EM based on accruals the larger is liquidity, price to earnings, and return on equity. The contrary occurs for the target's leverage, toehold, and for the presence of stock-swaps, which show a negative association with *EM-Accruals*. Furthermore, there is a negative relationship between *EM-Accruals* and *EM-Sales*, as well as between *EM–Sales* and *EM-Overproduction*. *EM-Sales* are negatively related to the presence of intra-industry deals but are positively associated with sales growth before the M&A, while toeholds and cash deals are positively associated with *EM-Overproduction.* And, the higher (lower) the levels of target size, MTB, and ROE, the higher (lower) the level of *EM–Sales* (*EM-Overproduction*).

Overall, the evidence provided in this section suggests that there are specific deal and target characteristics that could shape the relation between the deal premium offered by acquirers and the target's level of EM before the deal announcement. Therefore, a multivariate analysis is needed to get valid conclusions on the relation of interest. Finally, although there are some high correlations between independent variables, we discard multicollinearity concerns since the variance inflation factors (VIFs) are below the suggested threshold value of 10.

Table 11. Pairwise Pearson/Spearman correlations matrix for Chapter 2

		1	2	3	4	5	6	7	8	9	10	11
1	*Premium*		0.041	-0.024	-0.023	**0.090**	-0.005	0.004	**0.086**	**-0.267**	**0.116**	**-0.165**
2	*EM-Accruals*	0.050		**-0.326**	0.002	0.048	-0.017	0.035	0.049	**-0.058**	0.053	**-0.065**
3	*EM-Sales*	**-0.067**	**-0.326**		**-0.273**	-0.011	**-0.066**	-0.009	0.021	0.024	-0.047	-0.042
4	*EM-Overproduction*	-0.010	0.002	**-0.273**		-0.011	-0.010	-0.041	-0.025	0.053	-0.005	0.031
5	*Inst-Diff*	-0.017	-0.013	0.015	0.021		0.030	-0.014	-0.033	-0.030	0.050	-0.018
6	*Intra-Industry*	0.007	-0.017	**-0.066**	-0.010	0.013		-0.015	0.054	-0.037	0.016	0.050
7	*Hostile*	-0.009	0.035	-0.009	-0.041	-0.053	-0.015		**0.193**	**-0.068**	-0.038	0.034
8	*Multibid*	**0.055**	0.049	0.021	-0.025	**-0.077**	0.054	**0.193**		**-0.189**	-0.002	-0.009
9	*Toehold*	**-0.162**	**-0.056**	0.028	**0.066**	**0.096**	-0.030	**-0.116**	**-0.198**		**0.097**	**-0.077**
10	*Tender*	**0.094**	0.053	-0.047	-0.005	**-0.056**	0.016	-0.038	-0.002	**0.074**		**-0.265**
11	*Stock*	**-0.107**	**-0.065**	-0.042	0.031	-0.016	0.050	0.034	-0.009	**-0.078**	**-0.265**	
12	*Cash*	0.001	-0.009	-0.001	**0.061**	**0.061**	**-0.105**	0.001	-0.044	**0.288**	**0.152**	**-0.575**
13	*Public-Bidder*	**-0.070**	-0.028	0.037	-0.034	-0.009	0.044	0.030	**0.057**	**-0.089**	**-0.137**	**0.331**
14	*Cross-Border*	0.047	-0.030	0.006	0.019	0.051	**0.087**	0.037	-0.012	**0.089**	0.016	-0.045
15	*Size*	**-0.156**	0.005	**0.200**	**-0.065**	-0.007	**0.115**	**0.107**	**0.122**	**0.135**	**-0.110**	**0.087**
16	*MTB*	**-0.066**	-0.047	**0.133**	**-0.165**	-0.008	0.017	-0.012	0.007	-0.019	0.014	**0.059**
17	*Liquidity*	**0.062**	**0.081**	-0.012	-0.011	0.007	**-0.077**	-0.050	**-0.057**	0.017	**0.087**	**-0.066**
18	*ROE*	0.032	**0.170**	**0.264**	**-0.065**	0.003	-0.035	0.022	0.035	**0.057**	0.017	**-0.094**
19	*P/E*	0.028	**0.056**	0.035	0.029	-0.001	0.002	**-0.064**	0.033	**0.087**	-0.009	0.029
20	*Growth*	-0.042	0.035	**0.101**	0.015	0.046	0.004	-0.053	0.003	-0.004	-0.006	**0.067**
21	*Leverage*	**-0.074**	**-0.066**	-0.031	-0.003	0.037	**0.055**	**0.062**	0.036	0.035	**-0.117**	**0.085**

Note: Pearson (Spearman) correlation coefficients are reported in the lower left (upper right) portion of the table. **Bold** text indicates that correlations are statistically significant at least at 10% level (p-value < 0.10).

Table 11. Continued

		12	13	14	15	16	17	18	19	20	21
1	*Premium*	0.014	**-0.069**	0.038	**-0.128**	**-0.078**	**0.077**	**0.059**	-0.026	-0.044	0.005
2	*EM-Accruals*	-0.009	-0.028	-0.030	0.017	**-0.058**	**0.087**	**0.164**	**0.124**	0.027	0.038
3	*EM-Sales*	-0.001	0.037	0.006	**0.191**	**0.184**	-0.015	**0.350**	**0.166**	**0.130**	**-0.072**
4	*EM-Overproduction*	**0.061**	-0.033	0.019	-0.048	**-0.164**	-0.021	**-0.166**	-0.019	-0.008	**0.062**
5	*Inst-Diff*	-0.032	-0.033	0.024	-0.036	0.005	**0.060**	**0.055**	-0.016	0.027	-0.036
6	*Intra-Industry*	**-0.105**	0.044	**0.087**	**0.098**	-0.007	**-0.096**	0.005	0.005	0.015	0.042
7	*Hostile*	0.001	0.030	0.037	**0.107**	-0.015	-0.051	0.043	-0.032	-0.038	**0.064**
8	*Multibid*	-0.044	**0.057**	-0.012	**0.133**	0.052	-0.054	0.049	**0.083**	0.046	0.048
9	*Toehold*	**0.290**	**-0.086**	**0.085**	**0.106**	-0.036	0.018	-0.028	**0.060**	-0.042	-0.026
10	*Tender*	**0.152**	**-0.137**	0.016	**-0.104**	0.006	**0.090**	0.040	-0.022	0.000	**-0.100**
11	*Stock*	**-0.575**	**0.331**	-0.045	**0.086**	0.005	**-0.068**	**-0.084**	-0.005	0.033	**0.060**
12	*Cash*		**-0.460**	**0.088**	**-0.077**	-0.034	**0.098**	-0.019	0.031	-0.048	-0.042
13	*Public-Bidder*	**-0.460**		**0.100**	**0.144**	-0.014	**-0.067**	0.006	0.023	**0.092**	0.019
14	*Cross-Border*	**0.088**	**0.100**		**0.222**	**0.058**	**-0.057**	0.025	0.048	**-0.061**	**0.114**
15	*Size*	**-0.091**	**0.157**	**0.235**		**0.355**	**-0.119**	**0.255**	**0.317**	**0.078**	**0.270**
16	*MTB*	-0.037	0.002	0.029	**0.220**		**-0.074**	**0.346**	**0.312**	**0.167**	**0.077**
17	*Liquidity*	**0.079**	**-0.063**	**-0.067**	**-0.110**	**-0.101**		0.046	-0.017	0.016	**-0.351**
18	*ROE*	**0.061**	0.002	0.043	**0.235**	0.010	**0.106**		**0.288**	**0.225**	0.013
19	*P/E*	0.029	0.013	0.023	**0.104**	**0.087**	0.037	**0.141**		**0.186**	0.016
20	*Growth*	**-0.068**	**0.101**	-0.012	**0.084**	**0.080**	0.007	**0.206**	**0.079**		-0.028
21	*Leverage*	-0.045	0.039	**0.085**	**0.204**	**0.336**	**-0.262**	**-0.157**	-0.022	0.033	

Note: Pearson (Spearman) correlation coefficients are reported in the lower left (upper right) portion of the table. **Bold** text indicates that correlations are statistically significant at least at 10% level (p-value < 0.10).

2.4.2. Regression analysis

Table 12 shows the results of the regression analysis. Column (1) presents the estimation of model (2.4) for the whole sample, where an additional independent variable that captures the industry relatedness, *Intra-Industry*, has been added; it takes the value of 1 for intra-industry deals and 0 otherwise. In addition, the other two columns exhibit the results of the estimation when the sample is divided into two groups, inter-industry and intra-industry sub-samples, columns (2) and (3) respectively.[27] The model explains more than 12% of the deal premium variability in the full sample; but shows a better fit when we estimate it separately in the industry-related (23%) and industry-unrelated deals (18%).

The results in column (1) indicate that, on average, there is no effect of the target's pre-EM measures on the bid premium, since none of the three coefficients of the different proxies of *EM* are statistically significant. However, in line with the hypotheses, the coefficient of *EM-Accruals* is significantly positive (negative) in the subsample of inter-industry (intra-industry) M&A. Acquirers in intra-industry deals seem to be able to detect, and discount from bid offers, the EM practices performed by the target firm before the M&A announcement; while in inter-industry deals, they pay more the greater the target's income increasing discretionary accruals. These results are not only statistically but also economically significant: the coefficient of *EM-Accruals* (0.0142 [-0.0114] in column (2) [(3)]) indicates that in inter-industry [intra-industry] deals, the premium offered increases [decreases] by 4.8 [4.5] percentage points when the target's *EM-Accruals* is one standard deviation above the mean in the sample. Having in mind that the average value of the deal premium in the inter-industry [intra-industry] sample is 32.3% [32.8%], the economic significance of our results is considerable. In contrast, none of our measures of EM via real activities, *EM–Sales* and *EM–Overproduction*, significantly relate to the bid premium in any estimation.

Regarding the control variables, the results in column (1) for *Toehold*, *Stock*, and *Size* are in line with those expected. *Growth* has a negative association with premiums in column (3). *Cross-Border* has a positive effect on bid premiums (columns (1) and (3)), indicating

[27] We use robust standard errors to test the significance of our coefficients. Results are qualitatively the same using standard errors clustered by target firms.

that cross-border deals exhibit higher bid premiums than domestic ones as expected. The results in columns (2) and (3) indicate that the associations between the bid premiums and the independent variables of the model are different when we consider different types of M&A.

Table 12. Regression analysis of bid premiums and earnings management considering the industry relatedness between acquirer and target firms

	(1)	(2)	(3)
Sample:	All	Inter-industry	Intra-industry
Independent variables	Coef. / [t]	Coef. / [t]	Coef. / [t]
EM-Accruals	-0.0063	0.0325 [b]	-0.0330 [b]
	[-0.63]	[2.09]	[-2.57]
EM-Sales	-0.0137	-0.0044	-0.0177
	[-1.21]	[-0.22]	[-1.25]
EM-Overproduction	-0.0009	0.0003	-0.0021
	[-0.09]	[0.02]	[-0.16]
Intra-industry	0.0018		
	[0.07]		
Hostile	-0.0330	0.0799	-0.0776
	[-0.75]	[0.97]	[-1.55]
Multibid	0.0556	0.1104	0.0471
	[1.48]	[1.43]	[1.07]
Toehold	-0.1456 [c]	-0.0321	-0.2153 [c]
	[-3.01]	[-0.44]	[-3.26]
Tender	0.0289	0.0262	0.0163
	[1.01]	[0.57]	[0.48]
Stock	-0.0921 [b]	-0.0766	-0.1271 [b]
	[-1.99]	[-0.81]	[-2.41]
Cash	-0.0451	-0.0603	-0.0344
	[-1.19]	[-0.87]	[-0.73]
Cross.Border	0.0857 [c]	0.0623	0.1038 [c]
	[3.14]	[1.31]	[2.92]
Inst.Diff	-0.0026	-0.0012	-0.0048
	[-0.40]	[-0.11]	[-0.57]
Public.Bidder	-0.0407	-0.0299	-0.0452
	[-1.45]	[-0.72]	[-1.18]
Size	-0.0258 [c]	-0.0190	-0.0282 [c]
	[-3.30]	[-1.49]	[-2.80]

Table 12. *Continued*

MTB	-0.0058	-0.0098	-0.0050
	[-1.12]	[-1.26]	[-0.77]
Liquidity	0.0647	0.0519	0.0632
	[1.04]	[0.51]	[0.74]
ROE	0.0481	0.0648	0.0561
	[1.39]	[1.13]	[1.34]
P/E	0.0006	0.0014	-0.0002
	[0.99]	[1.36]	[-0.28]
Growth	-0.0620	0.0897	-0.1478 [a]
	[-1.00]	[0.87]	[-1.89]
Leverage	0.0016	0.0209	0.0036
	[0.11]	[0.88]	[0.21]
UK-Indicator	0.0403	0.0681	0.0093
	[1.29]	[1.40]	[0.23]
Cons	0.6572 [c]	0.5283 [b]	0.6731 [c]
	[4.35]	[2.25]	[3.76]
Year-Indicators	Included	Included	Included
UK-Indicator	Included	Included	Included
Obs.	913	353	560
R^2	0.129	0.229	0.175

Note: Coefficients for indicator variables are omitted for brevity. Standard errors are robust while a, b, and c denote significance at 10%, 5%, and 1%, respectively. See Table 7 for variable definitions.

2.4.2.1. Discussion

The evidence for the whole sample does not support the notion that the targets' EM practices affect the bid premium offered by acquirers. Although this result appears to contradict prior FRQ literature (Raman et al., 2013; Skaife & Wangerin, 2013), it should be considered that FRQ is a broader construct of which EM is just a dimension. Indeed, these studies use unsigned proxies of discretionary accruals in their FRQ constructs, which intend to capture not only the intentional but also the unintentional errors in financial reporting. In contrast, we use signed measures since it is more appropriate for our objective of gauging the effects of accounting distortions by managers trying to boost earnings, with the risk of overpayment by acquirer firms.

Although the evidence does not suggest that EM influences the bid premium when the model is estimated in the whole sample, the results do not contradict the idea that

accounting information is relevant to deal negotiations. It might be the case that a more refined analysis is needed to better understand how acquirer firms assimilate the target's EM practices, particularly the accrual manipulation. It is likely that the two conflicting explanations about the impact of the target EM practices on the bid premiums compensate each other. Indeed, after splitting the sample into inter-industry and intra-industry, the results support the argument that industry familiarity conditions the relation between the bid premium offered and the target's discretionary accruals. As expected, the evidence indicates that the bidders need background on the target's industry to discount its income-increasing EM practices. These results suggest that acquirers take advantage of the knowledge about their business, specifically the accounting practices and EM techniques, to untangle the complex mix between the real economic value of synergies and the noise of the upward EM practises carried out by target firms.

Overall, our results are compatible with prior research on M&A. The literature analyzing the association between the target's FRQ, the M&A terms, and the post-merger efficiency, discussed in section 2.2.1.1, indicates that *ceteris paribus* high-quality accounting information reduces uncertainty and facilitates the target's valuation (McNichols & Stubben, 2015; Skaife & Wangerin, 2013; Raman et al., 2013). Consequently, the poorer the target's FRQ, the lower the bid premium (Skaife & Wangerin, 2013). Given that EM by discretionary accruals indicates poor FRQ (Dechow et al., 2010), a negative association between the target's EM and the bid premium in intra-industry takeovers (*H2*) is line with this research. Also, the positive association between the target's EM via discretionary accruals and bid premiums in inter-industry takeovers (*H1*) relates to prior research validating negative results for acquirers in M&A. Particularly, as reviewed in section 2.2.1.2, some studies indicate that the risk of overvaluation is higher in inter-industry deals compared to intra-industry deals, and several papers report value-destroying M&A associated with overpayments (Fu, Lin, & Officer, 2013; Harford, Humphery-Jenner, & Powell, 2012; Malmendier & Tate, 2008; Morck, Shleifer, & Vishny, 1990; Rau & Vermaelen, 1998; Roll, 1986).

Additionally, the finding that EM through real activities does not relate to the bid premiums, no matter whether deals are industry-related or not, is not particularly surprising. Indeed, this result is consistent with the claim that firms prefer to carry on EM via accruals, instead of real activities, since real activities are more costly (Bagnoli & Watts, 2000: 379). Compared to accrual management, the manipulation of real activities

is considered more costly since it involves real production decisions, which compromise firms' cash flows and ultimately have negative effects on the firm's long term objectives, financial health and future performance (e.g., Graham et al., 2005; Cohen et al., 2008; Zang, 2012; Kothari et al., 2016). Therefore, EM via real activities is likely less pervasive than accounting manipulation via accruals, and this could underlie the lack of significance of our proxies for EM via real activities.

2.4.3. Additional analysis

In this section, we replicate the analyses above after dividing the sample into those deals where acquirers use cash as the payment method (cash deals) and those using other means of payment, such as stock or combinations of stock and cash (non-cash deals). We posit that in cash deals acquirers should perform a more in-depth analysis of the target's financial information to detect overvaluation compared to non-cash deals, since in cash deals the acquirer assumes higher risks regarding the outcome of the transaction (Mantecon, 2009). In non-cash deals, the acquirer and target shareholders share the risk of potential wealth losses in the post-takeover period if targets are overvalued and synergies are not met. However, in cash-deals this risk is only undertaken by acquirers because, once they receive their payment, the target shareholders are no longer exposed to future wealth losses as a result of the deal.

Thus, a priori, the cost of not performing a thorough analysis of the target's financial statements to avoid overpaying is higher in cash-deals compared to non-cash deals; and then, acquirers in cash deals have stronger incentives to do a more detailed analysis of the target's financial information.

Table 13 presents the results after splitting the sample into cash and non-cash deals, where we see that the prior findinds are confirmed only in the cash deals subsample. The coefficient of *EM-Accruals* is negative (positive) when the acquirers and targets are (are not) in a related industry, while the proxies of real EM are not statistically significant in any case. However, none of the EM proxies significantly relate to the bid premium in the non-cash deals subsample, except for *EM–Sales*, which is negative and weakly significant, at 10% level, in the inter-industry subsample.

In sum, these results suggest that when the acquirers have strong incentives to perform a detailed analysis of the target's financial information, the background of the industry is a

crucial factor to be able to detect EM in the target's financial statements.

Table 13. Regression analysis of bid premiums and earnings management considering the industry relatedness between acquirer and target firms – Cash vs. Non-cash deals

Sample	*CASH DEALS*			*NON-CASH DEALS*		
	(1)	(2)	(3)	(4)	(5)	(6)
Sub-sample:	All	Inter-industry	Intra-industry	All	Inter-industry	Intra-industry
Independent variables	Coef. / [t]	Coef. / [t]	Coef. / [t]	Coef. / [t]	Coef. / [t]	Coef. / [t]
EM-Accruals	-0.0007	0.0368 [b]	-0.0380 [b]	-0.0094	0.0108	-0.0192
	[-0.05]	[2.06]	[-2.07]	[-0.53]	[0.24]	[-0.96]
EM-Sales	0.0000	0.0221	-0.0203	-0.0346 [a]	-0.1005 [a]	-0.0140
	[0.00]	[1.04]	[-1.05]	[-1.71]	[-1.77]	[-0.62]
EM-Overproduction	0.0071	0.0183	-0.0005	-0.0035	-0.0191	-0.0039
	[0.58]	[1.15]	[-0.03]	[-0.19]	[-0.43]	[-0.17]
Intra-industry	0.0233			-0.0452		
	[0.80]			[-0.84]		
Hostile	-0.0623	0.0981	-0.1528 [b]	-0.0289	-0.0382	0.0580
	[-1.01]	[0.78]	[-2.44]	[-0.39]	[-0.28]	[0.54]
Multibid	0.0888 [a]	0.1336	0.0526	0.0489	0.0391	0.0742
	[1.72]	[1.49]	[0.85]	[0.79]	[0.17]	[1.04]
Toehold	-0.1169 [b]	-0.0464	-0.1607 [b]	-0.1761	0.2507	-0.2183
	[-2.27]	[-0.64]	[-2.04]	[-1.23]	[0.75]	[-1.51]
Tender	0.0607 [a]	0.0630	-0.0002	-0.0279	-0.0071	0.0516
	[1.75]	[1.24]	[-0.00]	[-0.54]	[-0.05]	[0.89]
Stock				-0.1687 [c]	-0.2462	-0.1732 [c]
				[-3.28]	[-1.57]	[-3.01]
Cash						
Cross.Border	0.0689 [b]	0.0627	0.0794 [b]	0.1413 [b]	0.0222	0.1423 [a]
	[2.28]	[1.38]	[2.00]	[2.03]	[0.12]	[1.73]
Inst.Diff	-0.0060	-0.0094	-0.0113	0.0106	-0.0877	0.0178
	[-0.91]	[-0.91]	[-1.27]	[0.64]	[-1.26]	[0.95]
Public.Bidder	-0.0438	-0.0360	-0.0451	-0.0982	0.1364	-0.1805 [b]
	[-1.42]	[-0.80]	[-1.04]	[-1.39]	[1.10]	[-2.08]
Size	-0.0083	-0.0097	-0.0050	-0.0588 [c]	-0.0196	-0.0649 [c]
	[-0.93]	[-0.72]	[-0.40]	[-3.92]	[-0.62]	[-3.69]
MTB	-0.0061	-0.0104	-0.0052	-0.0022	-0.0093	0.0008
	[-1.26]	[-1.29]	[-0.75]	[-0.22]	[-0.30]	[0.07]
Liquidity	0.1019	0.1555	0.1086	-0.0275	-0.4257	-0.0100

Table 13. Continued

	[1.34]	[1.30]	[1.01]	[-0.25]	[-1.49]	[-0.07]
ROE	0.0454	0.1703	0.0508	0.0702	0.0752	0.0952 [a]
	[0.85]	[1.64]	[0.78]	[1.45]	[0.67]	[1.78]
P/E	0.0000	0.0003	-0.0005	0.0013	0.0012	-0.0001
	[0.05]	[0.32]	[-0.76]	[0.97]	[0.39]	[-0.06]
Growth	-0.0563	-0.0219	-0.1562	-0.0855	0.2178	-0.1940 [a]
	[-0.75]	[-0.20]	[-1.43]	[-0.79]	[0.95]	[-1.70]
Leverage	0.0025	0.0262	-0.0049	0.0036	0.0853	0.0120
	[0.13]	[0.99]	[-0.21]	[0.16]	[0.93]	[0.49]
UK-Indicator	0.1409 [c]	0.1146 [b]	0.1302 [c]	-0.1110 [b]	-0.0335	-0.1748 [c]
	[3.72]	[2.18]	[2.67]	[-2.00]	[-0.26]	[-2.68]
Cons	0.3850 [b]	0.2522	0.7180 [c]	1.4448 [c]	0.6118	1.2723 [c]
	[2.39]	[0.82]	[3.43]	[4.48]	[1.03]	[3.89]
Year-Indicators	Included	Included	Included	Included	Included	Included
UK-Indicator	Included	Included	Included	Included	Included	Included
Obs.	581	247	334	332	106	226
R^2	0.141	0.284	0.187	0.221	0.460	0.314

Note: Coefficients for indicator variables are omitted for brevity. Standard errors are robust while a, b, and c denote significance at 10%, 5%, and 1%, respectively. See Table 7 for variable definitions. Columns (1) – (3) include deals paid only in cash while columns (4) – (6) include deals paid only with stocks or with a combination between stocks and cash.

2.4.4. Robustness tests

To corroborate the robust nature of our findings, we performed several tests. Table 14 exhibits the results.

Firstly, it is possible that our aggregate proxy for the institutional differences between the acquirer and target nations (*Institutional-Differences*) does not capture what is important for the takeover market. To alleviate this concern, we used the Rule of Law index (RL) of the WGI, since it could be the primary source of discrepancies between institutional settings.[28] The results, included in Panel A, basically confirm the differences between inter-industry and intra-industry transactions regarding the association between the bid premium and the target's EM. Additionally, in non-tabulated tests we control for other institutional proxies of the target's country such as the RL, as well as the first principal

[28] This index measures the level of confidence and abidance that agents in the society have concerning the contract enforcement and property rights (Kaufmann et al., 2009).

component of the WGI, and our results prevail.

Secondly, we consider the regulatory changes that might have affected the M&A activity. In 2006, the EU attempted to foster M&A in the region by harmonizing the regulation with the implementation of the European Takeover Directive (ETD) (European-Commission, 2007).[29] We included an additional indicator variable that controls for the implementation of the ETD and its effect on M&A activity in the EU (1: after 2006; 0: before 2006). The results, shown in Panel B, confirm a different sign in the relation between *EM-Accruals* and *Premium* in the inter- and intra-industry subsamples, as well as the lack of significance of *EM-Sales* and *EM-Overproduction*.

Thirdly, the EU adopted IFRS in 2005, and prior literature indicates that both EM and M&A activity were affected by the IFRS implementation (Bozos et al., 2014; Doukakis, 2014; Francis, Huang, & Khurana, 2016). Thus, the change of the accounting model could possibly bias our results. Given this concern, we included in model (2.4) a new indicator variable that takes into account if the target's financial information is prepared under IFRS (1: after 2005; 0: before 2005). Results are shown in Panel C, and conlusions remain unchanged.

[29] Some papers exploring the European takeover reform and its effects for the M&A market are: Alcalde and Pérez-Soba (2016), Humphery-Jenner (2012) and Clarke (2009).

Table 14. Robustness test regressions

Panel A. Rule of Law – Distance

Sample:	*ALL DEALS*			*CASH DEALS*			*NON-CASH DEALS*		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Sub-sample:	All	Inter-industry	Intra-industry	All	Inter-industry	Intra-industry	All	Inter-industry	Intra-industry
Independent variables	Coef. / [t]	Coef. / [t]	Coef. / [t]	Coef. / [t]	Coef. / [t]	Coef. / [t]	Coef. / [t]	Coef. / [t]	Coef. / [t]
EM-Accruals	-0.0063	0.0326 [b]	-0.0331 [b]	-0.0008	0.0372 [b]	-0.0380 [b]	-0.0102	0.0139	-0.0209
	[-0.62]	[2.09]	[-2.57]	[-0.06]	[2.07]	[-2.07]	[-0.57]	[0.32]	[-1.05]
EM-Sales	-0.0136	-0.0044	-0.0177	0.0001	0.0226	-0.0202	-0.0348 [a]	-0.1013 [a]	-0.0138
	[-1.20]	[-0.22]	[-1.25]	[0.01]	[1.06]	[-1.04]	[-1.73]	[-1.82]	[-0.62]
EM-Overproduction	-0.0010	0.0002	-0.0021	0.0070	0.0179	-0.0007	-0.0028	-0.0146	-0.0021
	[-0.10]	[0.01]	[-0.16]	[0.58]	[1.12]	[-0.04]	[-0.15]	[-0.33]	[-0.09]
Intra-industry	0.0018			0.0236			-0.0458		
	[0.07]			[0.81]			[-0.85]		
Hostile	-0.0330	0.0798	-0.0760	-0.0621	0.0971	-0.1499 [b]	-0.0253	-0.0311	0.0679
	[-0.75]	[0.97]	[-1.53]	[-1.01]	[0.77]	[-2.41]	[-0.34]	[-0.23]	[0.64]
Multibid	0.0557	0.1102	0.0482	0.0892 [a]	0.1339	0.0551	0.0518	0.0422	0.0778
	[1.48]	[1.43]	[1.09]	[1.73]	[1.50]	[0.89]	[0.84]	[0.19]	[1.09]
Toehold	-0.1462 [c]	-0.0325	-0.2167 [c]	-0.1176 [b]	-0.0487	-0.1620 [b]	-0.1685	0.1864	-0.2116
	[-3.03]	[-0.45]	[-3.29]	[-2.29]	[-0.68]	[-2.06]	[-1.17]	[0.59]	[-1.45]
Tender	0.0289	0.0263	0.0173	0.0601 [a]	0.0627	0.0006	-0.0280	-0.0303	0.0497
	[1.01]	[0.57]	[0.51]	[1.73]	[1.23]	[0.01]	[-0.54]	[-0.23]	[0.86]
Stock	-0.0918 [b]	-0.0762	-0.1271 [b]				-0.1726 [c]	-0.2700 [a]	-0.1810 [c]
	[-1.99]	[-0.81]	[-2.40]				[-3.32]	[-1.79]	[-3.10]

Table 14. Continued

Cash	-0.0450	-0.0600	-0.0353						
	[-1.18]	[-0.86]	[-0.74]						
Cross.Border	0.0856 [c]	0.0623	0.1032 [c]	0.0691 [b]	0.0615	0.0784 [b]	0.1440 [b]	0.0024	0.1444 [a]
	[3.14]	[1.31]	[2.91]	[2.29]	[1.35]	[1.98]	[2.06]	[0.01]	[1.75]
Inst.Diff	-0.0153	-0.0018	-0.0161	-0.0466	-0.0412	-0.0696	0.1017	-1.0665 [b]	0.1480
	[-0.40]	[-0.03]	[-0.31]	[-1.20]	[-0.67]	[-1.26]	[1.04]	[-2.11]	[1.40]
Public.Bidder	-0.0408	-0.0299	-0.0459	-0.0441	-0.0367	-0.0461	-0.0971	0.1359	-0.1785 [b]
	[-1.45]	[-0.73]	[-1.20]	[-1.43]	[-0.82]	[-1.06]	[-1.37]	[1.10]	[-2.05]
Size	-0.0257 [c]	-0.0190	-0.0281 [c]	-0.0082	-0.0096	-0.0049	-0.0591 [c]	-0.0114	-0.0652 [c]
	[-3.30]	[-1.48]	[-2.79]	[-0.93]	[-0.72]	[-0.38]	[-3.94]	[-0.36]	[-3.71]
MTB	-0.0058	-0.0098	-0.0049	-0.0061	-0.0106	-0.0053	-0.0022	-0.0155	0.0009
	[-1.12]	[-1.27]	[-0.76]	[-1.28]	[-1.32]	[-0.76]	[-0.21]	[-0.51]	[0.08]
Liquidity	0.0645	0.0521	0.0622	0.1003	0.1561	0.1062	-0.0290	-0.4300	-0.0086
	[1.04]	[0.52]	[0.73]	[1.32]	[1.30]	[0.99]	[-0.26]	[-1.50]	[-0.06]
ROE	0.0480	0.0646	0.0563	0.0452	0.1670	0.0506	0.0700	0.0714	0.0945 [a]
	[1.38]	[1.12]	[1.34]	[0.85]	[1.61]	[0.77]	[1.45]	[0.64]	[1.77]
P/E	0.0006	0.0014	-0.0002	0.0000	0.0003	-0.0005	0.0013	0.0010	-0.0001
	[1.00]	[1.35]	[-0.27]	[0.06]	[0.32]	[-0.72]	[0.95]	[0.34]	[-0.08]
Growth	-0.0620	0.0895	-0.1483 [a]	-0.0546	-0.0223	-0.1524	-0.0849	0.2494	-0.1897 [a]
	[-1.00]	[0.87]	[-1.90]	[-0.73]	[-0.20]	[-1.40]	[-0.79]	[1.14]	[-1.65]
Leverage	0.0015	0.0208	0.0032	0.0022	0.0265	-0.0056	0.0029	0.1018	0.0116
	[0.10]	[0.88]	[0.19]	[0.12]	[1.00]	[-0.25]	[0.13]	[1.12]	[0.48]
UK-Indicator	0.0399	0.0683	0.0086	0.1389 [c]	0.1143 [b]	0.1280 [c]	-0.1092 [b]	-0.0634	-0.1732 [c]
	[1.28]	[1.41]	[0.21]	[3.66]	[2.17]	[2.62]	[-1.98]	[-0.50]	[-2.67]

Table 14. Continued

Cons	0.6569 [c]	0.5285 [b]	0.6743 [c]	0.3875 [b]	0.2531	0.7157 [c]	1.4638 [c]	0.5968	1.2937 [c]
	[4.35]	[2.25]	[3.76]	[2.41]	[0.82]	[3.42]	[4.52]	[1.02]	[3.93]
Year-Indicators	Included	Included	Included	Included	Included	Included	Included	Included	Included
UK-Indicator	Included	Included	Included	Included	Included	Included	Included	Included	Included
Obs.	913	353	560	581	247	334	332	106	226
R2	0.129	0.229	0.175	0.142	0.284	0.187	0.222	0.483	0.317

Panel B. European Takeover Directive

Sample:	*ALL DEALS*			*CASH DEALS*			*NON-CASH DEALS*		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Sub-sample:	All	Inter-industry	Intra-industry	All	Inter-industry	Intra-industry	All	Inter-industry	Intra-industry
Independent variables	Coef. / [t]	Coef. / [t]	Coef. / [t]	Coef. / [t]	Coef. / [t]	Coef. / [t]	Coef. / [t]	Coef. / [t]	Coef. / [t]
EM-Accruals	-0.0022	0.0356 [b]	-0.0283 [b]	-0.0001	0.0393 [b]	-0.0377 [b]	-0.0026	0.0140	-0.0159
	[-0.22]	[2.35]	[-2.13]	[-0.01]	[2.36]	[-2.04]	[-0.15]	[0.40]	[-0.76]
EM-Sales	-0.0134	-0.0061	-0.0160	-0.0029	0.0199	-0.0243	-0.0308	-0.0659	-0.0087
	[-1.17]	[-0.32]	[-1.12]	[-0.20]	[1.00]	[-1.28]	[-1.53]	[-1.65]	[-0.38]
EM-Overproduction	-0.0028	-0.0022	-0.0040	-0.0005	0.0146	-0.0089	0.0007	-0.0129	0.0070
	[-0.28]	[-0.14]	[-0.31]	[-0.04]	[0.96]	[-0.54]	[0.04]	[-0.30]	[0.32]
Intra-industry	0.0049			0.0180			-0.0301		
	[0.19]			[0.62]			[-0.59]		
Hostile	-0.0211	0.0466	-0.0478	-0.0567	0.0615	-0.1231 [b]	0.0113	0.0141	0.1340
	[-0.50]	[0.59]	[-1.00]	[-0.94]	[0.50]	[-2.22]	[0.17]	[0.14]	[1.38]
Multibid	0.0562	0.1471 [b]	0.0303	0.0858 [a]	0.1538 [a]	0.0424	0.0474	0.0119	0.0545

Table 14. Continued

	[1.49]	[2.00]	[0.68]	[1.70]	[1.88]	[0.72]	[0.76]	[0.07]	[0.76]
Toehold	-0.1526 [c]	-0.0514	-0.2191 [c]	-0.1178 [b]	-0.0562	-0.1730 [b]	-0.1870	-0.0304	-0.1993
	[-3.16]	[-0.70]	[-3.44]	[-2.26]	[-0.79]	[-2.28]	[-1.41]	[-0.09]	[-1.65]
Tender	0.0447	0.0411	0.0460	0.0718 [b]	0.0917 [a]	0.0281	-0.0070	-0.0960	0.0592
	[1.59]	[0.87]	[1.33]	[2.09]	[1.71]	[0.61]	[-0.13]	[-0.66]	[1.03]
Stock	-0.0980 [b]	-0.1051	-0.1112 [b]				-0.1627 [c]	-0.2694 [b]	-0.1726 [c]
	[-2.15]	[-1.25]	[-2.07]				[-3.14]	[-2.02]	[-2.94]
Cash	-0.0567	-0.0909	-0.0375						
	[-1.50]	[-1.37]	[-0.79]						
Cross.Border	0.0919 [c]	0.0747	0.1055 [c]	0.0732 [b]	0.0541	0.0857 [b]	0.1412 [b]	0.1489	0.1526 [a]
	[3.25]	[1.62]	[2.92]	[2.44]	[1.16]	[2.21]	[2.00]	[0.88]	[1.96]
Inst.Diff	0.0007	0.0042	-0.0004	-0.0013	0.0039	-0.0071	0.0192	0.0116	0.0381 a
	[0.11]	[0.48]	[-0.05]	[-0.19]	[0.43]	[-0.78]	[1.18]	[0.30]	[1.86]
Public.Bidder	-0.0526 [a]	-0.0369	-0.0552	-0.0583 [b]	-0.0593	-0.0510	-0.0926	0.0255	-0.1482
	[-1.91]	[-0.95]	[-1.45]	[-1.98]	[-1.43]	[-1.25]	[-1.28]	[0.30]	[-1.56]
Size	-0.0273 [c]	-0.0273 [b]	-0.0283 [c]	-0.0117	-0.0187	-0.0098	-0.0575 [c]	-0.0427	-0.0597 [c]
	[-3.58]	[-2.04]	[-2.93]	[-1.32]	[-1.38]	[-0.81]	[-4.04]	[-1.50]	[-3.53]
MTB	-0.0051	-0.0053	-0.0040	-0.0060	-0.0049	-0.0059	-0.0007	-0.0200	0.0044
	[-1.06]	[-0.71]	[-0.66]	[-1.30]	[-0.64]	[-0.94]	[-0.07]	[-0.67]	[0.43]
Liquidity	0.0729	0.0587	0.0766	0.1155	0.1610	0.0952	-0.0227	-0.1324	0.0261
	[1.20]	[0.60]	[0.95]	[1.60]	[1.42]	[0.98]	[-0.21]	[-0.53]	[0.18]
ROE	0.0571	0.0449	0.0703	0.0469	0.1022	0.0634	0.0825	0.0011	0.1017 [a]
	[1.61]	[0.70]	[1.60]	[0.90]	[0.97]	[1.01]	[1.65]	[0.01]	[1.70]
P/E	0.0006	0.0016	-0.0002	0.0002	0.0005	-0.0004	0.0012	0.0040	-0.0006

Table 14. Continued

	[1.02]	[1.40]	[-0.43]	[0.33]	[0.65]	[-0.57]	[0.81]	[1.21]	[-0.68]
Growth	-0.0552	0.1006	-0.1372 [b]	-0.0503	0.0120	-0.1274	-0.0841	0.2052	-0.1797 [a]
	[-1.00]	[1.22]	[-2.00]	[-0.75]	[0.13]	[-1.43]	[-0.89]	[1.21]	[-1.84]
Leverage	-0.0001	0.0137	-0.0029	0.0042	0.0167	-0.0095	-0.0046	-0.0003	-0.0060
	[-0.01]	[0.56]	[-0.17]	[0.23]	[0.59]	[-0.43]	[-0.21]	[-0.00]	[-0.24]
UK - Indicator	0.0380	0.0811 [a]	-0.0038	0.1305 [c]	0.1270 [b]	0.1069 [b]	-0.1031 [a]	0.0613	-0.1781 [c]
	[1.23]	[1.74]	[-0.09]	[3.44]	[2.46]	[2.14]	[-1.88]	[0.50]	[-2.71]
ETD - Indicator	-0.0112	0.0248	-0.0331	-0.0330	-0.0121	-0.0469	0.0170	0.0498	0.0062
	[-0.40]	[0.60]	[-0.93]	[-1.01]	[-0.26]	[-1.04]	[0.30]	[0.47]	[0.10]
Cons	0.7579 [c]	0.5424 [b]	0.9151 [c]	0.4247 [c]	0.1959	0.7066 [c]	1.3561 [c]	1.1388 [b]	1.3760 [c]
	[5.73]	[2.48]	[5.62]	[3.19]	[1.08]	[3.77]	[5.52]	[2.22]	[4.81]
ETD - Indicator	[1: > 2006; 0: o.w.]			[1: > 2006; 0: o.w.]			[1: > 2006; 0: o.w.]		
UK - Indicator	Included	Included	Included	Included	Included	Included	Included	Included	Included
Obs.	913	353	560	581	247	334	332	106	226
R2	0.090	0.137	0.117	0.100	0.157	0.123	0.157	0.265	0.220

Panel C. IFRS Adoption – IFRS Indicator

Sample:	*ALL DEALS*			*CASH DEALS*			*NON-CASH DEALS*		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Sub-sample:	All	Inter-industry	Intra-industry	All	Inter-industry	Intra-industry	All	Inter-industry	Intra-industry
Independent variables	Coef. / [t]	Coef. / [t]	Coef. / [t]	Coef. / [t]	Coef. / [t]	Coef. / [t]	Coef. / [t]	Coef. / [t]	Coef. / [t]
EM-Accruals	-0.0022	0.0356 [b]	-0.0285 [b]	0.0003	0.0398 [b]	-0.0378 [b]	-0.0024	0.0142	-0.0156
	[-0.22]	[2.35]	[-2.15]	[0.03]	[2.34]	[-2.05]	[-0.13]	[0.39]	[-0.74]

Table 14. Continued

EM-Sales	-0.0131	-0.0057	-0.0151	-0.0012	0.0211	-0.0223	-0.0306	-0.0658	-0.0074
	[-1.14]	[-0.30]	[-1.04]	[-0.08]	[1.03]	[-1.16]	[-1.51]	[-1.66]	[-0.32]
EM-Overproduction	-0.0027	-0.0015	-0.0035	0.0003	0.0150	-0.0077	0.0010	-0.0105	0.0077
	[-0.27]	[-0.10]	[-0.27]	[0.03]	[0.98]	[-0.46]	[0.06]	[-0.23]	[0.35]
Intra-industry	0.0051			0.0185			-0.0301		
	[0.20]			[0.64]			[-0.59]		
Hostile	-0.0203	0.0450	-0.0470	-0.0532	0.0635	-0.1190 b	0.0109	0.0149	0.1303
	[-0.48]	[0.56]	[-0.98]	[-0.88]	[0.53]	[-2.11]	[0.17]	[0.15]	[1.35]
Multibid	0.0562	0.1475 b	0.0305	0.0869 a	0.1537 a	0.0469	0.0481	0.0048	0.0582
	[1.49]	[2.00]	[0.69]	[1.73]	[1.88]	[0.80]	[0.77]	[0.03]	[0.82]
Toehold	-0.1529 c	-0.0519	-0.2193 c	-0.1179 b	-0.0570	-0.1711 b	-0.1903	-0.0451	-0.2055 a
	[-3.16]	[-0.71]	[-3.43]	[-2.26]	[-0.80]	[-2.24]	[-1.42]	[-0.13]	[-1.68]
Tender	0.0444	0.0406	0.0446	0.0716 b	0.0920 a	0.0280	-0.0095	-0.1027	0.0496
	[1.57]	[0.86]	[1.27]	[2.08]	[1.72]	[0.61]	[-0.18]	[-0.72]	[0.83]
Stock	-0.0974 b	-0.1035	-0.1108 b				-0.1624 c	-0.2682 a	-0.1736 c
	[-2.13]	[-1.22]	[-2.06]				[-3.13]	[-1.97]	[-2.97]
Cash	-0.0559	-0.0895	-0.0360						
	[-1.46]	[-1.33]	[-0.76]						
Cross.Border	0.0918 c	0.0756	0.1059 c	0.0718 b	0.0532	0.0848 b	0.1430 b	0.1499	0.1594 b
	[3.25]	[1.64]	[2.93]	[2.39]	[1.13]	[2.19]	[2.03]	[0.88]	[2.02]
Inst.Diff	0.0007	0.0041	-0.0006	-0.0013	0.0039	-0.0072	0.0192	0.0104	0.0387 a
	[0.11]	[0.47]	[-0.07]	[-0.20]	[0.43]	[-0.81]	[1.19]	[0.27]	[1.90]
Public.Bidder	-0.0527 a	-0.0391	-0.0560	-0.0602 b	-0.0611	-0.0538	-0.0910	0.0246	-0.1454
	[-1.91]	[-1.00]	[-1.46]	[-2.03]	[-1.46]	[-1.31]	[-1.27]	[0.29]	[-1.53]

Table 14. Continued

Size	-0.0272 [c]	-0.0273 [b]	-0.0280 [c]	-0.0113	-0.0186	-0.0089	-0.0577 [c]	-0.0430	-0.0605 [c]
	[-3.55]	[-2.03]	[-2.89]	[-1.28]	[-1.37]	[-0.75]	[-4.04]	[-1.52]	[-3.55]
MTB	-0.0051	-0.0052	-0.0040	-0.0058	-0.0047	-0.0056	-0.0008	-0.0188	0.0042
	[-1.05]	[-0.70]	[-0.66]	[-1.25]	[-0.63]	[-0.90]	[-0.08]	[-0.65]	[0.41]
Liquidity	0.0729	0.0591	0.0782	0.1146	0.1595	0.0954	-0.0218	-0.1371	0.0341
	[1.20]	[0.61]	[0.96]	[1.59]	[1.41]	[0.99]	[-0.20]	[-0.55]	[0.24]
ROE	0.0567	0.0447	0.0689	0.0434	0.0995	0.0586	0.0828 [a]	0.0005	0.1033 [a]
	[1.60]	[0.69]	[1.57]	[0.82]	[0.93]	[0.92]	[1.65]	[0.00]	[1.72]
P/E	0.0006	0.0016	-0.0002	0.0002	0.0005	-0.0004	0.0012	0.0040	-0.0007
	[1.02]	[1.40]	[-0.47]	[0.34]	[0.67]	[-0.61]	[0.81]	[1.20]	[-0.73]
Growth	-0.0538	0.0951	-0.1319 [a]	-0.0459	0.0110	-0.1146	-0.0856	0.1930	-0.1796 [a]
	[-1.00]	[1.18]	[-1.96]	[-0.71]	[0.12]	[-1.34]	[-0.92]	[1.18]	[-1.85]
Leverage	-0.0003	0.0144	-0.0033	0.0037	0.0167	-0.0104	-0.0040	-0.0005	-0.0042
	[-0.02]	[0.60]	[-0.19]	[0.20]	[0.60]	[-0.47]	[-0.18]	[-0.01]	[-0.17]
UK - Indicator	0.0384	0.0795 [a]	-0.0034	0.1331 [c]	0.1291 [b]	0.1090 [b]	-0.1041 [a]	0.0569	-0.1825 [c]
	[1.24]	[1.70]	[-0.08]	[3.52]	[2.49]	[2.17]	[-1.89]	[0.46]	[-2.74]
IFRS - Indicator	-0.0121	0.0138	-0.0370	-0.0453	-0.0225	-0.0624	0.0072	0.0228	-0.0198
	[-0.43]	[0.34]	[-1.00]	[-1.36]	[-0.46]	[-1.37]	[0.13]	[0.22]	[-0.29]
Cons	0.7562 [c]	0.5453 [b]	0.9114 [c]	0.4205 [c]	0.1962	0.6988 [c]	1.3590 [c]	1.1504 [b]	1.3948 [c]
	[5.67]	[2.47]	[5.54]	[3.14]	[1.07]	[3.73]	[5.52]	[2.26]	[4.84]
IFRS - Indicator	[1: > 2005; 0: o.w.]			[1: > 2005; 0: o.w.]			[1: > 2005; 0: o.w.]		
UK - Indicator	Included	Included	Included	Included	Included	Included	Included	Included	Included
Obs.	913	353	560	581	247	334	332	106	226
R2	0.090	0.136	0.118	0.102	0.158	0.126	0.156	0.264	0.220

Table 14. Continued

Panel D. IFRS Adoption – Excluding observations using financial data around mandatory adoption (2005 and 2006)

Sample:	*ALL DEALS*			*CASH DEALS*			*NON-CASH DEALS*		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Sub-sample:	All	Inter-industry	Intra-industry	All	Inter-industry	Intra-industry	All	Inter-industry	Intra-industry
Independent variables	Coef. / [t]	Coef. / [t]	Coef. / [t]	Coef. / [t]	Coef. / [t]	Coef. / [t]	Coef. / [t]	Coef. / [t]	Coef. / [t]
EM-Accruals	-0.0094	0.0216	-0.0299 [b]	-0.0034	0.0352 [a]	-0.0459 [b]	-0.0139	-0.0175	-0.0134
	[-0.91]	[1.40]	[-2.14]	[-0.24]	[1.81]	[-2.25]	[-0.73]	[-0.35]	[-0.58]
EM-Sales	-0.0172	-0.0038	-0.0283 [a]	-0.0097	0.0204	-0.0385 [a]	-0.0304	-0.0718	-0.0243
	[-1.42]	[-0.18]	[-1.86]	[-0.62]	[0.87]	[-1.83]	[-1.44]	[-1.33]	[-0.92]
EM-Overproduction	-0.0017	-0.0011	-0.0046	0.0082	0.0207	-0.0021	-0.0085	-0.0280	-0.0082
	[-0.16]	[-0.07]	[-0.31]	[0.62]	[1.23]	[-0.11]	[-0.42]	[-0.67]	[-0.31]
Intra-industry	0.0181			0.0233			0.0067		
	[0.69]			[0.75]			[0.14]		
Hostile	-0.0242	0.1313	-0.0926	-0.0504	0.2144	-0.2131 [c]	-0.0250	-0.0456	0.0440
	[-0.46]	[1.49]	[-1.52]	[-0.67]	[1.52]	[-2.82]	[-0.30]	[-0.36]	[0.37]
Multibid	0.0607	0.0799	0.0584	0.0943	0.1229	0.0496	0.0525	-0.1143	0.0995
	[1.40]	[0.92]	[1.14]	[1.52]	[1.21]	[0.63]	[0.76]	[-0.55]	[1.27]
Toehold	-0.1781 [c]	-0.0487	-0.2500 [c]	-0.1309 [b]	-0.0383	-0.1920 [b]	-0.2527 [b]	0.1747	-0.2851 [a]
	[-3.79]	[-0.72]	[-3.52]	[-2.42]	[-0.49]	[-2.30]	[-2.11]	[0.58]	[-1.70]
Tender	0.0440	0.0538	0.0156	0.0706 [a]	0.0648	-0.0009	-0.0107	-0.0980	0.0660
	[1.47]	[1.19]	[0.42]	[1.88]	[1.17]	[-0.02]	[-0.20]	[-0.82]	[1.01]
Stock	-0.1213 [b]	-0.1343	-0.1457 [b]				-0.1805 [c]	-0.2938 [b]	-0.1905 [c]
	[-2.49]	[-1.46]	[-2.46]				[-3.36]	[-2.07]	[-2.91]

Table 14. Continued

Cash	-0.0459	-0.0099	-0.0583						
	[-1.11]	[-0.14]	[-1.07]						
Cross.Border	0.0886 [c]	0.0811 [a]	0.1004 [b]	0.0643 [a]	0.0746	0.0615	0.1779 [b]	0.1070	0.1737 [a]
	[3.01]	[1.66]	[2.55]	[1.96]	[1.61]	[1.39]	[2.42]	[0.66]	[1.93]
Inst.Diff	-0.0020	-0.0087	-0.0044	-0.0056	-0.0081	-0.0121	0.0194	-0.0124	0.0230
	[-0.29]	[-0.83]	[-0.49]	[-0.76]	[-0.67]	[-1.29]	[1.15]	[-0.21]	[1.14]
Public.Bidder	-0.0410	-0.0126	-0.0490	-0.0496	-0.0329	-0.0501	-0.0712	0.0883	-0.1504
	[-1.33]	[-0.30]	[-1.13]	[-1.44]	[-0.68]	[-1.01]	[-0.96]	[0.76]	[-1.53]
Size	-0.0266 [c]	-0.0094	-0.0342 [c]	-0.0129	-0.0125	-0.0086	-0.0564 [c]	-0.0209	-0.0733 [c]
	[-3.29]	[-0.83]	[-3.00]	[-1.35]	[-0.91]	[-0.60]	[-3.75]	[-0.69]	[-3.81]
MTB	-0.0046	-0.0086	-0.0044	-0.0064	-0.0192 [a]	-0.0009	-0.0010	0.0042	0.0000
	[-0.76]	[-0.87]	[-0.58]	[-1.12]	[-1.73]	[-0.11]	[-0.09]	[0.15]	[-0.00]
Liquidity	0.0715	0.0764	0.0549	0.1026	0.1672	0.1407	0.0126	-0.2538	-0.0400
	[1.06]	[0.72]	[0.58]	[1.21]	[1.23]	[1.13]	[0.11]	[-1.00]	[-0.25]
ROE	0.0603	0.0682	0.0640	0.0801	0.1815	0.0956	0.0821 [a]	0.0990	0.0963 [a]
	[1.63]	[1.14]	[1.39]	[1.23]	[1.53]	[1.18]	[1.72]	[1.12]	[1.75]
P/E	0.0002	0.0004	0.0001	0.0003	0.0009	-0.0002	-0.0005	-0.0036	0.0000
	[0.31]	[0.40]	[0.20]	[0.52]	[0.98]	[-0.31]	[-0.46]	[-1.42]	[0.02]
Growth	-0.0635	0.0102	-0.1334	-0.0365	-0.0188	-0.1477	-0.1256	-0.2132	-0.1829
	[-0.98]	[0.11]	[-1.57]	[-0.44]	[-0.17]	[-1.21]	[-1.18]	[-0.96]	[-1.54]
Leverage	0.0007	0.0302	-0.0019	0.0002	0.0294	-0.0087	0.0026	0.0532	0.0081
	[0.04]	[1.11]	[-0.10]	[0.01]	[1.01]	[-0.33]	[0.11]	[0.68]	[0.28]
UK - Indicator	0.0566	0.1374 [c]	0.0034	0.1572 [c]	0.1445 [b]	0.1482 [c]	-0.0890	0.0789	-0.1890 [b]
	[1.63]	[2.90]	[0.07]	[3.70]	[2.53]	[2.62]	[-1.50]	[0.65]	[-2.57]

Table 14. Continued

Cons	0.6761 [c]	0.3295	1.0007 [c]	0.4765 [c]	0.4075 [b]	0.5247 [b]	1.3778 [c]	0.3378	1.3343 [c]
	[4.40]	[1.57]	[4.77]	[2.97]	[2.12]	[2.58]	[4.22]	[0.39]	[3.42]
Year - Indicators	Included	Included	Included	Included	Included	Included	Included	Included	Included
UK - Indicator	Included	Included	Included	Included	Included	Included	Included	Included	Included
Obs.	807	320	487	513	223	290	294	97	197
R2	0.155	0.254	0.193	0.158	0.313	0.215	0.256	0.428	0.331

Note: Coefficients for Year indicators and some control variables are omitted for brevity. Columns (1) – (3) include all deals. Columns (4) – (6) include deals paid only in cash while columns (7) – (9) include deals paid only with stocks or with a combination between stocks and cash. In Panel A, the variable *RL-Diff* measures the distance between the Rule of Law indexes between the acquirer and target nations. Standard errors are robust to heteroskedasticity, and a, b, and c denote significance at 10%, 5%, and 1% respectively. See Table 7 for variable definitions.

Finally, we performed additional estimations excluding the M&A announcements where the targets' EM variables are measured using financial information around the IFRS adoption (i.e., 2006 and 2005). The rationale for this check is that the estimations of the EM measures might have been affected by the change in the accounting standards. As shown in Panel D, although this analysis reduces our sample by about 10%, the results remain fairly consistent.

2.5. Conclusions

In line with prior studies that have explored the impact of FRQ on M&A terms, this study examines the relation between the target's EM practices and the deal premium offered by the acquirer. In particular, we argue that industry relatedness is a key factor that influences this association, because operating in the same industry helps the acquirer to identify the target's income increasing manipulation practices in the due diligence process, and, consequently, discount them from the premium. In other words, the due process is more hepful for bidders in industry-related deals because they can better understand the public financial information of target firms, and isolate expected synergies from managers' discretion.

The evidence based on a sample of European M&A anouncements during the twenty-year period 1997-2017 shows that, on average, there is no association between the target's EM and the bid premium. However, a more detailed analysis indicates that the association depends on whether the deals are inter-industry or intra-industry. Acquirers announce to pay lower bid premiums under the presence of upwards EM of targets —via discretionary accruals— in intra-industry M&A, while the opposite effect is found in inter-industry deals. The lack of significance of our proxies for EM via real activities can be interpreted as that this kind of manipulation is less prevalent than using accruals due to higher costs for targets. We should emphasize that the measures taken in the EU to foster regional economic integration through setting common rules for different aspects, including takeovers (ETD) and financial reporting (IFRS) are not affecting our main results.

These results provide some insights on how bidders incorporate the targets' management discretion into the pre-acquisition process. By disentangling the upward EM from the value of synergies in the target's accounting information, acquirers mitigate the risks of

overstating those synergies in intra-industry deals. Our findings suggest that business insight can help acquirers complete a more valuable due diligence process, as well as gain a better position in negotiating the deal. Thus, we pose that, based on their knowledge of the industry, and, in particular of the accounting practices, acquirers in industry-related takeovers can see through the target's EM, while this is not the case in unrelated transactions.

Indeed, our results for the un-related transactions are consistent with prior studies finding evidence that stock returns surrounding deal announcements are positive for target firms but insignificant, or even negative in the long-run, for acquirers. This enhances our understanding of some widely known facts of the acquirer's financial performance after the M&A, such as the prevalence of value-destroying takeovers. However, although according to the literature the overvaluation risk is higher in inter-industry deals than in intra-industry deals, our results cannot confirm that value-destroying activities, such as management hubris (Roll, 1986), overconfidence (Malmendier & Tate, 2008) and entrenchment (Harford et al., 2012), are associated with unidentified EM practices in the targets and overpayments. This opens new avenues for research.

Our results are in line with the growing body of research that looks at the influence of FRQ on M&A deals; but, unlike other studies, our study focuses on EM practices and considers the influence of industry relatedness. We suggest that by relying on their background in the business, in industry-related deals, acquirers can counteract the dominant negotiation power that targets have in the M&A process, and thus achieve better terms in the takeover (such as a favorable bid price).

Before concluding we woud like to refer to future research opportunities within the M&A scenario. Indeed, there are other outcomes from M&A negotiations, such as the likelihood of completion, the percentage of shares used as the payment method, and the timing of the deals that future research can explore. It is our belief that the relatively un-explored EU setting offers huge opportunities for future investigations.

References

Ahuja, G., & Katila, R. (2001). Technological acquisitions and the innovation performance of acquiring firms: a longitudinal study. *Strategic Management Journal*, *22*(3), 197–220. https://doi.org/10.1002/smj.157

Alcalde, N., & Pérez-Soba, I. (2016). Has the EU Takeover Directive Improved Minority Shareholder Protection? The Spanish Evidence. *European Business Organization Law Review*, 17(3), 261–283. https://doi.org/10.1007/s40804-016-0049-8.

Alsharairi, M., Black, E.L., Hofer, C., & Al-Hamadeen, R. (2015). The post-merger performance of the European M&As: Does pre-merger earnings management matter? *Corporate Ownership and Control*, 13 (1), 994–1005. Retrieved from April, 22, 2016. http://www.scopus.com/inward/record.url?eid=2-s2.0-84949740612&partnerID=tZOtx3y1.

Anagnostopoulou, S.C., & Tsekrekos, A.E. (2015). Earnings management in firms seeking to be acquired. *The British Accounting Review*, 47(4), 351–375. https://doi.org/10.1016/j.bar.2014.07.001.

Andriosopoulos, D., & Yang, S. (2015). The impact of institutional investors on mergers and acquisitions in the United Kingdom. *Journal of Banking and Finance*, *50*, 547–561. https://doi.org/10.1016/j.jbankfin.2014.06.004

Angwin, D. (2001). Mergers and acquisitions across European borders: National perspectives on preacquisition due diligence and the use of professional advisers. *Journal of World Business*, 36(1), 32–57. https://doi.org/10.1016/S1090-9516(00)00053-5.

Bagnoli, M., & Watts, S. G. (2000). The Effect of Relative Performance Evaluation on Earnings Management: A Game-theoretic Approach. *Journal of Accounting and Public Policy*, *19* (December), 377–397. https://doi.org/https://doi.org/10.1016/S0278-4254(00)00005-3.

Baik, B., Cho, K., Choi, W., & Kang, J.K. (2015). The Role of Institutional Environments in Cross-Border Mergers: A Perspective from Bidders' Earnings Management Behavior. *Management International Review*, 55(5), 615–646. https://doi.org/10.1007/s11575-015-0249-4.

Baik, B., Kang, J.K., & Morton, R.M. (2007). Earnings Management in Takeovers of Privately Held Targets. Working Paper, Seoul National University. Available at SSRN: http://dx.doi.org/10.2139/ssrn.1013639.

Balakrishnan, S., & Koza, M.P. (1993). Information asymmetry, adverse selection and joint-ventures: Theory and evidence. *Journal of Economic Behavior & Organization*, 20(1), 99–117. https://doi.org/10.1016/0167-2681(93)90083-2.

Ballas, A. A., & Hevas, D. L. (2005). Differences in the valuation of earnings and book value: Regulation effects or industry effects? *International Journal of Accounting*, *40*(4), 363–389. https://doi.org/10.1016/j.intacc.2005.06.007.

Balsam, S., Krishnan, J., & Yang, J. S. (2003). Auditor Industry Specialization and Earnings Quality. *AUDITING: A Journal of Practice & Theory*, *22*(2), 71–97. https://doi.org/10.2308/aud.2003.22.2.71

Bargeron, L.L., Schlingemann, F.P., Stulz, R.M., & Zutter, C.J. (2008). Why do private acquirers pay so little compared to public acquirers? *Journal of Financial Economics*, 89(3), 375–390. https://doi.org/10.1016/j.jfineco.2007.11.005.

Barth, M. E., Beaver, W. H., Hand, J. R. M., & Landsman, W. R. (1999). Accruals, Cash Flows, and Equity Values. *Review of Accounting Studies*, *3*, 205–229. https://doi.org/10.1023/A:1009630100586.

Ben-Amar, W., & Missonier-Piera, F. (2008). Earnings management by friendly takeover targets. *International Journal of Managerial Finance*, 4(3), 232–243. https://doi.org/10.1108/17439130810878811.

Betton, S., & Eckbo, B. E. (2000). Toeholds, Bid Jumps, and Expected Payoffs in Takeovers. *The Review of Financial Studies*, 13(4), 841–882. http://www.jstor.org/stable/2646055.

Botsari, A., Meeks, G., 2008. Do acquirers manage earnings prior to a share for share bid? *Journal of Business Finance and Accounting*, 35(5–6), 633–670. https://doi.org/10.1111/j.1468-5957.2008.02091.x.

Bozos, K., Ratnaike, Y. C., & Alsharairi, M. (2014). How has the international harmonization of financial reporting standards affected merger premiums within the European Union? *International Review of Financial Analysis*, 31, 48–60. https://doi.org/10.1016/j.irfa.2013.09.004.

Campa, D., & Hajbaba, A. (2016). Do targets grab the cash in takeovers: The role of earnings management. *International Review of Financial Analysis*, 44, 56–64. https://doi.org/10.1016/j.irfa.2016.01.008.

Capron, L. (1999). The long-term performance of horizontal acquisitions. *Strategic Management Journal*, *20*(11), 987–1018. https://doi.org/10.1002/(SICI)1097-0266(199911)20:11<987::AID-SMJ61>3.0.CO;2-B

Capron, L., & Shen, J.C. (2007). Acquisitions of private vs. public firms: Private information, target selection, and acquirer returns. *Strategic Management Journal*, 28 (9), 891–911. https://doi.org/10.1002/smj.612.

Carcello, J. V, & Nagy, A. L. (2004). Client size, auditor specialization and fraudulent financial reporting. *Managerial Auditing Journal*, *19*(5), 651–668. https://doi.org/10.1108/02686900410537775

Chang, R. A., Curtis, G. A., & Jenk, J. (2002). Keys to the kingdom: How an integrated IT capability can increase your odds of M&A success. *New York, USA*.

Chen, S., Thomas, J., & Zhang, F. (2016). Spring-loading when no one is looking? Earnings and cash flow management around acquisitions. *Review of Accounting Studies*, 21(4), 1081–1115. https://doi.org/10.1007/s11142-016-9365-z.

Chen, C. W., Collins, D. W., Kravet, T. D., & Mergenthaler, R. D. (2018). Financial Statement Comparability and the Efficiency of Acquisition Decisions. *Contemporary Accounting Research*, *35*(1), 164–202. https://doi.org/10.1111/1911-3846.12380

Child, J., Faulkner, D., & Pitkethly, R. (2001). *The management of international acquisitions*. Oxford University Press.

Ciesielski, J. 2016. *How Autonomy Fooled Hewlett-Packard*. Retrieved March 12, 2019, from http://fortune.com/2016/12/14/hewlett-packard-autonomy/

Clarke, B. (2009). The Takeover Directive: Is a Little Regulation Better Than No Regulation? *European Law Journal*, *15*(2), 174–197. https://doi.org/10.1111/j.1468-0386.2008.00457.x

Cohen, D. A., Dey, A., & Lys, T. Z. (2008). Real and Accrual-Based Earnings Management in the Pre-and Post-Sarbanes-Oxley Periods. *The Accounting Review*, *83*(3), 757–787. Retrieved from http://www.jstor.org/stable/30244500

Cumming, D., & Zambelli, S. (2017). Due Diligence and Investee Performance. *European Financial Management*, 23 (2), 211–253. https://doi.org/10.1111/eufm.12100.

Dang, M., Henry, D., Nguyen, M. T., & Hoang, V. A. (2018). Cross-country determinants of ownership choices in cross-border acquisitions: Evidence from emerging markets. *Journal of Multinational Financial Management*, *44*, 14–35. https://doi.org/10.1016/j.mulfin.2018.01.001

Davies, R. B., Desbordes, R., & Ray, A. (2018). Greenfield versus merger and acquisition FDI: Same wine, different bottles? *Canadian Journal of Economics/Revue Canadienne d'économique*, *51*(4), 1151–1190. https://doi.org/10.1111/caje.12353

Dechow, P.M., Ge, W., & Schrand, C. (2010). Understanding earnings quality: A review of the proxies, their determinants and their consequences. *Journal of Accounting and Economics*, 50(2–3), 344–401. https://doi.org/10.1016/j.jacceco.2010.09.001.

Dechow, P. M., & Skinner, D. J. (2000). Earnings management: Reconciling the views of accounting academics, practitioners, and regulators. *Accounting Horizons*, *14*(2), 235–250. https://doi.org/10.2308/acch.2000.14.2.235

Doukakis, L. C. (2014). The effect of mandatory IFRS adoption on real and accrual-based earnings management activities. *Journal of Accounting and Public Policy*, *33*(6),

551–572. https://doi.org/10.1016/j.jaccpubpol.2014.08.006

Easterwood, C.M. (1998). Takeovers and Incentives for Earnings Management: An Empirical Analysis. *Journal of Applied Business Research*, 14(1), 29–47. http://dx.doi.org/10.19030/jabr.v14i1.5726.

Erickson, M., & Wang, S. (1999). Earnings management by acquiring firms in stock for stock mergers. *Journal of Accounting and Economics*, 27, 149–176. https://doi.org/10.1016/S0165-4101(99)00008-7

European-Commission. (2007). *Report on the implementation of the Directive on Takeover Bids*. Brussels.

Faccio, M., & Masulis, R.W. (2016). The Choice of Payment Method in European Mergers and Acquisitions. *The Journal of Finance*, 60(3), 1345–1388. https://doi.org/10.1111/j.1540-6261.2005.00764.x.

Francis, J. R., Huang, S. X., & Khurana, I. K. (2016). The Role of Similar Accounting Standards in Cross-Border Mergers and Acquisitions. *Contemporary Accounting Research*, *33*(3), 1298–1330. https://doi.org/10.1111/1911-3846.12176

Francoeur, C., Ben-Amar, W., & Rakoto, P. (2012). Ownership structure, earnings management and acquiring firm post-merger market performance: Evidence from Canada. *International Journal of Managerial Finance*, 8(2), 100–119. https://doi.org/10.1108/17439131211216594.

Fu, F., Lin, L., & Officer, M. S. (2013). Acquisitions driven by stock overvaluation: Are they good deals? *Journal of Financial Economics*, *109*(1), 24–39. https://doi.org/10.1016/j.jfineco.2013.02.013

Gong, G., Louis, H., & Sun, A.X. (2008). Earnings management, lawsuits, and stock-for-stock acquirers' market performance. *Journal of Accounting and Economics*, 46(1), 62–77. https://doi.org/10.1016/j.jacceco.2008.03.001.

Gregory, A. (1997). An examination of the long run performance of UK acquiring firms. *Journal of Business Finance & Accounting*, 24(7–8), 971–1002. https://doi.org/10.1111/1468-5957.00146.

Gu, Z., Lee, C. W. J., & Rosett, J. G. (2005). What determines the variability of accounting accruals? *Review of Quantitative Finance and Accounting*, *24*(3), 313–334. https://doi.org/10.1007/s11156-005-6869-1.

Guest, P.M., Bild, M., & Runsten, M. (2010). The effect of takeovers on the fundamental value of acquirers. *Accounting and Business Research*, 40(4), 333–352. https://doi.org/10.1080/00014788.2010.9663409.

Gupta, P., Damouni, N., & Sandle, P. (2012). *How a desperate HP suspended disbelief for Autonomy deal*. Retrieved March 12, 2019, from http://www.reuters.com/article/2012/11/30/us-hp-autonomy-idUSBRE8AT09X20121130.

Graham, J. R., Harvey, C. R., & Rajgopal, S. (2005). The economic implications of corporate financial reporting. *Journal of Accounting and Economics*, *40*(1–3), 3–73. https://doi.org/10.1016/j.jacceco.2005.01.002

Hagendorff, J., Hernando, I., Nieto, M.J., & Wall, L.D. (2012). What do premiums paid for bank M&As reflect? The case of the European Union. *Journal of Banking and Finance*, 36(3), 749–759. https://doi.org/10.1016/j.jbankfin.2011.03.009.

Harford, J., Humphery-Jenner, M., & Powell, R. (2012). The sources of value destruction in acquisitions by entrenched managers. *Journal of Financial Economics, 106*(2), 247–261. https://doi.org/10.1016/j.jfineco.2012.05.016

Healy, P., & J. M. Whalen. (1999). A review of the earnings management literature and its implications for standard setting. *Accounting Horizons,* 13, 365-383.

Helfat, C. E., & Eisenhardt, K. M. (2004). Inter-temporal economies of scope, organizational modularity, and the dynamics of diversification. *Strategic Management Journal*, *25*(13), 1217–1232. https://doi.org/10.1002/smj.427.

Heron, R., Lie, E. (2002). Operating Performance and the Method of Payment in Takeovers. *Journal of Financial and Quantitative Analysis*, 37(1), 137–155. https://doi.org/10.2307/3594998.

Higgins, H. N. (2013). Do stock-for-stock merger acquirers manage earnings? Evidence from Japan. *Journal of Accounting and Public Policy*, 32(1), 44–70. https://doi.org/10.1016/j.jaccpubpol.2012.10.001.

Humphery-Jenner, M. (2012). The impact of the EU takeover directive on takeover performance and empire building. *Journal of Corporate Finance*, 18(2), 254–272. https://doi.org/10.1016/j.jcorpfin.2011.12.004.

Hur, J., Parinduri, R. A., & Riyanto, Y. E. (2011). Cross-Border M&A Inflows and Quality of Country Governance: Developing vs. Developed Countries. *Pacific Economic Review*, *16*(5), 638–655. https://doi.org/10.1111/j.1468-0106.2011.00568.x

Jaafar, A., & McLeay, S. (2007). Country effects and sector effects on the harmonization of accounting policy choice. *Abacus*, *43*(2), 156–189. https://doi.org/10.1111/j.1467-6281.2007.00224.x.

Jolly, J. (2018). UK entrepreneur to face charges in US over Hewlett-Packard takeover. Retrieved March 6, 2019, from https://www.theguardian.com/business/2018/nov/30/autonomy-co-founder-to-face-us-files-criminal-charges-mike-lynch-hewlett-packard.

J.P. Morgan (2019). *2019 Global M&A Outlook*. Retrieved from https://www.jpmorgan.com/global/cib/2019-ma-global-year-outlook

Kaufmann, D., Kraay, A., & Mastruzzi, M. (2009). Governance matters VIII: Aggregate and individual governance indicators 1996-2008. *World Bank Policy Research Working Paper No. 4978*.

Kothari, S.P., Leone, A.J., & Wasley, C.E. (2005). Performance matched discretionary accrual measures. *Journal of Accounting and Economics*, 39(1), 163–197. https://doi.org/10.1016/j.jacceco.2004.11.002.

Kothari, S. P., Mizik, N., & Roychowdhury, S. (2016). Managing for the Moment: The Role of Earnings Management via Real Activities versus Accruals in SEO Valuation. *The Accounting Review*, *91*(2), 559–586. https://doi.org/10.2308/accr-51153

Koumanakos, E., Siriopoulos, C., & Georgopoulos, A. (2005). Firm acquisitions and earnings management: Evidence from Greece. *Managerial Auditing Journal*, 20(7), 663–678. https://doi.org/10.1108/02686900510611212.

Krishnan, G. V. (2003). Does Big 6 Auditor Industry Expertise Constrain Earnings Management? *Accounting Horizons*, *17*(s-1), 1–16. https://doi.org/10.2308/acch.2003.17.s-1.1

La Porta, R., Lopez-de-Silanes, F., Shleifer, A., & Vishny, R. W. (1998). Law and Finance. *Journal of Political Economy*, *106*(6), 1113–1155. https://doi.org/10.1086/250042

Lajoux, A. R., & Elson, C. M. (2009). *The Art of M&A Due Diligence: Navigating Critical Steps & Uncovering Crucial Data*. (2nd ed.). New York: McGraw-Hill.

Lehmann, N. (2015). The role of corporate governance in shaping accruals manipulation prior to acquisitions. *Accounting and Business Research*, 46(4), 327–364. https://doi.org/10.1080/00014788.2015.1116969.

Louis, H. (2004). Earnings management and the market performance of acquiring firms. *Journal of Financial Economics*, 74(1), 121–148. https://doi.org/10.1016/j.jfineco.2003.08.004.

Louis, H., & Sun, A.X. (2016). Abnormal Accruals and Managerial Intent: Evidence from the Timing of Merger Announcements and Completions. *Contemporary Accounting Research*, 33(3), 1101–1135. https://doi.org/10.1111/1911-3846.12171.

Malmendier, U., & Tate, G. (2008). Who makes acquisitions? CEO overconfidence and the market's reaction. *Journal of Financial Economics*, *89*(1), 20–43. https://doi.org/10.1016/j.jfineco.2007.07.002

Mantecon, T. (2009). Mitigating risks in cross-border acquisitions. *Journal of Banking and Finance*, *33*(4), 640–651. https://doi.org/10.1016/j.jbankfin.2008.12.001

Maquieira, C.P., Megginson, W.L., & Nail, L. (1998). Wealth creation versus wealth redistributions in pure stock-for-stock mergers. *Journal of Financial Economics*, 48(1), 3–33. https://doi.org/10.1016/S0304-405X(98)00002-6.

Marquardt, C., & Zur, E. (2015). The Role of Accounting Quality in the M&A Market. *Management Science*, 61(3), 604–623. https://doi.org/10.1287/mnsc.2013.1873.

Martynova, M., Oosting, S., & Renneboog, L. (2007). The long-term operating performance in European mergers and acquisitions. In: Gregoriou, G.N., Renneboog, L. (Eds.), *International Mergers and Acquisitions Activity Since 1990: Recent Research and Quantitative Analysis*. Academic Press-Elsevier, Burlington (MA), San Diego (CA) and London, 79–116. https://doi.org/10.1016/B978-075068289-3.50006-X.

Martynova, M., & Renneboog, L. (2008). A century of corporate takeovers: What have we learned and where do we stand? *Journal of Banking and Finance*, 32(10), 2148–2177. https://doi.org/10.1016/j.jbankfin.2007.12.038.

Martynova, M., & Renneboog, L. (2011). The Performance of the European Market for Corporate Control: Evidence from the Fifth Takeover Wave. *European Financial Management*, 17(2), 208–259. https://doi.org/10.1111/j.1468-036X.2009.00497.x.

McNichols, M.F., & Stubben, S.R. (2015). The effect of target-firm accounting quality on valuation in acquisitions. *Review of Accounting Studies*, 20(1), 110–140. https://doi.org/10.1007/s11142-014-9283-x.

Moeller, S.B., & Schlingemann, F.P. (2005). Global diversification and bidder gains: A comparison between cross-border and domestic acquisitions. *Journal of Banking and Finance*, 29(3), 533–564. https://doi.org/10.1016/j.jbankfin.2004.05.018.

Moore, H. 2012. *Hewlett-Packard ignored red flags ahead of Autonomy misstep*. Retrieved March 6, 2019, from https://www.theguardian.com/commentisfree/2012/nov/21/hewlett-packard-red-flags-autonomy.

Morck, R., Shleifer, A., & Vishny, R. W. (1990). Do Managerial Objectives Drive Bad Acquisitions ? *The Journal of Finance*, *45*(1), 31–48. Retrieved from http://www.jstor.org/stable/2328808

Moschieri, C., & Campa, J.M. (2009). The European M&A Industry: A Market in the Process of Construction. *Academy of Management Perspectives*, 23(4), 71–87. https://doi.org/10.5465/amp.23.4.71.

Moschieri, C., & Campa, J.M. (2014). New trends in mergers and acquisitions: Idiosyncrasies of the European market. *Journal of Business Research*, 67(7), 1478–1485. https://doi.org/10.1016/j.jbusres.2013.07.018.

Nesta, L., & Saviotti, P. P. (2005). Coherence of the knowledge base and the firm's innovative performance: Evidence from the U.S. pharmaceutical industry. *Journal of Industrial Economics*, *53*(1), 123–142. https://doi.org/10.1111/j.0022-1821.2005.00248.x

Nguyen, H., & Kleiner, B. H. (2003). The effective management of mergers. *Leadership & Organization Development Journal*, *24*(8), 447–454. https://doi.org/10.1108/01437730310505876

PwC (2016). *Mergers & Acquisitions*. Retrieved from https://www.pwc.nl/nl/assets/documents/pwc-mergers-acquisitions.pdf

PwC (2019). *Deals year-end review and 2019 outlook*. Retrieved from https://www.pwc.com/us/en/services/deals/year-end-review-and-2019-outlook.html

Raman, K., Shivakumar, L., & Tamayo, A. (2013). Target's earnings quality and bidders' takeover decisions. *Review of Accounting Studies*, 18(4), 1050–1087. https://doi.org/10.1007/s11142-013-9224-0.

Rau, P. R., & Vermaelen, T. (1998). Glamour, value and the post-acquisition performance of acquiring firms. *Journal of Financial Economics*, *49*(2), 223–253. https://doi.org/10.1016/S0304-405X(98)00023-3

Reppenhagen, D. A. (2010). Contagion of accounting methods: evidence from stock option expensing. *Review of Accounting Studies*, *15*(3), 629–657. https://doi.org/10.1007/s11142-010-9128-1

Rhode, J., Whitsell, G., & Kelsey, R. (1974). An Analysis of Client-Industry Concentrations for Large Public Accounting Firms. *The Accounting Review, 49*(4), 772-787. Retrieved from http://www.jstor.org/stable/245055

Riad, S. (2007). Of mergers and cultures: "What happened to shared values and joint assumptions?". *Journal of Organizational Change Management, 20*(1), 26–43. https://doi.org/10.1108/09534810710715261

Roll, R. (1986). The Hubris Hypothesis of Corporate Takeovers. *The Journal of Business, 59*(2), 197–216. Retrieved from http://www.jstor.org/stable/2353017

Rossi, S., & Volpin, P. F. (2004). Cross-country determinants of mergers and acquisitions. *Journal of Financial Economics, 74*(2), 277–304. https://doi.org/10.1016/j.jfineco.2003.10.001

Roychowdhury, S. (2006). Earnings management through real activities manipulation. *Journal of Accounting and Economics, 42*(3), 335–370. https://doi.org/10.1016/j.jacceco.2006.01.002

Schwert, W.G. (2000). Hostility in takeovers: In the eye of the beholder? *Journal of Finance*, 55(6), 2599–2640. https://doi.org/10.1111/0022-1082.00301.

Shen, J.C., & Reuer, J.J. (2005). Adverse selection in acquisitions of small manufacturing firms: A comparison of private and public targets. *Small Business Economics*, 24(4), 393–407. https://doi.org/10.1007/s11187-005-5332-y.

Singh, H., & Montgomery, C.A. (1987). Corporate Acquisition Strategies and Economic Performance. *Strategic Management Journal*, 8(4), 377–386. https://doi.org/10.1002/smj.4250080407.

Skaife, H.A., & Wangerin, D.D. (2013). Target financial reporting quality and M&A deals that go bust. *Contemporary Accounting Research*, 30(2), 719–749. https://doi.org/10.1111/j.1911-3846.2012.01172.x.

Tuch, C., & O'Sullivan, N. (2007). The impact of acquisitions on firm performance: A review of the evidence. *International Journal of Management Reviews*, 9(2), 141–170. https://doi.org/10.1111/j.1468-2370.2007.00206.x.

Very, P., & Schweiger, D.M. (2001). The acquisition process as a learning process: Evidence from a study of critical problems and solutions in domestic and cross-border deals. *Journal of World Business*, 36(1), 11–31. https://doi.org/10.1016/S1090-9516(00)00052-3.

Walker, M.M. (2000). Corporate Takeovers, Strategic Objectives, and Acquiring-Firm Shareholder Wealth. *Financial Management*, 29(1), 53–66. https://www.jstor.org/stable/3666361.

Walkling, R.A., & Edmister, R.O. (1985). Determinants of Tender Offer Premiums. *Financial Analysts Journal*, 41(1), 27-37. http://www.jstor.org/stable/4478804.

Weitzel, U., & Berns, S. (2006). Cross-border takeovers, corruption, and related aspects of governance. *Journal of International Business Studies*, *37*(6), 786–806. https://doi.org/10.1057/palgrave.jibs.8400225

Zang, A. Y. (2012). Evidence on the Trade-Off between Real Activities Manipulation and Accrual-Based Earnings Management. *The Accounting Review*, *87*(2), 675–703. https://doi.org/10.2308/accr-10196

CHAPTER 3. THE OWNERSHIP DECISION AND EARNINGS MANAGEMENT OF TARGET FIRMS IN EUROPE

3.1. Introduction

Mergers and acquisitions (M&A) usually catch the attention of the public when failed deals occur (PwC, 2016). Failure rates are between 50% and 80%, and imply important losses for the acquirers' shareholders. Overpayment is one of the main reasons underlying these failures (Kumar, 2009; PwC, 2016). Notably, the acquisition of the US company Monsanto by Bayer portraits this scenario. Back in 2016, many shareholders of the German company expressed their concerns about the high price of the bid for Monsanto, which turned into a USD 63 billion transaction, with a 44% premium.[30] Three years later, some voices claimed that this was the worst corporate deal ever amid the allegations for glyphosate cancer in the Monsanto's herbicide, Roundup, which could compel Bayer to pay millions in compensations.[31] This scenario suggests that Bayer probably underestimated the risks derived from the acquisition of Monsanto or, in other words, overestimated the value of Monsanto.

Many factors can explain the uncertainties about the target's value and the overvaluation problem. For example, bidders performing cross-border deals (e.g., Bayer and Monsanto) or acquiring targets in high-tech firms may overestimate the synergies from the business combination due to the information asymmetries they face. Nevertheless, bidders can implement some strategies to cope with this problem, including performing joint-ventures; implementing contingent earnouts or stock swaps; or buying public instead of private companies (Reuer, 2005).

Similarly, there is evidence that when bidders face high uncertainties regarding the target's value, they prefer to acquire small rather than large equity stakes (e.g., Huang, Humphery-Jenner, & Powell, 2017; Ouimet, 2013; Povel & Sertsios, 2014; Shekhar & Wey, 2017). For example, bidders can strategically decide to get more information from the target by engaging in minority acquisitions, this is buying less than 50% of the target's shares, and deciding about the reasonable terms (e.g., offer price) of a majority acquisition afterwards (Povel & Sertsios, 2014). The rationale is that the small equity stakes will

[30] "*Bayer urged by Monsanto shareholders to raise bid further," Financial Times,* September 6, 2016. Source: https://www.ft.com/content/9219b46c-7422-11e6-b60a-de4532d5ea35

[31] "*Bayer's acquisition of Monsanto could easily turn out to be the worst deal ever," The Telegraph,* May 15, 2019, Source: https://www.telegraph.co.uk/business/2019/05/15/bayers-acquisition-monsanto-could-easily-turn-worst-deal-ever/; "*How Bayer-Monsanto Became One of the Worst Corporate Deals—in 12 Charts". The Wall Street Journal*, August 28, 2019, Source: https://www.wsj.com/articles/how-bayer-monsanto-became-one-of-the-worst-corporate-dealsin-12-charts-11567001577

facilitate acquirers knowing better about the target's value and make a good investment decision, avoiding the overvaluation problem. Some examples of such strategy are found in the biotechnology industry and the Chinese setting (Filson & Morales, 2006; Folta & Miller, 2002; Xu, Zhou, & Phan, 2010).

This study uses the target's discretionary accruals as a proxy for its potential overvaluation and analyzes if this affects the percentage of ownership that bidders are willing to acquire. Related literature finds that poor target's financial reporting quality before M&A is negatively related not only to the deal completion, but to other terms of the deal, such as the method of payment and the bid premium (e.g., Marquardt & Zur, 2015; Raman, Shivakumar, & Tamayo, 2013; Skaife & Wangerin, 2013). However, this strand of research seems to overlook a relevant output of the M&A negotiations, the percentage of equity that bidders are seeking to acquire in the target with the transaction, henceforth the ownership decision. This decision is crucial for bidders since it will affect future actions. For example, as pointed out by Liao (2014), acquirers can use their equity stakes to effectively monitor or share control with other large shareholders in targets after M&A. Besides, the complexities, risks, and investment costs that bidders face in M&A significantly vary with different levels of ownership (Contractor, Lahiri, Elango, & Kundu, 2014). Consequently, an in-depth analysis of the ownership decision can widen our understanding of M&A outputs.

We posit that bidders, concerned about the overpayment risk, take a cautious approach when identifying signs of overvaluation in the M&A pre-acquisition process (i.e., the due diligence). The level of upwards earnings management proxies for the target's potential overvaluation. Thus, we hypothesize that the acquirers will be more conservative, by bidding for fewer equity shares, the higher the target's discretionary accruals.

We use a sample of deal announcements involving acquirers and targets located in the European Union (EU) during the period 1990-2017. The European takeover market is an appropriate setting to analyze since the region has become an attractive market for foreign investors, and exhibits a variety set of regulations and business environments (Moschieri & Campa, 2014). All these factors make the M&A process unique in terms of acquisition techniques, payment methods, rates of completion, different from traditional research that focuses on one single country, mainly the USA (Moschieri & Campa, 2014). This setting allows for reaching more generalizable results than studies analyzing M&A in the USA

(Goergen & Renneboog, 2004; Vasilescu & Millo, 2016). We delimit our analysis to those deals where acquirers do not have any prior significant toehold in the target. With this approach, cases where acquirers have had access to privileged information about the target, are excluded, which allows us to better concentrate on how bidders use public financial statements to value targets.

To test the hypothesis, we estimate a multinomial ordered logit model where the dependent variable is an ordinal categorical variable, taking different values depending on the level of ownership offered at the deal announcement: minority acquisitions, partial acquisitions, and full acquisitions. The independent variables include the target's discretionary accruals and several controls that the M&A literature has identified as determinants of the ownership decision. In general, results validate our expectation, indicating that bidders are more prone to acquire low levels of ownership when the target exhibits high discretionary accruals before the deal. We interpret this as that acquirers seem to decide to take conservative equity stakes in targets under the suspect of overpayment. We also validate that this behaviour only happens for bidders buying equity stakes of targets located in the same country and with upwards earnings manipulation. We carry out several tests to corroborate the robustness of our findings, including, controlling by the acquirer characteristics, bid premiums, and the IFRS mandatory adoption in the EU.

This research brings new insights to the recent strand of literature that explores the earnings quality of targets and their effects on the M&A negotiations. Our results validate that bidders also incorporate the target's earnings management when deciding about the level of ownership to acquire. This partially responds to prior claims demanding more research about cross-border deals to examine in detail the complexities around their due diligence process (Collins, Holcomb, Certo, Hitt, & Lester, 2009; Haleblian, Devers, McNamara, Carpenter, & Davison, 2009; Martynova & Renneboog, 2008; Shimizu, Hitt, Vaidyanath, & Pisano, 2004). Our findings also have implications for the understanding of the M&A pre-acquisition process. In this regard, our results imply that bidders have difficulties in valuing targets properly in cross-border deals, which is in line with some studies that reveal the existence of several obstacles in the due diligence of cross-border M&A compared to local transactions, especially in terms of target valuation (Angwin, 2001; Chircop, Johan, & Tarsalewska, 2018; Mantecon, 2009; Very & Schweiger, 2001).

The remainder of the study is as follows. The next section reviews the related literature and develops the hypotheses. Section 3.3 presents the methodology, while sections 3.4 and 3.5 discuss the findings and robustness tests, respectively. Section 3.6 exhibits the conclusions.

3.2. Literature review and hypothesis

3.2.1. Target valuation uncertainty and earnings management

For bidder firms, it is critical to correctly asses the value of the targets' assets. The literature widely reports that value-destroying deals generally involve overpayments (e.g., Bouwman, Fuller, & Nain, 2009; Campa & Hajbaba, 2016; Fu, Lin, & Officer, 2013; Harford, Humphery-Jenner, & Powell, 2012; Malmendier & Tate, 2008; McNichols & Stubben, 2015; Morck, Shleifer, & Vishny, 1990; Very & Schweiger, 2001). In this regard, part of the problem is that the acquirers have to cope with an informational disadvantage that leads to uncertainty in the targets' valuation process since they lack crucial private information about the risks, economic resources, and obligations of the target before M&A (Wangerin, 2019).

In this uncertain setting, bidders perform a due diligence process. Angwin (2001) defines this process as an extensive examination of the target focusing on its financial information, taxes, asset valuation, operations, and business valuation in general; to have a complete portrait of the value and the risks of the company they are bidding for. In his exploratory study about M&A in Europe and the pre-acquisition due diligence, this author surveyed 142 top executives of leading European firms in the most active acquiring countries,[32] concluding that national cultural differences in Europe have a direct impact on the negotiations between acquirers and targets, and on the subsequent phases after M&A are completed.

Very and Schweiger (2001) examine the fundamental problems (and solutions) during the different stages of local and cross-border deals. Using a small number of in-depth interviews with managers,[33] these authors conclude that, on average, M&A do not create value for the acquirers, mainly due to the difficulties they face in collecting reliable

[32] France, Germany, Netherlands, Sweden, Switzerland, and the United Kingdom.
[33] The study involves senior executives from active middle-market acquirers in France, Germany, Italy and the USA.

information about targets, and in the integration process of the targets. The reliability of collected information has a direct impact on the value destruction for acquirers because high information asymmetries may lead to excessive-high pricing of the target.

Additionally, it is broadly known that firms manipulate their financial reports to mislead stakeholders and achieve contractual benefits for managers (Healy & Wahlen, 1999). Bagnoli and Watts (2000) posit that firms are usually in a non-cooperative game, where similar firms compete for funding using their financial information, which prompts them to engage in upwards EM regularly. For M&A, this implies that bidders are exposed to overvalued targets that use discretionary accruals to portrait an artificially appealing financial health. Considering this discussion, the acquirers may or may not be able to detect the target overvaluation in the due diligence process.

The presence of EM in financial reports erodes their earnings quality (EQ) (Dechow, Ge, & Schrand, 2010). In this regard, prior evidence indicates that deal announcements involving targets with low EQ level are associated with: 1) long-lasting negotiations with low rates of completion (Marquardt & Zur, 2015; Skaife & Wangerin, 2013); 2) using more shares as the payment method (Raman et al., 2013); 3) auction deals (Marquardt & Zur, 2015); and 4) renegotiated deals (and consequently lower bid prices) (Skaife & Wangerin, 2013). Besides, acquirers usually discount the poor EQ by bidding low deal premiums (Skaife & Wangerin, 2013), although there is evidence that this association depends on the deal attitude. Bidders offer lower premiums to targets with blurry financial statements because they can tell little about the target's actual value. However, in friendly deals, acquirers bid higher because they can learn more about the target from negotiations, and hence have more elements to disentangle the actual value from the fuzziness of the target's financial information (Raman et al., 2013).

Dealing with different institutional settings, such as when the companies involved in an M&A transaction are located in different countries, could add additional uncertainty to the decision, as well as to the entire process.[34] The institutional differences, such as political stability, corruption, accounting standards, religion, and culture, have a direct impact on the informational disadvantage that acquirers face in cross-border deals, compared with acquirers in local deals (Baik, Cho, Choi, & Kang, 2015). In this vein, the

[34] Other factors of uncertainty include bidders acquiring targets in the high-tech industry and with high levels of intangible assets (Aintablian, El Khoury, & M'Chirgui, 2017; Huang et al., 2017).

literature has found that acquirers in cross-border deals face more obstacles than those in domestic deals, translating into more problems when valuing the target (Chircop et al., 2018; Mantecon, 2009; Phillips & Ormsby, 2016; Seth, Song, & Pettit, 2000).

3.2.2. The ownership decision

One important aspect that has been overlooked in the research is the decision about ownership, i.e., the desired level of ownership of the target firm. Although as Kim (2012) posits in his study about investor protection and structural differences in corporate ownership and control around the world, these are critical features of the agency problems. For example, considering the tunneling problem, if acquirers decide to get a minority stake, they assume the risks of future wealth expropriation from majority shareholders of the target; the problem is particularly acute in economies with civil law legal systems (Johnson, La Porta, Lopez-de-Silanes, & Shleifer, 2000). Besides, Kim (2012) analyzes how investor protection might lead to changes in ownership structures across different regions over time. He confirms that M&A using stock (cash) as means of payment are more usual in countries where investors are well (weak) protected; and that, in line with the above comment, after M&A, intercorporate control pyramids and subsequent ownership dilution are more prevalent in civil law than in common law countries.

In the same line, Liao (2014) studies the determinants of minority acquisitions around the world and states that there are many explanations for the equity stakes acquired in other firms, such as governance and contracting reasons. Regarding governance motives, the acquirers' ownership choice determines if they can effectively monitor, or share the control of the target with other large shareholders. In the contracting hypothesis, she posits that acquirers can use their equity stakes in the target to bonding with business partners amid high contracting costs. In this vein, Fee, Hadlock, and Thomas (2006) examine about 10,000 customer-supplier relationships in the USA and show that contractual incompleteness and market frictions motivate customers to get equity blocks in their suppliers. This evidence also suggests that the ownership position is related to the subsequent evolution of the trading relationship between customers and suppliers; that is, such a position helps customers and suppliers in bonding their trading relations.

The M&A literature also finds that wise ownership decisions, in the form of non-

controlling equity stakes or minority acquisitions, bring several benefits for acquirers. In general, the evidence shows that acquirers performing non-controlling acquisitions face less competition from other bidders, get positive stock returns around local deal announcements, increase their probabilities to complete the deal, and pay lower premiums (Bessler, Schneck, & Zimmermann, 2015; Betton & Eckbo, 2000; Bulow, Huang, & Klemperer, 1999; Mantecon, 2009; Walkling, 1985). To make this clearer, consider the case of auctions: Bulow, Huang, and Klemperer (1999) observe that by acquiring non-controlling stakes before the auction, bidders gain an advantage over other competitors because they can assure to win the auction with relatively lower costs. These bidders have incentives to bid higher than their competitors since, in the case of not winning the auction, they can sell their shares in the target and still get a profit.

Previous research has also confirmed that the ownership decision in M&A relate to the uncertainty faced by the acquirers when pricing targets. Ouimet (2013) studies a sample of 2,166 acquisitions between 1994 and 2006 in the USA and shows that acquirers are more prone to take part in minority rather than in majority acquisitions if: they need the help of prior target management in the post-takeover period; targets are financially constrained, or if there are large uncertainties about the target's valuation. Under these circumstances, given that the gains from the deal are not clear a priori, bidders can use minority equity stakes to learn more about the target, and better assess the synergies, before committing to buy a majority position. In a related study, Folta and Miller (2002) use option theory to analyze the effects of uncertainty on the decision of bidders to acquire equity stakes in targets by sequential investment processes. They observe that between 1978 and 1999 in the US biotechnology industry, the uncertainty around high-value technology motivates acquirers to perform minority acquisitions in partner firms. Also, Filson and Morales (2006) analyze biotechnology alliances between clients and R&D firms in a similar period and find that minority acquisitions benefit acquirers. These authors develop a model showing that minority acquisitions help clients to reduce their uncertainty about the R&D firm's ability and the quality of the alliance project before committing more resources in it.

Similarly, in a study of M&A in the USA and Canada between 1998 and 2010, Povel and Sertsios (2014) denote that minority acquisitions give bidders the access to more reliable information about the actual synergies from the deal. They emphasize that the success of M&A is mainly threatened by not obtaining the expected synergies from the deal and,

considering that valuing them is not straightforward, bidders benefit from minority acquisitions through improving their assessment of potential synergies. For example, bidders may be allowed to nominate a director on the target's board to widen their understanding about the target's operations and management, allowing them to interact with the targets or its management in ways that are not possible otherwise.

A different context, China, is the focus of attention of Xu, Zhou and Phan (2010), although their results are consistent with those mentioned above for more developed markets. These authors find that in completed M&A between 1995 and 2003 acquirers use minority acquisitions as an instrument to cope with uncertainties around the targets' valuation, since this allows them to gather valuable information that is not available otherwise, due to the institutional weaknesses and constraints that characterize emerging markets.

3.2.3. Hypothesis

In sum, prior research indicates that valuation uncertainty affects the bidders' decision on the ownership stake to acquire in M&A. Notably, in opaque environments characterized by high levels of uncertainty around targets' value, bidders prefer to engage in minority rather than in majority acquisitions.

We follow a similar reasoning but specifically focus on M&A where acquirers do not have a significant equity stake in the targets before the deal. This setting excludes the possibility that bidders have access to privileged information of the targets through prior non-controlling equity stakes (as suggested before), so they should rely on public information such as the financial statements when they make the offer. Indeed, in the due diligence bidders have limited access to private information about the target before the deal announcement, which implies that most of this process relies on the target's financial statements (Lajoux & Elson, 2010; Marquardt & Zur, 2015; Wangerin, 2019).[35]

Above all, we expect that if bidders have no prior significant equity stakes in the target

[35] Furthermore, even if majority acquisitions are not performed in the future, we posit that bidders can at least mitigate their exposure to the overpayment risk, since they only buy a part of the target in minority acquisitions. That reduces the resources invested, which in turn ameliorates the potential value destruction problem.

and the due diligence unveils signs of upwards EM —suggesting target overvaluation, — bidders decide to acquire low rather than high ownership levels in the target. Therefore, we state our alternative hypothesis as follows:

H: *There is a negative association between the upward EM of the target and the level of ownership offered by the acquirer in the deal announcement*.

3.3. Methodology

3.3.1. Earnings management measure and model

We measure the target's EM in year t-1 (one year before the year of the deal announcement) using the performance-matched model of discretionary accruals (Kothari, Leone, & Wasley, 2005). We estimate the discretionary accruals from the model in equation (3.1) for each combination of industry and year, requiring a minimum of 20 observations per regression. Industries are delimited using the Fama-French 48-industry classification. Cross-section samples (industry-year) comprise targets and peer firms (or competitors by industry) listed in the leading stock exchanges of the EU.

$$TA_{i,t-1}/Assets_{i,t-2} = \beta_0 + \beta_1(\frac{1}{Assets_{i,t-2}}) + \beta_2(\Delta Rev_{i,t-1} - \Delta AR_{i,t-1})/ Assets_{i,t-2} + \beta_3 PPE_{i,t-1}/Assets_{i,t-2} + \beta_3 ROA_{i,t-2} + \varepsilon_{i,t-1} \quad (3.1)$$

In equation (3.1), TA stands for total accruals (net income less cash flow from operations); ΔRev is the change in net sales; ΔAR is the change in accounts receivable; PPE is the level of property, plant, and equipment; ROA is the Return on Assets (net income over total assets); and $Assets$ is total assets.

To test the hypothesis, we estimate the ordered logit model specified in equation (3.2), where the ownership levels that bidders are seeking to acquire are expressed as a function of the target's discretionary accruals before the deal announcement, and several controls concerning the deal and the target firms' characteristics; which prior literature identified as determinants of ownership decisions in M&A (e.g., Andriosopoulos & Yang, 2015; Contractor et al., 2014; Dang & Henry, 2016; Ouimet, 2013; Zhu, Jog, & Otchere, 2014).

$$Own.Dec_{t} = \alpha_0 + \alpha_1 EM_{t-1} + \sum_{j=1}^{7} \beta_j Deal.Controls_{j,t} + \sum_{k=1}^{4} \gamma_k Target.Controls_{k,t-1} + \mu_t \quad (3.2)$$

The dependent variable ($Own.Dec$) classifies ownership choices into three categories depending on the level of control that bidders are seeking in the deal: 1 for minority acquisitions (less than 50%), 2 for partial acquisitions (at least 50% but less than 100%), and 3 for full acquisitions (100%); EM represents the target's discretionary accruals estimated using the annual financial statements of the year before the deal; the set of controls includes two groups of variables related to the characteristics of the deal ($Deal.Controls$) and the target firms ($Target.Controls$). The target-based controls are measured one year before the deal announcement.

Regarding the definition of our dependent variable, despite that most of the studies reviewed in the prior section only consider the dichotomy between minority and majority deals, or non-controlling and controlling acquisitions, we define three categories of ownership, since bidders can gain some control of the target by performing a partial or a full acquisition. Thus, we consider three categories for *Own.Dec* in an ordinal scale, being minority acquisitions the lowest ownership level, partial acquisitions the middle level, and full acquisitions the higher level of ownership. Following Dang & Henry (2016), partial acquisitions refer to M&A where the bidder acquires at least 50% of target's shares but less than 100%, and full acquisitions denote the cases where the bidder acquires 100% of the target. As pointed out in prior studies, the complexities, risks, and gains of minority, partial, and full acquisitions are substantially different for acquirers (Contractor et al., 2014; Dang & Henry, 2016; Kim, 2012).

Table 15 includes the definitions of the research variables. Deal controls include indicator variables to capture cases when the acquirer and the target firms are located in different countries (*Cross.Border*), and when operating in the same industry (*Ind.Related*). Industry affiliation is delimited using the 48 industries groups of Fama-French, and M&A are labelled as industry-related if both firms belong to the same industry group. Based on prior research on ownership decisions and information asymmetries discussed above, we expect that cross-border deals increase the probability that acquirers perform minority acquisitions and the opposite for industry-related deals (Andriosopoulos & Yang, 2015;

Contractor et al., 2014; Ouimet, 2013). The remaining control variables are standard in the M&A literature. In particular, we consider: the presence of competitive offers (*Multibid*); tender offers (*Tender*); whether bidders are public or private (*Public.Bidder*); the payment method (*Cash*); and the size of the deal (*Size*). In the same spirit, target controls account for the financial health of the targets, including: the market-to-book ratio (*MTB*); return on equity (*ROE*); leverage (*Leverage*); and liquidity (*Liquidity*).

Table 15. Variable definitions for Chapter 3

Variable	Definition
Dependent variable	
Own.Dec	Takes the value of (1) for minority acquisitions (less than 50%), (2) for partial acquisitions (at least 50% but less than 100%), and (3) for full acquisitions (100%)
Experiment variable	
EM	Target's discretionary accruals from the performance-matched model (Kothari et al., 2005) in year t-1
Deal controls	
Multibid	Takes the value of 1 if there are multiple bidders (0, otherwise)
Tender	Takes the value of 1 if a tender offer for the target is made (0, otherwise)
Cash	Takes the value of 1 for transactions in which the only consideration offered is cash (0, otherwise)
Cross.Border	Takes the value of 1 if acquirer and target are located in different countries (0, otherwise)
Ind.Related	Takes the value of 1 if acquirer and target are in the same industry (using the Fama-French 48-industry classification) (0 otherwise)
Size	Natural log of the deal value ($ million)
Public.Bidder	Takes the value of 1 if the acquirer is a public firm (0, otherwise)
Target controls	
MTB	Market to book ratio in year t-1
ROE	Return on equity ratio in year t-1
Leverage	Ratio between total debt and common equity in year t-1
Liquidity	Ratio between the working capital (current assets - current liabilities) over assets in year t-1
Other controls for robustness tests	
Premiums	Ratio of the offer price to the target's share price four weeks before the deal's announcement date, minus one
ACQ_Relat.Size	Ratio of the acquirer's market capitalization over target's market capitalization in year t-1
ACQ_Size	Natural log of the acquirer's market capitalization in year t-1
ACQ_MTB	Market to book ratio of the acquirer in year t-1

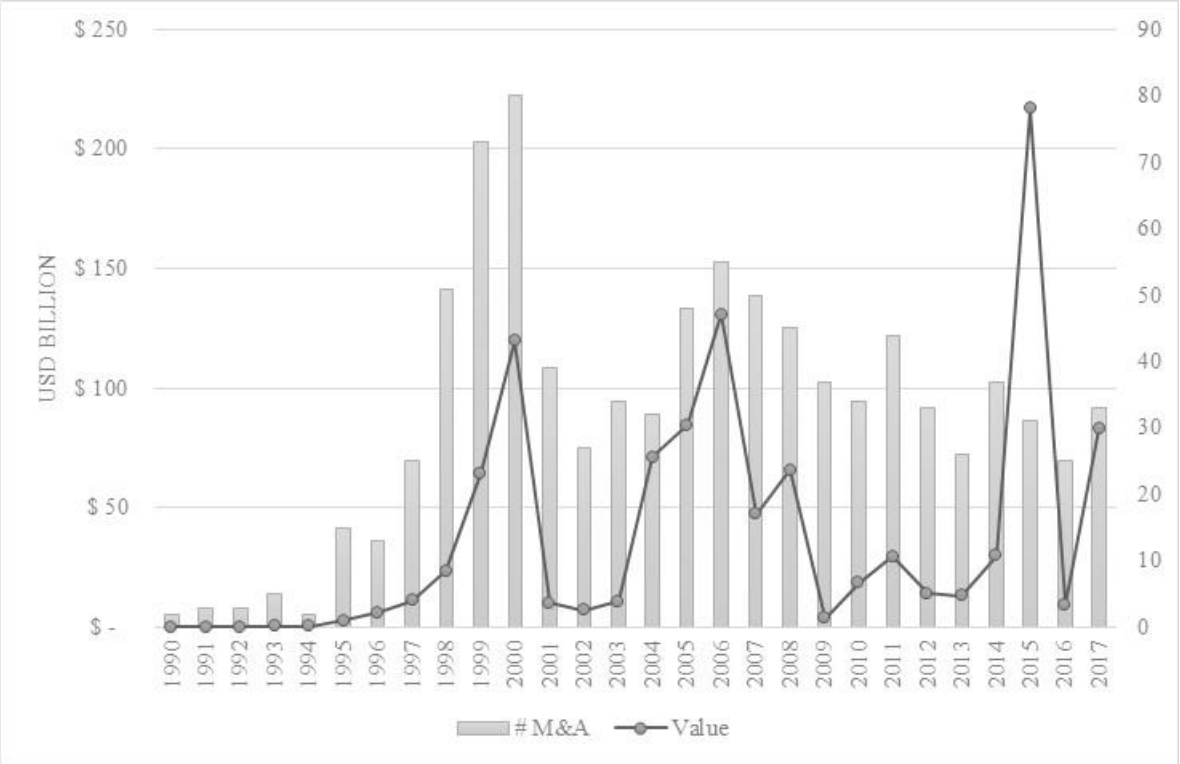
Table 15. Continued

ACQ_ROA	Return on assets ratio of the acquirer in year t-1 (Acquirer)
ACQ_Leverage	Ratio between total debt and common equity of acquirer in year t-1
ACQ_Experience	Takes the value of 1 if the acquirer completed an M&A within the last 365 calendar days before the deal of announcement (0, otherwise)

Note: t stands for the year of the deal announcement.

The model also includes indicator variables for the announcement year (*Year – Indicators*), and if the target is located in the UK (*UK – Indicator*).[36] The *Year – Indicators* variables control by the fact that the M&A activity varies along the time, as Figure 15 shows (Martynova & Renneboog, 2011; Moschieri & Campa, 2014). The *UK – Indicator* controls by the fact that the European M&A market is highly concentrated, with the UK being the most active market in the region.[37]

Figure 15. Number and value of deal announcements in the sample over time for Chapter 3



[36] In non-tabulated tests, our results are qualitatively the same if we include other country indicators for highly active markets such as France, Germany, Sweden and the Netherlands.

[37] As we show later, the UK M&A market concentrates almost half of the sample. The literature indicates that this is due to factors such as the higher level of development of financial markets and investor protection in the UK compared with Continental Europe (Moschieri & Campa, 2009).

3.3.2. Sample selection process

The sample comprises all the deals announced in Europe between 1990 and 2017 covered by the Thomson One Banker M&A database. Transactions included in the sample meet the following criteria:

1. Target firms are domiciled in the EU (28 member states).
2. Neither the targets nor the acquirers belong to regulated industries (i.e., financial and utilities).
3. Target companies are public (financial statements are gathered from *Worldscope*).
4. Acquirer firms have less than 5% of the target firm's stock before the deal announcement.
5. Acquirer firms seek more than 5% of the target firm's stock after the deal announcement.

Filters 4 and 5 are because ownership stakes below 5% are more akin to a portfolio investment than to an M&A.[38] The process described results in a final sample of 902 observations, comprising 665 domestic and 237 cross-border acquisitions.

Data of the deal-based controls is collected from *Thomson One Banker*, while the target-based controls are collected from *Worldscope*. All the continuous variables are winsorized at 1% and 99%.

Figure 15 shows the takeover activity per year. The average value of a deal in the sample is USD 1.2 billion. Deal announcements are clustered over time in a wave pattern, where ups and downs are associated with the occurrence of business environment shocks, like the "*.com*" bubble (around 2000) and the financial crisis of *subprime mortgages* (around 2008). That is consistent with prior research on M&A in Europe (Martynova & Renneboog, 2008, 2011). Indeed, after 2013, the M&A activity recovered considerably, reaching a new peak in 2015, with deal announcements priced at USD 216 billion. Here, the boom in the M&A activity is highly due to the takeover where the brewer Anheuser-Busch Inbev (Belgium) acquired its rival SABMiller (UK) in USD 101.6 billion.[39]

[38] Results are qualitatively the same when limiting the sample to those M&A where acquirers do not have any ownership in the target before the deal announcement.
[39] "How deal for SABMiller left AB InBev with lasting hangover," *Financial Times*, July 24, 2019. Retrieved from https://www.ft.com/content/bb048b10-ad66-11e9-8030-530adfa879c2 (accessed 13 March 2020).

However, in 2016, the roar in M&A end with deal announcements barely totalling USD 9.6 billion.

Table 16 provides information on the country of origin of the firms participating in the M&A of the sample. Targets from the UK represent almost half of the sample (48.5%), and M&A targeting firms in France (12.4%) Germany (8.2%), Sweden (6.7%), and the Netherlands (5.5%) account for more than one-third of the observations. These five countries represent 81.3% of the targets in the sample deals. In the case of acquirers, the ranking is similar, except for the Netherlands and Sweden that interchange places, and acquirers located in those five countries add up 78.4% of the sample.

Table 16. Sample distribution by acquirer's and target's domicile country for Chapter 3

Panel A. Target country

Country	**Freq.**	**Percent.**	**Cum.**
United Kingdom	437	48.5	48.5
France	112	12.4	60.9
Germany	74	8.2	69.1
Sweden	60	6.7	75.7
Netherlands	50	5.5	81.3
Spain	26	2.9	84.2
Italy	25	2.8	86.9
Poland	25	2.8	89.7
Finland	20	2.2	91.9
Belgium	14	1.6	93.5
Denmark	14	1.6	95.0
Greece	13	1.4	96.5
Ireland-Rep	7	0.8	97.2
Austria	6	0.7	97.9
Portugal	6	0.7	98.6
Czech Republic	3	0.3	98.9
Hungary	2	0.2	99.1
Luxembourg	2	0.2	99.3
Romania	2	0.2	99.6
Bulgaria	1	0.1	99.7
Croatia	1	0.1	99.8
Malta	1	0.1	99.9
Slovenia	1	0.1	100.0
Total	*902*	*100.0*	

Panel B. Acquirer country

Country	**Freq.**	**Percent.**	**Cum.**
United Kingdom	394	43.7	43.7
France	124	13.8	57.4
Germany	85	9.4	66.9
Netherlands	54	6.0	72.8
Sweden	50	5.5	78.4
Italy	28	3.1	81.5
Finland	25	2.8	84.3
Spain	24	2.7	86.9
Belgium	21	2.3	89.3
Poland	20	2.2	91.5
Ireland-Rep	19	2.1	93.6
Denmark	15	1.7	95.2
Austria	10	1.1	96.3
Greece	9	1.0	97.3
Portugal	8	0.9	98.2
Luxembourg	7	0.8	99.0
Cyprus	2	0.2	99.2
Bulgaria	1	0.1	99.3
Croatia	1	0.1	99.5
Czech Republic	1	0.1	99.6
Estonia	1	0.1	99.7
Hungary	1	0.1	99.8
Malta	1	0.1	99.9
Slovenia	1	0.1	100.0
Total	*902*	*100.0*	

Table 17 shows the distribution of the sample according to the targets' industry affiliation. For the sake of brevity, sectors are delimited using the Fama-French 12-industry classification. As for industry distribution, consumer goods (durable and nondurable), manufacturing, and business equipment are the most common activities of the target firms (48.7%).

Table 17. Sample distribution by the target's industry for Chapter 3

Description	**Freq.**	**Percent.**	**Cum.**
Consumer Non-Durables -- Food, Tobacco, Textiles, Apparel, Leather, Toys	66	7.3	7.3
Consumer Durables -- Cars, TV's, Furniture, Household Appliances	22	2.4	9.8
Manufacturing -- Machinery, Trucks, Planes, Office Furniture, Paper, Com. Printing	128	14.2	24.0
Oil, Gas, and Coal Extraction and Products	16	1.8	25.7
Chemicals and Allied Products	32	3.6	29.3
Business Equipment -- Computers, Software, and Electronic Equipment	223	24.7	54.0
Telephone and Television Transmission	32	3.6	57.5
Wholesale, Retail, and Some Services (Laundries, Repair Shops)	118	13.1	70.6
Healthcare, Medical Equipment, and Drugs	47	5.2	75.8
Other	218	24.2	100.0
Total	*902*	*100.0*	

3.4. Results

3.4.1. Descriptive statistics and correlations

Table 18 provides the descriptive statistics of the research variables. Data confirms that acquirers usually bid for full-control acquisitions (71.8%), followed by minority acquisitions (16.7%), and partial acquisitions (11.4%). Most M&A are between industry-related firms (60%), often involve tender offers (53.7%), and public acquirers (63.5%) that are willing to pay entirely in cash (59.5%). The *EM* variable exhibits a mean value close to zero (-0.005), has a standard deviation of 0.117, and a range between -0.535 and 0.721. On the other hand, deal announcements are not often cross-border M&A (27.1%), nor have competitive offers from multiple bidders (10.5%). Target controls statistics indicate that the average return on equity for target firms is -2.3%, the MTB ratio is 2.7,

leverage is high (0.79), and, on average, 15% of their assets correspond to working capital.

Table 18. Descriptive statistics of the research variables for Chapter 3

Dependent variable	**Control**	**Code**	**Freq.**	**Perc.**	**Cum.**
Own.Dec	Minority	1	151	16.7	16.7
	Partial	2	103	11.4	28.2
	Full	3	648	71.8	100.0
		Subtotal	902	100.0	

Interest variable	**Obs**	**Mean**	**Std. Dev.**	**Min.**	**Max.**
EM	902	-0.005	0.117	-0.535	0.721

Deal characteristics	**Obs**	**Mean**	**Std. Dev.**	**Min.**	**Max.**
Multibid	902	0.105	0.307	0.000	1.000
Tender	902	0.537	0.499	0.000	1.000
Cash	902	0.595	0.491	0.000	1.000
Cross.Border	902	0.263	0.440	0.000	1.000
Ind.Related	902	0.600	0.490	0.000	1.000
Size	902	4.823	2.082	-4.135	11.528
Public.Bidder	902	0.635	0.482	0.000	1.000

Target characteristics	**Obs**	**Mean**	**Std. Dev.**	**Min**	**Max**
MTB	902	2.653	2.922	0.270	19.277
ROE	902	-0.023	0.556	-3.745	0.756
Leverage	902	0.792	1.316	0.000	9.450
Liquidity	902	0.151	0.221	-0.589	0.781

Table 19. Pairwise correlations matrix for Chapter 3

		1	2	3	4	5	6	7	8	9	10	11	12
1	*EM*												
2	*Multibid*	0.034											
3	*Tender*	0.050	**0.109**										
4	*Cash*	0.005	-0.041	**-0.105**									
5	*Cross.Border*	**-0.088**	-0.024	**-0.092**	**0.107**								
6	*Ind.Related*	-0.028	0.037	0.030	**-0.116**	**0.071**							
7	*Size*	0.022	**0.230**	**0.074**	**-0.215**	**0.205**	**0.150**						
8	*Public.Bidder*	-0.012	0.050	-0.053	**-0.442**	0.039	0.039	**0.110**					
9	*MTB*	-0.034	0.032	0.027	**-0.084**	0.025	0.019	**0.165**	0.039				
10	*ROE*	**0.217**	0.046	0.051	0.036	0.041	-0.015	**0.220**	0.019	-0.014			
11	*Leverage*	0.014	0.021	**-0.111**	0.036	0.039	-0.027	0.018	-0.026	**0.265**	**-0.362**		
12	*Liquidity*	**0.081**	-0.053	**0.095**	-0.022	**-0.069**	-0.012	**-0.070**	-0.029	**-0.076**	**0.095**	**-0.313**	
	VIF	1.090	1.080	1.060	1.390	1.110	1.040	1.300	1.280	1.120	1.330	1.420	1.130

Pearson correlation coefficients are reported in the lower-left portion of the table. Bold text indicates that correlations are statistically significant at p-value < 0.05. VIF denotes the variance inflation factors for each variable.

Table 19 shows Pearson's product-moment correlations between the independent variables included in the model presented in equation (3.2). The target's discretionary accruals are negatively and significantly correlated to the presence of cross-border deals, and the opposite with high levels of performance and liquidity. Overall, correlations between those variables do not exhibit multicollinearity issues since their VIFs (variance inflation factors) do not exceed 10.

3.4.2. Multivariate analysis and discussion of the results

Table 20 shows the results of the estimation of the ordered multinomial logit. In column (1), we show the coefficients; the marginal effects for each category of the dependent variable are included in columns (2) to (4). The Pseudo *R*-square is above 0.4, and the *Chi*-square of the Wald test is high and significant, denoting a good fit of the model.

As shown in column (1), the coefficient of *EM* is negative and strongly significant, indicating that the higher the target's discretionary accruals, the higher the probability of being in the lowest category of ownership (minority acquisitions) and the lower the probability of being in the highest category of ownership (full acquisitions). Marginal effects in columns (2) to (4) give a clearer portrait. If the proportion of discretionary accruals scaled by assets increases in one percentage point, the probability of being involved in a minority acquisition (partial acquisition) increases by 6% (17%), while the probability of being involved in a full acquisition decreases by 23%.

The results are in line with our expectations. The negative coefficient of *EM* suggests that bidders can identify the potential overvaluation of the target, in the form of upwards discretionary accruals, before the deal, and consequently decide to bid for lower equity stakes in the target. Specifically, bidders seem to prefer a more cautious approach by bidding minority or partial positions over full acquisitions in these circumstances. This finding is related with prior literature reporting that minority and partial acquisitions can bring several benefits compared with full acquisitions, such as support on understanding foreign markets in cross-border deals, by letting a percentage of target's ownership to the founders or former managers (Contractor et al., 2014). Furthermore, Mantecon (2009) conjectures that low ownership stakes, such as minority acquisitions, might also resemble a contingent payment (e.g., earnouts or stock swaps) for bidders since in this type of deals buyers and sellers share the risks in the post-acquisition period, as opposed to full

acquisitions, where acquirers assume the whole risks.

Our results are also in line with the intriguing findings on the association between bid premiums and the target's EQ in friendly deals. Although acquirers usually penalize targets with poor EQ offering lower bid premiums (Skaife & Wangerin, 2013), this is not the case in friendly deals. In this regard, Raman et al. (2013) indicate that, as happens with minority or partial acquisitions, in friendly deals, acquirers end up bidding higher premiums. That allows them to address the informational disadvantage they face by having private negotiations directly with the targets, which are out of reach in hostile deals. In general, we conclude that having the opportunity of knowing better about the target's value in high uncertainty settings is valuable for bidders.

Regarding the control variables, as expected, the coefficient for cross-border deals is negative, meaning that bidders prefer to acquire lower equity stakes in foreign targets but higher in local ones. However, this effect is not particularly strong (p-value<0.10). The presence of industry-related deals is not significantly related to *Own.Dec*, indicating that being in the same industry does not relate to the bidders' decision about the target's portion to acquire.[40] Results also indicate that bidders in larger deals are more prone to make full acquisitions, cash is preferred as means of payment in minority or partial acquisitions rather than in full acquisitions, and bidders are more prone to perform full acquisitions when buying targets in the UK compared with targets located in Continental Europe. There is no conclusive evidence that bidder's ownership decisions are affected by their public status or by the fact that there is competition from other bidders. Furthermore, none of the target-based controls affects the probability that the acquirers bid for higher (or lower) ownership. In general, these associations are similar to prior empirical research on ownership decisions (Andriosopoulos & Yang, 2015; Contractor et al., 2014; Dang & Henry, 2016; Zhu et al., 2014).

[40] In non-reported tests, we use other proxies to classify industry-related deals based on different industry delimiters such as the first 2-digits of the SIC codes of firms involved, and results remain the same.

Table 20. Regression analysis of the ownership decisions and earnings management, including controls for the deal and target characteristics. Multinomial ordered logit model (marginal effects per category included)

Dependent variable:	*Own.Dec - (1: Minority acquisition; 2: Partial acquisition; 3: Full acquisition)*			
	(1)	(2)	(3)	(4)
Categories	All	Minority acquisitions	Partial acquisitions	Full acquisitions
Independent variables	Coef. / [z]	Mg. Ef. / [z]	Mg. Ef. / [z]	Mg. Ef. / [z]
EM	-2.4297 [c]	0.0643 [b]	0.1702 [c]	-0.2346 [c]
	[-2.70]	[2.47]	[2.60]	[-2.62]
Multibid	1.6013 [a]	-0.0254 [c]	-0.0721 [c]	0.0975 [c]
	[1.89]	[-3.58]	[-3.78]	[3.89]
Tender	3.3251 [c]	-0.1369 [c]	-0.2574 [c]	0.3943 [c]
	[12.62]	[-5.83]	[-10.66]	[10.93]
Cash	-1.8776 [c]	0.0474 [c]	0.1205 [c]	-0.1679 [c]
	[-6.16]	[4.67]	[6.23]	[-6.32]
Cross.Border	-0.4584 [a]	0.0135 [c]	0.0347 [c]	-0.0483 [c]
	[-1.94]	[1.71]	[1.82]	[-1.81]
Ind.Related	-0.2753	0.0071	0.0189	-0.0260
	[-1.41]	[1.37]	[1.42]	[-1.42]
Size	0.4138 [c]	-0.0110 [c]	-0.0290 [c]	0.0399 [c]
	[6.37]	[-3.95]	[-5.13]	[5.08]
Public.Bidder	-0.4391 [a]	0.0111 [b]	0.0295 [c]	-0.0406 [b]
	[-1.80]	[1.99]	[1.93]	[-1.97]
MTB	-0.0552	0.0015	0.0039	-0.0053
	[-1.19]	[1.14]	[1.18]	[-1.17]
ROE	-0.3912	0.0104	0.0274	-0.0378
	[-1.61]	[1.54]	[1.59]	[-1.59]
Leverage	-0.0256	0.0007	0.0018	-0.0025
	[-0.26]	[0.26]	[0.26]	[-0.26]
Liquidity	0.3139	-0.0083	-0.0220	0.0303
	[0.61]	[-0.60]	[-0.61]	[0.61]
UK - Indicator	1.9364 [c]	-0.0565 [c]	-0.1374 [c]	0.1939 [c]
	[7.12]	[-4.52]	[-6.19]	[6.18]
Cut1	-0.7636			
	[-1.19]			
Cut2	0.7041			
	[1.11]			
Year - Indicators	Included	Included	Included	Included
UK - Indicator	Included	Included	Included	Included

Table 20. Continued

Obs.	902
Wald test - χ^2	616
Pseudo - R^2	0.435

Column 1 shows the coefficients for the order logit regression, and columns 2 to 4 exhibit the marginal effects for each category of the dependent variable *Own.Dec*. The *UK - Indicator* is a dummy variable that takes the value of 1 if the target firm is located in the UK (0: Continental Europe), and the *Year – Indicators* refer to dummy variables for the year of deal announcements. Those coefficients are omitted for brevity. Standard errors are clustered by firm. a, b, and c denote significance at 10%, 5%, and 1%, respectively. See Table 15 for variable definitions.

3.4.3. Additional analyses

3.4.3.1. Local versus cross-border deals

The nature of the sample in this study involves the presence of local and cross-border deals. The literature shows that firms investing in foreign markets suffer from the liability of foreignness, facing higher costs of doing business in those markets compared to their domestic competitors (Reuer, Tong, & Wu, 2012). This implies that acquirers in cross-border deals usually have more difficulties in valuing targets and are more prone to make bad investment decisions (Chircop et al., 2018; Conn, Cosh, Guest, & Hughes, 2005; Francis, Huang, & Khurana, 2016). Among the reasons for that, researchers point out that the due diligence in cross border deals faces several obstacles compared to local deals, including the lack of background in local business traditions, national cultural differences, language barriers, differences in accounting practices, as well as law diversity, and political and socioeconomic conditions (Angwin, 2001; Reuer & Koza, 2000; Shimizu et al., 2004; Very & Schweiger, 2001).

Accordingly, we posit that, compared with local deals, bidders in cross-border deals are less familiar with how the target's financial information is prepared and enforced. Thus, it will be more difficult for them to identify signs of target overvaluation —in the form of upwards EM—, in the due diligence process carried out before the deal.[41] Therefore, we expect that the negative association between target's EM and the ownership level should

[41] Even with the presence of similar accounting standards, which is the case of the EU after the IFRS mandatory adoption in 2005, we posit that the due diligence in cross-border deals is still difficult for European acquirers due to some institutional differences that affect the usefulness of the financial information. In particular, we refer to factors such as the reporting enforcement, national institutions and culture, which widely diverge from jurisdiction to jurisdiction in the EU (Angwin, 2001; Christensen, Hail, & Leuz, 2013; Daske, Hail, Leuz, & Verdi, 2008; Francis et al., 2016; Q. Liao, Sellhorn, & Skaife, 2012).

be stronger for local than for cross-border deals.

To test this conjecture, we estimate the model in equation (3.2) separately in the two subsamples: local and cross-border. Results are included in columns (1) and (2) of Table 21.

We observe that higher values EM of the target firm are significantly associated with lower equity stakes offered by bidders only in the subsample of local deals. We interpret this as evidence that for bidders is easier to digest the target's financial information and to identify signs of EM when they are more familiar with the targets' environment.

3.4.3.2. Upwards versus downwards earnings management

Our proxy for EM entails upwards and downwards manipulation in the form of positive and negative discretionary accruals, respectively. Thus, our experimental variable does not exclusively capture the potential overvaluation in targets but also their undervaluation before the deal announcement. However, the rationale behind our hypothesis implies that results in Table 20 must be driven by the positive values of the discretionary accruals. Indeed, bidders performing a due diligence process to cope with their informational disadvantage should be more worried about a scenario where they end up overpaying targets – and then bid for lower equity stakes– than where they underpay targets.

To test this, we estimate the model in equation (3.2) separately in the subsamples where targets exhibit positive and negative discretionary accruals. Results are included in columns (3) and (4) of Table 21, where EM is now the absolute value of the positive and negative discretionary accruals, respectively.

As expected, we only find a significantly negative relation between EM and the dependent variable in the subsample where discretionary accruals are positive. This in line with the idea that bidders implement a more cautious approach concerning the ownership levels they are willing to acquire only if they detect signs of overvaluation in the due diligence process.

Table 21. Regression analysis of the ownership decisions and earnings management, including controls for the deal and target characteristics. Multinomial ordered logit model. Sub-samples of local deals (1), cross-border deals (2), deals where targets exhibit positive discretionary accruals (3), deals where targets exhibit negative discretionary accruals (4).

Dependent variable:	*Own.Dec - (1: Minority acquisition; 2: Partial acquisition; 3: Full acquisition)*			
	(1)	(2)	(3)	(4)
Sub-sample:	Local	Cross-Border	DA-Positive	DA-Negative
Independent variables	Coef. / [z]	Coef. / [z]	Coef. / [z]	Coef. / [z]
EM	-3.4096 [c]	-1.1056	-4.4868 [b]	0.1318
	[-3.06]	[-0.57]	[-2.52]	[0.07]
Multibid	0.2721	18.4471	2.0188	1.3193
	[0.40]	[13.74]	[1.10]	[1.30]
Tender	3.2920 [c]	4.0757 [c]	3.8281 [c]	3.2687 [c]
	[10.00]	[6.97]	[7.91]	[9.11]
Cash	-2.2016 [c]	-2.0093 [c]	-2.0463 [c]	-2.1292 [c]
	[-5.51]	[-3.17]	[-3.53]	[-5.05]
Cross.Border			-0.5545	-0.4518
			[-1.14]	[-1.46]
Ind.Related	-0.4473 [a]	-0.2662	-0.2148	-0.3967
	[-1.84]	[-0.58]	[-0.70]	[-1.44]
Size	0.5011 [c]	0.3157 [b]	0.4717 [c]	0.3825 [c]
	[5.96]	[2.51]	[3.78]	[4.17]
Public.Bidder	-0.4805	-0.5099	-0.7626 [a]	-0.2486
	[-1.53]	[-1.05]	[-1.73]	[-0.76]
MTB	-0.0284	-0.1205	-0.0789	0.0025
	[-0.63]	[-1.17]	[-1.14]	[0.04]
ROE	-0.4541 [a]	-0.1933	-1.8855	-0.4578 [a]
	[-1.70]	[-0.26]	[-1.56]	[-1.67]
Leverage	-0.0755	0.5823	0.1145	-0.1032
	[-0.64]	[1.48]	[0.90]	[-0.74]
Liquidity	0.5913	-0.7044	-0.4235	0.5340
	[0.92]	[-0.63]	[-0.43]	[0.81]
UK - Indicator	2.2125 [c]	1.5055 [b]	2.2601 [c]	1.8848 [c]
	[6.59]	[2.26]	[4.73]	[4.32]
Cut1	-0.8617	0.3387	-1.3129	-1.0078
	[-1.09]	[0.24]	[-1.12]	[-0.98]
Cut2	0.7642	1.7658	0.1687	0.5957
	[0.99]	[1.21]	[0.15]	[0.58]
Year - Indicators	Included	Included	Included	Included

Table 21. *Continued*

UK - Indicator	Included	Included	Included	Included
Obs.	665	237	422	480
Wald test - χ^2	1,039	1,276	1,511	505
Pseudo - R^2	0.464	0.441	0.500	0.431

The *UK - Indicator* is a dummy variable that takes the value of 1 if the target firm is located in the UK (0: Continental Europe), and the *Year – Indicators* refer to dummy variables for the year of deal announcements. Those coefficients are omitted for brevity. In columns (3) and (4) the sample is split into those deals where targets have positive and negative discretionary accruals, respectively, and the *EM* variable corresponds to the discretionary accruals from equation (3.1) in absolute values. Standard errors are clustered by firm. a, b, and c denote significance at 10%, 5%, and 1%, respectively. See Table 15 for variable definitions.

3.5. Robustness tests

To enhance the validity of the results, we carried out a set of robustness tests. Results are included in this section and are consistent with those shown above.

We use an alternative dependent variable in equation (3.2): the percentage of ownership that bidders offer.[42] The OLS results are presented in Table 22 for the whole sample, and for the sub-samples corresponding to local and cross-border deals, as well as those M&A where targets have positive and negative EM before the deal announcement. Overall, results remain the same, indicating that higher levels of the target's EM are associated with lower levels of ownership, and this relation is observed only in the subsamples of local deals and those deals with targets exhibiting positive discretionary accruals.

Table 22. Regression analysis of the ownership levels that bidders seek to acquire after the M&A and earnings management, including controls for the deal and target characteristics. OLS model. Sub-samples of local deals (1), cross-border deals (2), deals where targets exhibit positive discretionary accruals (3), deals where targets exhibit negative discretionary accruals (4).

Dependent variable:	*% Seek to acquire after M&A*				
	(1)	(2)	(3)	(4)	(5)
Sample	All	Local	Cross-Border	DA-Positive	DA-Negative
Independent variables	Coef. / [t]	Coef. / [t]	Coef. / [t]	Coef. / [t]	Coef. / [t]
EM	-0.1845 ^{c}	-0.2011 ^{c}	-0.1487	-0.2337 ^{b}	0.0944
	[-2.95]	[-3.17]	[-0.83]	[-2.21]	[0.73]
Multibid	0.0641 ^{c}	0.0282	0.1601 ^{c}	0.0878 ^{c}	0.0394

[42] Although this analysis is more intuitive, it does not consider controlling thresholds. For example, the difference between 50% and 51% is one percentage point but, in terms of control, the latter can give the acquirer full-control over the target.

Table 22. Continued

	[3.35]		[1.32]		[3.13]		[3.31]		[1.28]	
Tender	0.2697	c	0.2486	c	0.3261	c	0.2878	c	0.2558	c
	[16.61]		[13.55]		[9.20]		[12.69]		[11.02]	
Cash	-0.1401	c	-0.1470	c	-0.1328	c	-0.1413	c	-0.1505	c
	[-7.76]		[-7.07]		[-3.21]		[-5.86]		[-5.70]	
Cross.Border	-0.0420	b					-0.0437		-0.0469	a
	[-2.19]						[-1.59]		[-1.78]	
Ind.Related	-0.0020		-0.0011		-0.0072		0.0168		-0.0175	
	[-0.13]		[-0.07]		[-0.19]		[0.79]		[-0.75]	
Size	0.0407	c	0.0464	c	0.0339	c	0.0409	c	0.0411	c
	[8.93]		[8.62]		[3.52]		[6.33]		[6.20]	
Public.Bidder	-0.0469	b	-0.0453	b	-0.0517		-0.0587	b	-0.0339	
	[-2.47]		[-2.15]		[-1.14]		[-2.14]		[-1.24]	
MTB	-0.0017		-0.0006		-0.0029		-0.0042		-0.0003	
	[-0.61]		[-0.21]		[-0.41]		[-1.34]		[-0.07]	
ROE	-0.0287	b	-0.0349	b	-0.0210		-0.0426		-0.0328	a
	[-2.07]		[-2.42]		[-0.38]		[-1.45]		[-1.83]	
Leverage	-0.0038		-0.0089		0.0117		0.0025		-0.0102	
	[-0.49]		[-1.01]		[0.58]		[0.21]		[-0.99]	
Liquidity	0.0522		0.0583		-0.0149		0.0099		0.0731	
	[1.40]		[1.46]		[-0.14]		[0.19]		[1.35]	
UK - Indicator	0.1218	c	0.1282	c	0.0925	b	0.1334	c	0.1051	c
	[7.48]		[6.86]		[2.47]		[5.04]		[4.53]	
Cons	0.5168	c	0.5104	c	0.5188	c	0.6485	c	0.5298	c
	[13.86]		[11.71]		[4.43]		[8.21]		[9.32]	
Year - Indicators	Included		Included		Included		Included		Included	
UK - Indicator	Included		Included		Included		Included		Included	
Obs.	902		665		237		422		480	
R^2	0.504		0.526		0.506		0.556		0.510	

The *UK - Indicator* is a dummy variable that takes the value of 1 if the target firm is located in the UK (0: Continental Europe), and the *Year – Indicators* refer to dummy variables for the year of deal announcements. Those coefficients are omitted for brevity. In columns (4) and (5) the sample is split into those deals where targets have positive and negative discretionary accruals, respectively, and the *EM* variable corresponds to the discretionary accruals from equation (3.1) in absolute values. Standard errors are clustered by firm. a, b, and c denote significance at 10%, 5%, and 1%, respectively. See Table 15 for variables definitions.

Other three robustness checks are included in Table 23. Panels A, B, and C show the results of different estimations where our sample size is reduced because of the exclusion of some M&A (Panel A = 797), or the inclusion of other independent variables in the

model specification, which forces the sample to be reduced due to data availability (Panel B = 626; Panel C = 508).

Thus, to avoid the potential effect of the change in the accounting rules, the estimation results included in Panel A exclude deal announcements where the targets' EM estimation needs financial information around the mandatory adoption of IFRS in the EU (i.e., years 2005 and 2006). These results confirm those obtained in the prior analyses.

The results in Panel B include the bid premium (*Premiums*) as an additional independent variable in the model (3.2). In M&A, the process of negotiation is a complex process where bidders and targets need to agree in a variety of terms, including the ownership level to acquire, the method of payment, or the bid premiums. Thus, a natural concern is that the model in equation (3.2) probably needs to cope with the possibility that bidders detect the target's EM before the deal, and decide to discount it from the bid premiums (paying a lower premium), rather than affecting their ownership decisions.

Last but not least, we consider controls about the acquirer's characteristics, including relative size compared with the targets (*ACQ_Relat.Size*), market capitalization (*ACQ_Size*), performance (*ACQ_ROA*), leverage (*ACQ_Leverage*), and experience in previous M&A (*ACQ_Experience*). The results including these variables as additional regressors in the model (2) are shown in Panel C. This analysis is limited to acquirers that are public firms, so the public bidder dummy (*Public.Bidder*) in equation (3.2) is omitted.

Table 23. Other robustness tests for the regression analysis of ownership decisions and earnings management, including controls for the deal and target characteristics. Multinomial ordered logit model. Sub-samples of local deals (1), cross-border deals (2), deals where targets exhibit positive discretionary accruals (3), deals where targets exhibit negative discretionary accruals (4).

Panel A. Excluding deals around IFRS adoption

Dependent variable:	*Own.Dec - (1: Minority acquisition; 2: Partial acquisition; 3: Full acquisition)*				
	(1)	(2)	(3)	(4)	(5)
Categories	All	Local	Cross-Border	DA-Positive	DA-Negative
Independent variables	Coef. / [z]	Coef. / [z]	Coef. / [z]	Coef. / [z]	Coef. / [z]
EM	-2.4271 [c]	-3.3375 [c]	-0.6181	-4.5305 [c]	0.8343
	[-2.71]	[-3.06]	[-0.31]	[-2.62]	[0.45]
Multibid	1.7876 [a]	0.5216	17.1914	1.5988	1.9309
	[1.82]	[0.66]	[12.62]	[0.84]	[1.36]
Tender	3.2223 [c]	3.1507 [c]	4.0266 [c]	3.7717 [c]	3.1079 [c]
	[11.86]	[9.47]	[6.51]	[7.94]	[8.55]
Cash	-1.7428 [c]	-2.0597 [c]	-1.9338 [c]	-1.7884 [c]	-1.9289 [c]
	[-5.46]	[-5.00]	[-2.79]	[-3.09]	[-4.50]
Cross.Border	-0.4703 [a]			-0.5971	-0.4940
	[-1.90]			[-1.11]	[-1.49]
Ind.Related	-0.3508 [a]	-0.4523 [a]	-0.4985	-0.1078	-0.5834 [b]
	[-1.70]	[-1.80]	[-1.00]	[-0.33]	[-2.02]
Size	0.4235 [c]	0.4992 [c]	0.3406 [b]	0.4644 [c]	0.4166 [c]
	[6.44]	[5.86]	[2.45]	[3.71]	[4.45]
Public.Bidder	-0.3734	-0.4478	-0.4846	-0.6617	-0.1420
	[-1.44]	[-1.35]	[-0.96]	[-1.42]	[-0.40]
MTB	-0.0632	-0.0428	-0.1194	-0.0780	-0.0250
	[-1.38]	[-1.01]	[-1.18]	[-1.18]	[-0.33]
ROE	-0.3070	-0.3531	-0.0583	-1.8567	-0.3730
	[-1.36]	[-1.50]	[-0.07]	[-1.53]	[-1.39]
Leverage	-0.0410	-0.0992	0.5325	0.1388	-0.1738
	[-0.38]	[-0.76]	[1.27]	[1.02]	[-1.28]
Liquidity	0.2620	0.4556	-0.5717	-0.2175	0.2340
	[0.50]	[0.68]	[-0.48]	[-0.22]	[0.35]
UK - Indicator	1.7877 [c]	1.9874 [c]	1.4908 [b]	2.0154 [c]	1.8018 [c]
	[6.34]	[5.76]	[2.16]	[4.12]	[4.10]
Cut1	-0.6940	-0.8920	0.4231	-0.9955	-0.9460
	[-1.07]	[-1.13]	[0.26]	[-0.88]	[-0.91]
Cut2	0.7195	0.7023	1.7096	0.4370	0.6057

Table 23. Continued

	[1.12]	[0.91]	[1.04]	[0.39]	[0.58]
Year - Indicators	Included	Included	Included	Included	Included
UK - Indicator	Included	Included	Included	Included	Included
Obs.	797	586	211	370	427
Wald test - χ^2	626	838	1,104	1,407	494
Pseudo - R^2	0.425	0.452	0.429	0.492	0.422

Panel B. Including bid premiums

Dependent variable:	*Own.Dec - (1: Minority acquisition; 2: Partial acquisition; 3: Full acquisition)*				
Categories	(1) All	(2) Local	(3) Cross-Border	(4) DA-Positive	(5) DA-Negative
Independent variables	Coef. / [z]	Coef. / [z]	Coef. / [z]	Coef. / [z]	Coef. / [z]
EM	-2.7786 [b]	-3.7830 [b]	-2.4743	-8.0328 [c]	0.8892
	[-2.30]	[-2.41]	[-0.75]	[-2.83]	[0.37]
Multibid	1.4021	0.0085	24.3176	1.4401	0.8498
	[1.33]	[0.01]	[6.58]	[0.84]	[0.61]
Tender	3.2669 [c]	2.9424 [c]	7.2968 [c]	3.9812 [c]	3.3682 [c]
	[9.64]	[7.84]	[3.48]	[5.03]	[7.02]
Cash	-2.0832 [c]	-2.3182 [c]	-4.7379 [c]	-2.0253 [b]	-2.9912 [c]
	[-4.99]	[-4.31]	[-3.51]	[-2.23]	[-4.77]
Cross.Border	-0.6659 [b]			0.1270	-1.0254 [c]
	[-2.53]			[0.28]	[-2.61]
Ind.Related	-0.1110	-0.4306	0.3560	0.3037	-0.4942
	[-0.44]	[-1.46]	[0.33]	[0.67]	[-1.33]
Size	0.3793 [c]	0.3794 [c]	0.6167 [c]	0.1984	0.4619 [c]
	[5.13]	[4.39]	[3.04]	[1.46]	[4.30]
Premiums	0.3753	0.3999	0.3759	0.2093	0.6155
	[1.23]	[1.06]	[0.27]	[0.44]	[1.34]
Public.Bidder	-0.2474	-0.1444	-2.1686 [b]	-0.6711	-0.2586
	[-0.80]	[-0.39]	[-2.21]	[-1.12]	[-0.61]
MTB	-0.1124 [b]	-0.0586	-0.4348 [c]	-0.1236	-0.0971
	[-2.51]	[-1.10]	[-3.33]	[-1.47]	[-0.85]
ROE	-0.2132	-0.5166	0.7950	-1.4646	-0.0097
	[-0.75]	[-1.39]	[0.46]	[-1.12]	[-0.02]
Leverage	0.3104 [a]	0.1892	1.5852 [c]	0.2165	0.5075 [b]
	[1.83]	[1.10]	[2.75]	[1.11]	[2.19]
Liquidity	0.2880	1.0206	-2.0953	-0.0600	-0.1963

Table 23. Continued

	[0.45]	[1.36]	[-1.13]	[-0.05]	[-0.24]
UK - Indicator	2.4172 [c]	2.5153 [c]	4.4778 [b]	2.9414 [c]	2.3049 [c]
	[6.36]	[5.82]	[2.15]	[4.43]	[3.62]
Cut1	-1.1583	-1.6985 [b]	0.4676	-2.5491	-1.7405
	[-1.56]	[-2.03]	[0.15]	[-1.37]	[-1.57]
Cut2	0.4553	0.0145	2.9185	-0.9660	0.1457
	[0.62]	[0.02]	[0.99]	[-0.53]	[0.13]
Year - Indicators	Included	Included	Included	Included	Included
UK - Indicator	Included	Included	Included	Included	Included
Obs.	720	531	189	343	377
Wald test - χ^2	607	1,348	1,411	2,397	1,078
Pseudo - R^2	0.437	0.429	0.652	0.476	0.488

Panel C. Including acquirers' controls

Dependent variable:	*Own.Dec - (1: Minority acquisition; 2: Partial acquisition; 3: Full acquisition)*				
Categories	(1) All	(2) Local	(3) Cross-Border	(4) DA-Positive	(5) DA-Negative
Independent variables	Beta / [z]	Beta / [z]	Beta / [z]	Beta / [z]	Beta / [z]
EM	-2.9707 [b]	-4.7282 [b]	-6.1401 [a]	-6.5410 [b]	-1.5514
	[-2.13]	[-2.08]	[-1.91]	[-2.21]	[-0.49]
Multibid	1.5785	-0.6853	26.9081	1.1352	2.7208 [b]
	[1.61]	[-0.79]	[10.65]	[0.58]	[2.03]
Tender	3.8625 [c]	4.9461 [c]	4.3682 [c]	5.1231 [c]	4.4259 [c]
	[7.61]	[4.96]	[3.73]	[5.24]	[4.91]
Cash	-2.7133 [c]	-3.7483 [c]	-4.3647 [c]	-3.3670 [c]	-3.7500 [c]
	[-7.26]	[-5.56]	[-3.25]	[-3.58]	[-5.57]
Cross.Border	-0.5091			-1.5896	-0.2430
	[-1.37]			[-1.61]	[-0.54]
Ind.Related	0.2067	-0.1636	0.4848	-0.3180	0.0010
	[0.63]	[-0.35]	[0.60]	[-0.59]	[0.00]
Size	0.4710 [c]	0.6545 [c]	0.4788 [b]	1.0032 [c]	0.3491 [b]
	[4.45]	[3.68]	[2.05]	[3.16]	[2.36]
ACQ_Relat.Size	0.0051 [c]	0.0038 [b]	0.0194 [b]	0.0082 [c]	0.0037 [a]
	[3.47]	[2.51]	[2.47]	[3.05]	[1.74]
ACQ_Size	-0.0162	0.1601 [c]	-0.2042 [b]	0.1455 [a]	-0.1603 [a]
	[-0.31]	[2.65]	[-2.03]	[1.73]	[-1.87]
ACQ_ROA	2.3492	5.8026 [b]	-4.8537	1.9629	2.9927

Table 23. Continued

	[1.23]	[2.18]	[-1.36]	[0.51]	[0.94]
ACQ_Leverage	-0.1769	0.0120	-0.1263	0.0925	0.0604
	[-0.91]	[0.05]	[-0.23]	[0.21]	[0.16]
ACQ_Experience	-1.0802	0.5896	-2.6813	-2.4104 [a]	-0.6513
	[-1.57]	[0.58]	[-1.48]	[-1.80]	[-0.71]
MTB	-0.1319	-0.1970 [c]	-0.1086	-0.3333 [c]	0.0226
	[-1.49]	[-2.76]	[-0.81]	[-3.49]	[0.24]
ROE	-0.4983 [a]	-0.8531 [b]	0.8067	-2.2000 [a]	-0.2439
	[-1.90]	[-2.10]	[0.45]	[-1.78]	[-0.63]
Leverage	-0.0270	-0.1846	0.7101	-0.0152	0.3547
	[-0.18]	[-0.98]	[1.37]	[-0.08]	[1.07]
Liquidity	-0.3714	0.4333	-5.3278 [a]	1.8481	-0.2520
	[-0.45]	[0.45]	[-1.84]	[1.40]	[-0.23]
UK - Indicator	2.1992 [c]	3.3209 [c]	2.4823 [a]	4.1955 [c]	1.6457 [b]
	[5.07]	[3.92]	[1.75]	[3.04]	[2.02]
Cut1	0.5841	0.6456	2.4723	4.3111 [a]	-1.2587
	[0.64]	[0.51]	[1.02]	[1.79]	[-0.74]
Cut2	2.1233 [b]	2.6883 [b]	4.1681 [a]	6.2099 [b]	0.5351
	[2.27]	[1.96]	[1.69]	[2.43]	[0.32]
Year - Indicators	Included	Included	Included	Included	Included
UK - Indicator	Included	Included	Included	Included	Included
Obs.	508	360	148	241	267
Wald test - χ^2	816	1,109	1,478	995	2,028
Pseudo - R^2	0.509	0.595	0.551	0.629	0.526

The *UK - Indicator* is a dummy variable that takes the value of 1 if the target firm is located in the UK (0: Continental Europe), and the *Year – Indicators* refer to dummy variables for the year of deal announcements. Those coefficients are omitted for brevity. In columns (4) and (5) the sample is split into those deals where targets have positive and negative discretionary accruals, respectively, and the *EM* variable corresponds to the discretionary accruals from equation (3.1) in absolute values. Standard errors are clustered by firm. a, b, and c denote significance at 10%, 5%, and 1%, respectively. See Table 15 for variables definitions.

3.6. Conclusions

This study belongs to the stream of research that explores the role of the target's EQ in M&A negotiations and extends it by examining the earnings manipulation of targets as an explanatory variable of bidder's ownership decisions in European acquisitions. Studying bidder's ownership decisions brings new insights into the M&A process,

particularly to the due diligence process. Notably, this research finds that acquirers prefer to be cautious when targets have high EM values, so they perform bids that seek to buy lower levels of the target's equity, compared to other cases.

From a practical standpoint, those results imply that bidders facing upwards EM of targets before the deal are more prone to bid for minority and partial acquisitions rather than for full acquisitions. Moreover, this research also validates that this effect is only seen in the case of local deals. We posit that these results are associated with the literature that states that bidders face more obstacles to implement due diligence and value targets properly in cross-border deals, so are more prone to end up making bad investment decisions compared to local deals.

Finally, the results are in line with prior literature positing that bidders strategically choose to know more about the targets' actual value, by purchasing low levels of ownership, before committing to buy high equity stakes. That is a real-options strategy. Future research can assess the effectiveness of this tactic by analyzing the post-takeover performance of acquirers buying targets sequentially, as well as how prior non-controlling stakes influence the terms of full acquisitions, divestitures, among other future investment decisions by acquirers.

References

Aintablian, S., El Khoury, W., & M'Chirgui, Z. (2017). The role of toeholds on asymmetric information in mergers and acquisitions. *Studies in Economics and Finance*, *34*(2), 260–280. https://doi.org/10.1108/SEF-04-2015-0113

Andriosopoulos, D., & Yang, S. (2015). The impact of institutional investors on mergers and acquisitions in the United Kingdom. *Journal of Banking and Finance*, *50*, 547–561. https://doi.org/10.1016/j.jbankfin.2014.06.004

Angwin, D. (2001). Mergers and acquisitions across European borders: National perspectives on preacquisition due diligence and the use of professional advisers. *Journal of World Business*, *36*(1), 32–57. https://doi.org/10.1016/S1090-9516(00)00053-5

Bagnoli, M., & Watts, S. G. (2000). The Effect of Relative Performance Evaluation on Earnings Management: A Game-theoretic Approach. *Journal of Accounting and Public Policy*, *19*(December), 377–397. https://doi.org/https://doi.org/10.1016/S0278-4254(00)00005-3

Baik, B., Cho, K., Choi, W., & Kang, J.-K. (2015). The Role of Institutional Environments in Cross-Border Mergers: A Perspective from Bidders' Earnings Management Behavior. *Management International Review*, *55*(5), 615–646. https://doi.org/10.1007/s11575-015-0249-4

Bessler, W., Schneck, C., & Zimmermann, J. (2015). Bidder contests in international mergers and acquisitions: The impact of toeholds, preemptive bidding, and termination fees. *International Review of Financial Analysis*, *42*, 4–23. https://doi.org/10.1016/j.irfa.2015.04.004

Betton, S., & Eckbo, B. E. (2000). Toeholds, Bid Jumps, and Expected Payoffs in Takeovers. *The Review of Financial Studies*, *13*(4), 841–882. Retrieved from http://www.jstor.org/stable/2646055

Bouwman, C. H. S., Fuller, K., & Nain, A. S. (2009). Market Valuation and Acquisition Quality: Empirical Evidence. *Review of Financial Studies*, *22*(2), 633–679. https://doi.org/10.1093/rfs/hhm073

Bulow, J., Huang, M., & Klemperer, P. (1999). Toeholds and Takeovers. *Journal of Political Economy*, *107*(3), 427–454. Retrieved from https://www.jstor.org/stable/10.1086/250068

Campa, D., & Hajbaba, A. (2016). Do targets grab the cash in takeovers: The role of earnings management. *International Review of Financial Analysis*, *44*, 56–64. https://doi.org/10.1016/j.irfa.2016.01.008

Chircop, J., Johan, S., & Tarsalewska, M. (2018). Common auditors and cross-country M&A transactions. *Journal of International Financial Markets, Institutions and Money*, *54*, 43–58. https://doi.org/10.1016/j.intfin.2017.04.001

Christensen, H. B., Hail, L., & Leuz, C. (2013). Mandatory IFRS reporting and changes in enforcement. *Journal of Accounting and Economics*, *56*(2–3), 147–177.

https://doi.org/10.1016/j.jacceco.2013.10.007

Collins, J. D., Holcomb, T. R., Certo, S. T., Hitt, M. A., & Lester, R. H. (2009). Learning by doing : Cross-border mergers and acquisitions. *Journal of Business Research*, *62*(12), 1329–1334. https://doi.org/10.1016/j.jbusres.2008.11.005

Conn, R. L., Cosh, A., Guest, P. M., & Hughes, A. (2005). The impact on UK acquirers of domestic, cross-border, public and private acquisitions. *Journal of Business Finance and Accounting*, *32*(5–6), 815–870. https://doi.org/10.1111/j.0306-686X.2005.00615.x

Contractor, F. J., Lahiri, S., Elango, B., & Kundu, S. K. (2014). Institutional, cultural and industry related determinants of ownership choices in emerging market FDI acquisitions. *International Business Review*, *23*(5), 931–941. https://doi.org/10.1016/j.ibusrev.2014.02.005

Dang, M., & Henry, D. (2016). Partial-control versus full-control acquisitions: Does target corporate governance matter? Evidence from eight East and Southeast Asian countries. *Pacific Basin Finance Journal*, *40*, 251–265. https://doi.org/10.1016/j.pacfin.2015.12.011

Daske, H., Hail, L., Leuz, C., & Verdi, R. (2008). Mandatory IFRS Reporting around the World: Early Evidence on the Economic Consequences. *Journal of Accounting Research*, *46*(5), 1085–1142. https://doi.org/10.1111/j.1475-679X.2008.00306.x

Dechow, P. M., Ge, W., & Schrand, C. (2010). Understanding earnings quality: A review of the proxies, their determinants and their consequences. *Journal of Accounting and Economics*, *50*(2–3), 344–401. https://doi.org/10.1016/j.jacceco.2010.09.001

Fee, C. E., Hadlock, C. J., & Thomas, S. (2006). Corporate equity ownership and the governance of product market relationships. *Journal of Finance*, *61*(3), 1217–1251. https://doi.org/10.1111/j.1540-6261.2006.00871.x

Filson, D., & Morales, R. (2006). Equity links and information acquisition in biotechnology alliances. *Journal of Economic Behavior & Organization*, *59*(1), 1–28. https://doi.org/10.1016/j.jebo.2004.03.010

Folta, T. B., & Miller, K. D. (2002). Real options in equity partnerships. *Strategic Management Journal*, *23*(1), 77–88. https://doi.org/10.1002/smj.209

Francis, J. R., Huang, S. X., & Khurana, I. K. (2016). The Role of Similar Accounting Standards in Cross-Border Mergers and Acquisitions. *Contemporary Accounting Research*, *33*(3), 1298–1330. https://doi.org/10.1111/1911-3846.12176

Fu, F., Lin, L., & Officer, M. S. (2013). Acquisitions driven by stock overvaluation: Are they good deals? *Journal of Financial Economics*, *109*(1), 24–39. https://doi.org/10.1016/j.jfineco.2013.02.013

Goergen, M., & Renneboog, L. (2004). Shareholder Wealth Effects of European Domestic and Cross-border Takeover Bids. *European Financial Management*, *10*(1), 9–45. https://doi.org/10.1111/j.1468-036X.2004.00239.x

Haleblian, J., Devers, C. E., McNamara, G., Carpenter, M. a., & Davison, R. B. (2009). Taking Stock of What We Know About Mergers and Acquisitions: A Review and Research Agenda. *Journal of Management*, *35*(3), 469–502. https://doi.org/10.1177/0149206308330554

Harford, J., Humphery-Jenner, M., & Powell, R. (2012). The sources of value destruction in acquisitions by entrenched managers. *Journal of Financial Economics*, *106*(2), 247–261. https://doi.org/10.1016/j.jfineco.2012.05.016

Healy, P. M., & Wahlen, J. M. (1999). A Review of the Earnings Management Literature and Its Implications for Standard Setting. *Accounting Horizons*, *13*(4), 365–383. https://doi.org/10.2308/acch.1999.13.4.365

Huang, P., Humphery-Jenner, M., & Powell, R. (2017). *Minority acquisitions and information risk: International and cross-border evidence*.

Johnson, S., La Porta, R., Lopez-de-Silanes, F., & Shleifer, A. (2000). Tunneling. *American Economic Review*, *90*(2), 22–27. https://doi.org/10.1257/aer.90.2.22

Kim, W. (2012). Investor Protection and the Mode of Acquisition: Implications for Ownership Dilution and Formation of Pyramids. *Financial Management*, *41*(1), 55–93. https://doi.org/10.1111/j.1755-053X.2012.01178.x

Kothari, S. P., Leone, A. J., & Wasley, C. E. (2005). Performance matched discretionary accrual measures. *Journal of Accounting and Economics, 39*(1), 163–197. https://doi.org/10.1016/j.jacceco.2004.11.002

Kumar, N. (2009). How emerging giants are rewriting the rules of M&A. *Harvard Business Review*, *87*(5), 115–121.

Lajoux, A. R., & Elson, C. M. (2010). *The Art of MA Due Diligence: Navigating Critical Steps Uncovering Crucial Data* (2nd ed.). New York: McGraw-Hill Education.

Liao, Q., Sellhorn, T., & Skaife, H. A. (2012). The Cross-Country Comparability of IFRS Earnings and Book Values: Evidence from France and Germany. *Journal of International Accounting Research*, *11*(1), 155–184. https://doi.org/10.2308/jiar-10215

Liao, R. C. (2014). What drives corporate minority acquisitions around the world? The case for financial constraints. *Journal of Corporate Finance*, *26*, 78–95. https://doi.org/10.1016/j.jcorpfin.2014.02.007

Malmendier, U., & Tate, G. (2008). Who makes acquisitions? CEO overconfidence and the market's reaction☆. *Journal of Financial Economics*, *89*(1), 20–43. https://doi.org/10.1016/j.jfineco.2007.07.002

Mantecon, T. (2009). Mitigating risks in cross-border acquisitions. *Journal of Banking and Finance*, *33*(4), 640–651. https://doi.org/10.1016/j.jbankfin.2008.12.001

Marquardt, C., & Zur, E. (2015). The Role of Accounting Quality in the M&A Market. *Management Science*, *61*(3), 604–623. https://doi.org/10.1287/mnsc.2013.1873

Martynova, M., & Renneboog, L. (2008). A century of corporate takeovers: What have we learned and where do we stand? *Journal of Banking and Finance*, *32*(10), 2148–2177. https://doi.org/10.1016/j.jbankfin.2007.12.038

Martynova, M., & Renneboog, L. (2011). The Performance of the European Market for Corporate Control: Evidence from the Fifth Takeover Wave. *European Financial Management*, *17*(2), 208–259. https://doi.org/10.1111/j.1468-036X.2009.00497.x

McNichols, M. F., & Stubben, S. R. (2015). The effect of target-firm accounting quality on valuation in acquisitions. *Review of Accounting Studies*, *20*(1), 110–140. https://doi.org/10.1007/s11142-014-9283-x

Morck, R., Shleifer, A., & Vishny, R. W. (1990). Do Managerial Objectives Drive Bad Acquisitions ? *The Journal of Finance*, *45*(1), 31–48. Retrieved from http://www.jstor.org/stable/2328808

Moschieri, C., & Campa, J. M. (2009). The European M&A Industry: A Market in the Process of Construction. *Academy of Management Perspectives*, *23*(4), 71–87. https://doi.org/10.5465/AMP.2009.45590141

Moschieri, C., & Campa, J. M. (2014). New trends in mergers and acquisitions: Idiosyncrasies of the European market. *Journal of Business Research*, *67*(7), 1478–1485. https://doi.org/10.1016/j.jbusres.2013.07.018

Ouimet, P. P. (2013). What motivates minority acquisitions? the trade-offs between a partial equity stake and complete integration. *Review of Financial Studies*, *26*(4), 1021–1047. https://doi.org/10.1093/rfs/hhs125

Phillips, R. L., & Ormsby, R. (2016). Industry classification schemes: An analysis and review. *Journal of Business & Finance Librarianship*, *21*(1), 1–25. https://doi.org/10.1080/08963568.2015.1110229

Povel, P., & Sertsios, G. (2014). Getting to know each other: The role of toeholds in acquisitions. *Journal of Corporate Finance*, *26*, 201–224. https://doi.org/10.1016/j.jcorpfin.2014.04.001

PwC. (2016). *Mergers & Acquisitions*. Retrieved from https://www.pwc.nl/nl/assets/documents/pwc-mergers-acquisitions.pdf

Raman, K., Shivakumar, L., & Tamayo, A. (2013). Target's earnings quality and bidders' takeover decisions. *Review of Accounting Studies*, *18*(4), 1050–1087. https://doi.org/10.1007/s11142-013-9224-0

Reuer, J. J. (2005). Avoiding lemons in M&A deals. *MIT Sloan Management Review*, *46*(3), 15–17.

Reuer, J. J., & Koza, M. P. (2000). Asymmetric information and joint venture performance: theory and evidence for domestic and international joint ventures. *Strategic Management Journal*, *21*, 81–88. https://doi.org/10.1002/(SICI)1097-0266(200001)21:1<81::AID-SMJ62>3.0.CO;2-R

Reuer, J. J., Tong, T. W., & Wu, C.-W. (2012). A Signaling Theory of Acquisition Premiums: Evidence from IPO Targets. *Academy of Management Journal*, *55*(3), 667–683. https://doi.org/10.5465/amj.2010.0259

Seth, A., Song, K. P., & Pettit, R. (2000). Synergy, managerialism or hubris? An empirical examination of motives for foreign acquisitions of U.S. firms. *Journal of International Business Studies*, *31*(3), 387–405. Retrieved from https://www.jstor.org/stable/155648

Shekhar, S., & Wey, C. (2017). *Uncertain merger synergies, passive partial ownership, and merger control* (No. 260). Düsseldorf.

Shimizu, K., Hitt, M. A., Vaidyanath, D., & Pisano, V. (2004). Theoretical foundations of cross-border mergers and acquisitions: A review of current research and recommendations for the future. *Journal of International Management*, *10*(3), 307–353. https://doi.org/10.1016/j.intman.2004.05.005

Skaife, H. A., & Wangerin, D. D. (2013). Target financial reporting quality and M&A deals that go bust. *Contemporary Accounting Research*, *30*(2), 719–749. https://doi.org/10.1111/j.1911-3846.2012.01172.x

Vasilescu, C., & Millo, Y. (2016). Do industrial and geographic diversifications have different effects on earnings management? Evidence from UK mergers and acquisitions. *International Review of Financial Analysis*, *46*, 33–45. https://doi.org/10.1016/j.irfa.2016.04.009

Very, P., & Schweiger, D. M. (2001). The acquisition process as a learning process: Evidence from a study of critical problems and solutions in domestic and cross-border deals. *Journal of World Business*, *36*(1), 11–31. https://doi.org/10.1016/S1090-9516(00)00052-3

Walkling, R. A. (1985). Predicting Tender Offer Success: A Logistic Analysis. *The*

Journal of Financial and Quantitative Analysis, *20*(4), 461. https://doi.org/10.2307/2330762

Wangerin, D. (2019). M&A Due Diligence, Post-Acquisition Performance, and Financial Reporting for Business Combinations. *Contemporary Accounting Research*, *36*(4), 2344–2378. https://doi.org/10.1111/1911-3846.12520

Xu, D., Zhou, C., & Phan, P. H. (2010). A real options perspective on sequential acquisitions in China. *Journal of International Business Studies*, *41*(1), 166–174. https://doi.org/10.1057/jibs.2009.16

Zhu, P., Jog, V., & Otchere, I. (2014). Idiosyncratic volatility and mergers and acquisitions in emerging markets. *Emerging Markets Review*, *19*, 18–48. https://doi.org/10.2139/ssrn.1360318

CONCLUSIONES

Las F&A son operaciones complejas para los adquirientes, las cuales normalmente suponen inversiones monetarias cuantiosas. Así, estas decisiones requieren un análisis muy riguroso de las empresas objetivo a fin de evitar errores en el proceso de inversión. En estas operaciones se lleva a cabo un arduo proceso de negociación para pactar los términos del acuerdo. Esta tesis se centra en la importancia que tiene la información financiera de la empresa objetivo en el proceso que antecede a la F&A, y permite concluir que efectivamente los adquirientes llevan a cabo un proceso previo a la combinación de negocios (*due diligence*), en el que, gracias a la detección de gestión del resultado contable, son capaces de plantear condiciones más acertadas para la empresa adquirente que previsiblemente permitarán contribuir al éxito de la operación.

A continuación, se presentan las conclusiones específicas de los análisis empíricos correspondientes a los distintos capítulos de la tesis.

<u>Capítulo 1 – Idiosincrasias del mercado europeo de F&A:</u>

- Las F&A se agrupan a lo largo del tiempo en forma de olas.
- La gran mayoría de anuncios de F&A se terminan completando, aunque los que son retirados, es decir las operaciones que no se completan, tienen un tamaño considerablemente mayor.
- Las F&A son mayoritariamente locales. No obstante, los acuerdos transfronterizos han aumentado sustancialmente entre 1990 y 2017 y tienden a ser de mayor tamaño.
- El mercado de F&A está altamente concentrado en unos pocos países, siendo el Reino Unido el país con más dinamismo en Europa.
- Más de la mitad de las F&A se hacen entre empresas de la misma industria. Los sectores con mayor actividad son: finanzas, transporte y manufactura.
- Las F&A no suelen ser hostiles y los adquirientes pocas veces compiten entre ellos por invertir en una empresa objetivo.
- El efectivo es el método de pago por excelencia, si bien los acuerdos de mayor volumen incluyen otras formas de pago como acciones, o combinaciones de efectivo y acciones.
- La mayor participación en la actividad de F&A corresponde a empresas cotizadas en el mercado de valores.

- En la mayoría de casos, las empresas adquirientes no tienen ningún tipo de propiedad en la empresa objetivo antes de la operación, aunque buscan hacerse con el control total después de la transacción.

En general, el mercado de F&A en Europa exhibe una dinámica similar al de EEUU. Sin embargo, las operaciones europeas y americanas difieren en que los adquirientes europeos hacen un mayor del uso del efectivo como medio pago, realizan menos adquisiciones hostiles, y el tamaño promedio de sus inversiones es menor al de sus pares americanos, esto último tras la crisis de las hipotecas "*subprime"*.

Capítulo 2 – Gestión del resultado contable de las empresas objetivo y prima ofrecida: el papel del conocimiento de la industria por parte de la adquirente:

- La relación entre la gestión del resultado contable de la empresa objetivo antes de la combinación y la prima que ofrece la adquiriente en el momento del anuncio depende de si ambas empresas pertenecen a la misma industria o no.
- Si objetivo y adquirente pertenecen a la misma industria (F&A relacionadas), dicha asociación es negativa, mientras que se observa lo contrario cuando pertenecen a distintas industrias (F&A no relacionadas).

Lo anterior permite concluir que el conocimiento de la industria, en particular el de sus prácticas contables, es relevante para las empresas adquirientes a la hora de realizar un *due diligence* que permita entender el contenido de la información financiera de la empresa objetivo. Los resultados sugieren que los adquirientes en F&A relacionadas son capaces de detectar cuando el resultado contable de la empresa objetivo ha sido sometido a un proceso de gestión intencionado, y por ello pueden evaluar mejor el valor real de las sinergias con las empresas objetivo. En consecuencia, en F&A relacionadas la adquiriente termina pagando una prima menor cuando hay altos niveles de gestión del resultado de la objetivo, mientras que ocurre lo opuesto para las adquirientes en F&A no relacionadas, cuyo conocimiento de las prácticas contables en la industria de la objetivo es menor.

Capítulo 3 – Porcentaje de propiedad a adquirir y gestión del resultado contable de la empresa objetivo:

- La relación entre la gestión del resultado contable de la empresa objetivo antes de las F&A y el nivel de propiedad que busca obtener la adquirente en el momento del anuncio del acuerdo es negativa.

Esta evidencia es consistente con la idea de que los adquirientes son adversos al riesgo de sobrevalorar las empresas objetivo en las F&A, porque las empresas suelen utilizar prácticas de gestión del resultado contable para sobrevalorar sus acciones en los mercados bursátiles. Así, cuando al llevar a cabo el *due diligence*, la empresa adquiriente encuentra signos de gestión del resultado contable por parte de la empresa objetivo, asumirá que la objetivo podría estar sobrevalorada; ello hará que adopte una posición conservadora respecto del nivel de propiedad que pretende obtener, a la espera de que, en el futuro, pueda acceder a información privada que le permita realizar un análisis más completo. De esta forma, a mayores niveles de gestión del resultado de los objetivos, menor es el porcentaje de propiedad que trata de conseguir la adquiriente.

Los análisis empíricos que componen esta tesis no están exentos de limitaciones, al igual que sucede en otros trabajos realizados en esta línea de investigación. Entre ellas se encuentran las relacionadas con las medidas de la gestión del resultado contable, el grado de generalización de los resultados y su significancia estadística. En lo concerniente a las medidas de gestión del resultado, se es consciente de que cualquier medida de este tipo es susceptible de errores de medición que podrían afectar los resultados. Además, dado que la investigación se centra en Europa, los resultados no necesariamente son replicables en otros contextos debido a las particularidades del mercado europeo de F&A. Por su parte, también conviene señalar que algunos resultados tienen una significancia estadística débil, que podría explicarse por la escasa información disponible en las bases de datos, lo que ha hecho que las muestras empleadas hayan tenido que ser pequeñas.

El mercado de F&A en Europa ofrece varias oportunidades de investigación futuras. Por ejemplo, se supone que la salida del Reino Unido de la Unión Europea (Brexit) tendrá un impacto significativo en el mercado. En relación a este hecho, surgen muchas preguntas incluyendo, cómo ello afectará a la actividad de F&A, y si el Brexit podría acarrear nuevos acuerdos en Europa Continental. Esto, teniendo presente que muchos inversores

ven a Reino Unido como la puerta de entrada a Europa. Asimismo, el crecimiento del número de F&A transfronterizas en Europa también ofrece oportunidades para investigaciones futuras. Aquí se podrían abordar diversas preguntas como qué papel juega la información contable en las F&A entre empresas de distintos países de la región, o si la homogenización de normas contables en Europa efectivamente ha incentivado la integración económica a través de este tipo de operaciones.

Por otra parte, el papel que juega el sector financiero en las F&A es relevante y podría dar lugar a nuevas investigaciones en el campo de la gestión del resultado contable de las empresas objetivo. La mayoría de investigaciones, incluida esta tesis, excluyen este sector porque tiene una regulación especial que podría afectar a las estimaciones de la gestión del resultado contable. Sin embargo, investigaciones futuras podrían abordar las F&A del sector financiero y analizar cómo se incorpora la información financiera en las negociaciones, teniendo en cuenta que los adquirientes de esta industria pueden ser caracterizados como usuarios sofisticados de los informes financieros.

Finalmente, el diseño de esta investigación hace que los análisis empíricos se hayan enfocado en los anuncios de F&A. No obstante, es bien sabido que los procesos de F&A son extensos e involucran varias etapas antes y después del anuncio del acuerdo. Así, las investigaciones futuras también podrían analizar cómo la gestión del resultado contable de las compañías adquiridas influye en otras etapas del proceso. En particular, se sabe poco sobre la etapa anterior al anuncio de las F&A, por lo que una pregunta a considerar sería si aquellas empresas con menores indicios de gestión del resultado contable son más propensas a ser adquiridas.