



ERASMUS UNIVERSITY ROTTERDAM

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Shareholder Wealth Effects of Domestic versus Cross-Border Acquisitions: An Analysis of the Ten Highest Trading Countries in Europe

Abstract

This paper examines the announcement, the (long-term) post-acquisition share returns, and the return on assets of acquisitions in the ten highest trading countries in Europe. Hereby, cross-border acquisitions are compared to domestic acquisitions over the period of 1993 to 2018. Overall, the results show no significant difference between cross-border acquisitions and domestic acquisition, not in announcement, long-term returns, or return on assets. In cross-border acquisitions, it does not matter if the target firm is in one of the ten European countries with the highest trading volume or not. This also applies to European targets, as a cross-border acquisition of a European target is not significantly different from an acquisition not in Europe. Also, comparing between regions of Europe of the target, no distinction is found between them.

Keywords: acquisitions, announcement returns, long-run returns, cross-border targets, European acquirers, intra-European acquisitions

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Introduction

Mergers and acquisitions (M&As) are widespread used by firms as way of strategic expansion, to extend their current businesses or diversify in to related markets. The widespread use of M&As, and cross-border M&As is also due to globalization and technological development. Besides, acquiring international firms can lead to obtaining new capabilities and knowledge by entering a new market. Especially during the fifth merger wave, from 1993 till 2000, M&As became increasingly popular as the value of M&As doubled during this period in the United States (US), and in Europe. Particularly for Europe this meant an enormous increase, as the European market became almost as big as the US market. Another phenomenon of the fifth merger wave is the increase of size of acquisitions and the fact that they are more often global. In addition, the value of cross-border acquisition grew from 0.5% in the 1980s to more than 2% in 2000 (Goergen & Renneboog, 2004; UNCTAD 2000). Besides, the amount and value of acquisitions grew again by almost 50% in 2008, of which Europe contributed for two thirds. Therefore, it appears that acquisitions between Europe and the rest of the world is gaining importance (Bhagat, Malhotra & Zhu, 2011; UNCTAD 2008).

This paper compares announcement returns between domestic and cross-border acquisitions during, and after the M&A wave in the 1990s. It focuses on acquisitions and cross-border acquisitions by 10 European countries – United Kingdom, Germany, Spain, France, Netherlands, Russia, Italy, Switzerland, Sweden, and Austria – during the period of 1993 through 2018. These ten European countries rank highest in the amount and value of acquisitions in the recent years, which are further referred to as “EU10” countries. By focusing on these EU10 countries, this paper distinguishes itself from previous research, as most research is concentrated in the US or the United Kingdom (UK), and mainly focuses on one country. The target firms are in any part of the world. I investigate the difference in domestic versus cross-border acquisitions, and if the acquisition is cross-border if it matters if the target is in one of the EU10 countries, or in Europe. also, I analyze the cross-sectional variation of cross-border acquisitions and relate it to differences in changes in operating performance, deal characteristics, and cross-country characteristics. The emphasis in this paper is on the acquirers returns, and hence on the valuation consequences for existing shareholders of the firm that initiates the bid.

As mentioned, this paper differs from previous studies by focusing on European acquirers, and by distinguishing between acquisitions within Europe (i.e. targets in Europe)

and targets outside Europe. Hereby, this study allows to contrast the difference in domestic versus cross-border acquisitions, and the difference between targets within Europe versus outside Europe. In addition, this paper examines the performance of acquisition by shareholder wealth with short-term returns, and long-term returns, while existing research mostly focuses on short-term returns. An evaluation of the long-term performance is necessary because the market is not always accurate in predicting the future performance of acquisitions (Conn, Cosh, Guest & Hughes, 2005). Another profitability measure of the acquisitions I use, is return on assets which is a financial performance variable, while returns are market performance variables.

The findings suggest that there is no significant difference between the announcement day returns, post-acquisition returns, or the return on assets of cross-border and domestic acquisitions. Also, if the acquisition is cross-border, it does not matter for the announcement day returns, post-acquisition returns, or the return on assets if the target is in one of the EU10 countries, or in Europe.

Theoretical background

Acquisitions are the purchase of another company's shares to gain control of that company. Even though an acquisition affects a lot of people within the acquiring firm, the profitability of an acquisition is usually measured as the wealth effect for shareholders. The profitability of the acquisition for shareholders is mostly measured by an event study which analyzes the stock prices on the day of the takeover. Hereby, investors are assumed to adjust their expectations by the new information the acquisition entails, which is then reflected in the stock prices.

The results of this method for the announcement wealth effects are quite diverse. Some studies find small negative returns for firms in the UK or US (Andrade et al., 2001; Conn, 2003; Gregory & O'Donohoe, 2014), while others find no or small positive abnormal returns for European firms, and intra-European acquisitions (Goergen & Renneboog, 2004; Martynova & Renneboog, 2008). The negative returns can be due to overpaying for the target, meaning that the negative reaction is the wealth transfer of the bidding firm to the shareholders of the target. Or, it can reflect the depletion of the internal investment opportunities which is negatively reflected upon the growth possibilities of the firm by

management (Jovanovic & Braguinsky, 2002). In addition, the negative reaction can be due to asymmetric information, or a cultural gap which makes integration difficult (Conn, Cosh, Guest & Hughes, 2005). Adversely, a positive effect on the abnormal returns can be the result of synergies due economies of scale for similar products or services in bidding and target company, or takeover of technology, brand name, or from additional financial resources (Bhagat, Malhotra & Zhu, 2011).

Similarly, studies investigate the difference between cross-border and domestic acquisitions, of which the results are again diverse. Moeller & Schlingemann (2005) find significantly lower announcement stock returns for US firms who acquire cross-border targets relative to those that acquire domestic targets, while Gregory and O'Donohoe (2014) discover underperformance of domestic acquirers to cross-border acquirers. Con, Cosh, Guest & Hughes (2005) find similar result for UK firms as Moeller & Schlingemann (2005), since cross-border acquisitions have lower announcement returns than domestic acquisitions according to their research.

Taking these studies into account, it will be interesting to see which wealth effect for shareholders holds in this paper as the sample consist of only the highest trading countries in Europe. Therefore, the first hypothesis is as follows:

Hypothesis 1: Cross-border acquisitions generate lower abnormal returns for acquiring firms, relative to domestic acquisitions.

In addition, in this sample a cross-border acquisition can have its target firm in an EU10 country, in the EU, or in another part of the world. Between these regions there can also be a difference in the shareholders returns. Gregory and O'Donohoe (2014) investigate acquisitions of companies in the UK, and separate their targets into three regions, the US, Europe, and rest of the world. After controlling for corporate governance regimes, they find no difference in returns between these regions. Moreover, Bertrand & Zitouna (2008) examine the French market and find non-European acquisitions to be more efficient than European acquisitions. At last, Martynova and Renneboog (2008) select a sample of intra-European acquisitions and investigate the difference in Continental Europe and UK target. They find larger returns for acquisitions of UK targets than for Continental European firms. As the returns between regions depend on the ease of integration, the second hypothesis is:

Hypothesis 2: Cross-border acquisitions earn higher returns if the acquisition is of a target in an EU10 country or in Europe.

Furthermore, it can be of use to measure the long-term wealth effects of acquisitions. This is usually done by long-term returns of at least a year. Also, another operating measure for acquisition that is often used to determine the wealth effect of an acquisition is the return on assets (Gentry & Shen, 2010; Das & Kapil, 2012). Moeller and Schlingemann (2005) find lower changes in operating performance for cross-border than domestic acquisitions. Besides, cross-border acquisitions result in lower long-run returns relative to domestic acquisitions (Con, Cosh, Guest & Hughes, 2005). Hence, the third hypothesis:

Hypothesis 3: Cross-border acquisitions receive lower long-term returns and return on assets relative to domestic acquisitions.

To test these hypotheses there are some variables that need to be accounted for as they might explain the difference in cross-border and domestic acquisitions. The M&A literature knows some profitable drivers for the stock returns. So, a hostile acquisition generates higher returns for the acquirer than a friendly one (Sundarsanam & Mahate, 2006). Also, the method of payment matters. The more cash involved in the acquisition, the higher the returns, since the market takes cash bids as a positive signal of future returns (Con, Cosh, Guest & Hughes, 2005). A higher market-to-book ratio destroys value (Rau & Vermaelen, 1998), as does a bigger company, because the interests of managers and shareholders are more likely to diverge (Bhagat, Malhotra & Zhu, 2011). Relative size has a positive effect on returns, as has diversification, since the firm is then less reliable on one segment for income (Cosh & Guest, 2001). Higher foreign sales improve the returns as a firm is already familiar with the local habits which reduces information asymmetry and integration costs (Aybar & Ficici, 2009). While a higher closely held percentage lowers the bidder returns, because a higher premium is required for shareholders to give up their shares (Dahlquist et al., 2003). In addition, there are some cultural and economic difference that affect the returns. Investor protection is positively related to the value between countries, of which the English common law system offers the most protection compared to the French civil law, German civil law, and Scandinavian law (La Porte et al., 1997). Less political and economic freedom is negatively correlated with returns as it undermines business opportunities (Porta, Lopez de Silanes, Shleifer & Vishny, 1998), as is cultural distance since it complicates the integration and cultural proximity diminishes information costs (Brock, 2005).

Data

A sample of completed acquisitions by European public firms is collected for the period 1993 to 2018 from Thomson Financial Securities Data Corporation (SDC) Database. The acquiring firms are listed in the United Kingdom (UK), Germany, Spain, France, Netherlands, Russia, Italy, Switzerland, Sweden, or Austria. These 10 countries in Europe will be referred to as “EU10”, which are selected because of the highest value amount of acquisitions in 2018 (Bureau van Dijk, 2019). The acquisition is classified as either domestic (i.e. an acquisition in the same country) or cross border (i.e. an acquisition with the target in another country than its own) based on the nationality of the acquirer and target. The nationality is the nation in which the acquirer has its headquarter. The acquisitions have a deal value greater than €1 million and more than 50% of shares are acquired during the deal. In addition, the time between two mergers & acquisitions (M&A) of the same firm should be 1 year (~250 trading days) to prevent one acquisition to influence another. Additional information of the transaction details such as deal value, deal characteristics, and industry characteristics are obtained from SDC Database. The stock price and other financial data of firm characteristics is retrieved from Thomson Financial Datastream. The country characteristics are collected from SDC Database and calculated by other sources as described in table 1. Likewise, all the variables used are described in table 1. The resulting sample consists of 1,895 M&A announcements of 1,329 different companies. This sample is used to test whether there exist a cross border effect and whether the control variables impact the performance of acquisitions. The final sample for the cross-sectional regression analysis only exists of 709 acquisitions due to the lack of data for certain firms.

Table 1: Variable definitions

Variable Description	Variable	Variable Definition
<i>Panel A: Dependent variable</i>		
Target Nationality	Cross	Dummy variable for cross border equal to 1 if the acquirer and target don't share the same nationality (cross border), and equal to 0 if they share the same nationality.
Target Nationality	EU10	Dummy equal to 1 if the target's nationality is in one of the 'EU10' countries and the acquisition is cross border, and 0 otherwise.

Target Nationality	EU	Dummy equal to 1 if the target's nationality is in Europe and the acquisition is cross border, and 0 otherwise.
Target Region	West	Dummy equal to 1 if the target's nationality is in West Europe and the acquisitions is cross border, and 0 otherwise.
Target Region	East	Dummy equal to 1 if the target's nationality is in East Europe and the acquisitions is cross border, and 0 otherwise.

Panel B: Firm characteristics

Firm Size	LogAssets	The natural logarithm of the total assets in the fiscal year prior to the acquisition.
Market Value	LogMV	The natural logarithm of the market value.
Market-to-Book	LogMTB	The natural logarithm of the market-to-book ratio of the acquirer in the fiscal year prior to the acquisition.
Global Diversification	ForeignSales	The ratio of foreign sales to total sales as the percentage of international sales to the net sales/revenues.
Return on Assets	ROA	The ratio of the net income to the total assets. It tells what earnings were generated by invested capital (assets).

Panel B: deal characteristics

Share Acquired	SharesAcq	The percentage of shares acquired in the acquisition.
Relative Size	RelSize	Ratio of the transaction value to the acquirer's market value.
Acquisition Attitude	Hostile	Dummy variable equal to 1 if the acquisition is defined as hostile by SDC: the board officially rejects the offer but the acquiror persists with the takeover.
Method of Payment	Cash	Percentage of cash used in the transaction.

Panel C: industry characteristics

Business Diversification	SIC	Dummy equal to 1 if the acquirer and target share the same 4-digit SIC code
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Panel D: country characteristics

Economic freedom	EFI	Fraser Institute’s World Economic Freedom Index. The index takes values between 1 (restrictive market economy) and 10 (fully functional market economy) based on Gwartney et al. (1996). The index data is obtained from The Fraser Institute ¹ .
Cultural Distance	CDI	Cultural Distance Index. The index takes values between 1 (cultural distant) and 0 (cultural proximity) based on Hofstede (2001) and Aybar & Ficici (2009). The index is obtained from Hofstede Insights ² .
Ownership Concentration	CloselyHeld	Percentage of market capitalization that is closely held based on Dahlquist et al. (2003). Fraction of a firm’s share that is closely held, i.e. share held by the biggest shareholders.
Legal System	English	Dummy if the acquirer’s country belongs to the English legal system based on LLSV (1997).
Legal System	French	Dummy if the acquirer’s country belongs to the French legal system.

This table describes the variables, the variables descriptions, and the variables definitions used.

In the sample, 1,048 of the 1,895 acquisition, the acquirer and target are in the same country (domestic), and 847 are cross border acquisitions. Of these 847, 216 are acquisitions of firms in one of the eu10 countries, and 631 are not. Most of the cross-border acquisitions and domestic acquisitions are done by companies from the United Kingdom, followed by France. For both domestic and cross border, most acquisitions are performed in 1999. While most of the acquisitions are performed between 1997-2001, to which domestic acquisitions contribute the most. After 2000 the acquisitions have decreased, with an intermission of an increase between 2005-2007 (table 2).

Table 2: Sample description.

Frequency	Total (n=1,895)	Cross-border (n=631)	Domestic (n=1,264)
<i>Panel A: Acquirer country</i>			
Austria	27	17	10
France	287	122	165

¹ <https://www.fraserinstitute.org/economic-freedom>

² <https://www.hofstede-insights.com/>

Germany	183	102	81
Italy	90	44	46
Netherlands	106	81	25
Russian Fed	32	7	25
Spain	64	39	25
Sweden	142	64	78
Switzerland	120	79	41
United Kingdom	844	292	552

Panel B: Yearly distribution

1993	39	16	23
1994	59	23	36
1995	66	24	42
1996	75	23	52
1997	112	37	75
1998	112	49	63
1999	188	87	101
2000	164	90	74
2001	93	43	50
2002	65	21	44
2003	71	25	46
2004	59	22	37
2005	94	42	52
2006	97	53	44
2007	96	49	47
2008	65	37	28
2009	62	24	38
2010	61	28	33
2011	58	26	32
2012	33	14	19
2013	35	14	21
2014	51	28	23
2015	37	18	19
2016	32	14	18
2017	45	24	21
2018	26	16	10

This table describes the 1993-2018 sample of cross-border and domestic acquisitions. Panel A presents the frequency of acquisitions per country of the acquirer. Panel B lists the number of acquisitions across announcement years.

Table 3 presents the means for the sample of 847 cross-border acquisitions and compares these with the means of the 1,048 domestic acquisitions. A t-test is used to tests if there is a significant difference between the means of the two samples (Brown and Warner, 1980).

Focusing on the acquirer characteristics, the p-values show significant difference for assets, and the percentage of foreign sales. Cross-border acquirers have a higher amount of assets, and are more involved in foreign sales, as ratio to their total sales, than domestic acquirers. Similarly, the deal characteristics cash, and hostile are significantly different. Cross-border acquisitions use a higher percentage of cash in the transaction, and their acquisition is less often hostile than for domestic acquisitions. In addition, the cross-border and domestic acquisitions are targeting different industries, since the industry characteristic (SIC code) is significantly different. Looking at the country characteristics, they show significant difference for the EFI, CDI, closely held, English, and French legal system. As expected, the cultural difference between the acquirer's and target nation is higher for cross-border than domestic acquisitions, and the economic freedom index is bigger for domestic than cross-border acquisitions. Also, the percentage of cross-border firms that are closely held is higher than for domestic acquisitions. Besides, more of the domestic acquisition nations fall under the English legal system than do cross-border. While, more of the cross-border acquisition nations fall under the French legal system.

Table 3: Univariate characteristics

	Full sample	Cross-border sample	Domestic sample	Difference	P-value
<i>Panel A: Acquirer characteristics</i>					
Assets	22,800,000	32,700,000	15,200,000	17,500,000	(0.0000)*
Market-to-book	2.3858	2.9450	1.9593	0.9857	(0.6289)
Foreign sales (%)	0.4317	0.5894	0.2897	0.2997	(0.0000)***
<i>Panel B: Deal characteristics</i>					
RelSize (%)	0.9108	0.8423	0.9664	-0.1241	(0.6309)
Hostile	0.0243	0.0165	0.0305	-0.0140	(0.0489)**
Shares acquired (%)	0.9022	0.8960	0.9072	-0.0111	(0.1344)
Cash (%)	0.8465	0.8892	0.7979	0.0913	(0.0000)***
<i>Panel C: Industry characteristics</i>					
Industry	0.3646	0.4085	0.3292	0.0793	(0.0004)***

Panel D: Country characteristics

EFI	7.8880	7.8656	7.9061	-0.0405	<i>(0.0803)*</i>
CDI	0.1727	0.3486	0.0305	0.3181	<i>(0.0000)***</i>
Closely held (%)	0.2496	0.2717	0.2318	0.0398	<i>(0.0000)***</i>
Legal system English	0.4454	0.3447	0.5267	-0.1820	<i>(0.0000)***</i>
Legal system French	0.2887	0.3377	0.2490	0.08862	<i>(0.0000)***</i>

*Means and p-values of the differences between the samples of cross-border and domestic acquisitions. The variables are as described in table 1. The assets are denoted in thousands of euro, and market values in millions of euros. The total assets represent the sum of total current assets, long term receivables, investment in unconsolidated subsidiaries, other investments, net property plant and equipment and other assets, and the market value is the share price multiplied by the number of ordinary shares. The ratio of foreign sales to total sales is the percentage of international sales to the net sales/revenues. Significance at the 10%, 5%, and 1% level is denoted with *, **, and *** (p-values in italics and between brackets).*

Methodology

To determine the performance of an acquisition, three dependent variables are used. The cumulative abnormal returns (CAR), the buy-and-hold abnormal returns (BHAR), and the return on assets (ROA). For the CAR, the short-term returns over different days around the acquisition are used by the practice of an event study, while the BHAR are used for the long-term returns over 3 and 5 years after the acquisition since these amounts of years are mostly used in empirical studies on the long-run stock performance in mergers and acquisitions (Bessembinder & Zhang, 2013). The ROA is an accounting measurement for the performance of the acquiring firms, and is determined for the 1, 2, and 3 year pre- and post-year differences.

An event study is widely used in the finance literature to study the stock price reactions to certain events. It can determine whether the event had a negative or positive effect on shareholder wealth. The underlying model of an event study is the market model which assumes a linear relation between the return of the market and the return of the stock (Aybar & Ficici, 2009). For each stock i , the market model computes the returns by

$$R_{it} = \alpha_i + \beta_i(R_{mkt}) + \epsilon_{it} \quad (1)$$

where R_{it} is the return of stock i at time t . R_{mkt} is the market return at time t , β_i is stock i 's market risk which is estimated by the regression of the market model, α_i is the intercept, and ϵ_{it} is the zero mean disturbance term for stock i at time t . The return obtained in equation (1) is the normal return, i.e. the returns that are expected if the acquisition had not occurred (MacKinlay, 1997). The normal returns are estimated by using a 255-day estimation period

before the event from $t=-11$ to $t=-265$, with $t=0$ as the event day (Sundarsanam et al., 1996; Aybar & Ficici 2009; Van der Sar, 2015).

Due to the announcement of an acquisition the returns could be different than expected, i.e. the abnormal return (AR). The AR represents the extent to which the actual return of stock i at time t deviates from the expected normal return (Van der Sar, 2015):

$$AR_{it} = R_{it} - (\alpha_i + \beta_i(R_{mkt})) \quad (2)$$

To capture the effect of the event, the average daily abnormal returns are computed for a sample of N stocks for each day t :

$$AR_t = \frac{1}{N} \sum_{i=1}^N AR_{it} \quad (3)$$

The full impact of an event may not be captured on a single day, therefore even studies often examine multiple days around the event, i.e. the event window. The event window will take T_1 days prior to the event and T_2 days after the event into account. The expected normal returns in equation (1) for the stock during the event window are compared to the actual returns occurred on each day within the even window. The difference between the expected normal return and actual return over the event window is the cumulative abnormal return (CAR) during the event window (T_1, T_2).

$$CAR_{i(T_1T_2)} = \sum_{t=T_1}^{T_2} AR_{it} \quad (4)$$

The CAR captures the short-term returns of the acquisition. To determine the long-term performance of the acquisitions, the buy-and-hold abnormal returns (BHAR) are used. The BHAR represents by how much the acquiring firms have outperformed or underperformed compared to the market return expectations in the corresponding periods (Giannopoulos et al., 2017). The BHAR of firm i over T days after the acquisition at date is

$$BHAR_{iT} = \prod_{t=1}^T (1 + r_{it}) - \prod_{t=1}^T (1 + r_{mt}), \quad (5)$$

where r_{it} and r_{mt} are the daily t stock returns of the firm and the corresponding daily benchmark return, respectively (Sundarsanam & Mahate, 2003; Bessembinder & Zhang, 2013).

At last, the return on assets is the net income divided by the total assets of firm i :

$$\frac{\text{net income}_i}{\text{total assets}_i} \quad (6)$$

The ROA is calculated over 1, 2, and 3 years before and after the acquisition. To determine the firm's performance, the median difference in the pre- and post-acquisition is used (Rao-Nicholson et al., 2016).

To find if the CARs, BHARs, and ROAs for cross-border and domestic acquisitions differ significantly from each other, several tests are applied. The time series t-test (Brown and Warner, 1980), and two non-parametric tests, the general Sign Test (Cowan, 1992), and the Wilcoxon Signed Rank Test (Akeyede, Usman and Chiawa, 2014) are used. The non-parametric tests are used, because they adjust for stationarity when the data tend to be skewed. The null hypothesis being that the difference between the means is zero for the t-test, and the difference between the medians is zero for the Sign Test and Wilcoxon Signed Rank Test. The test statistics indicate how cross-border acquisitions perform compared to domestic acquisitions.

The performance value of an acquisition can be due to a variety of factors. To determine the cross-sectional variation in the cumulative abnormal returns, a regression is used to determine which factors influence the CAR of the stocks:

$$\begin{aligned}
 CAR(T_1, T_2) = & \beta_1 Cross + \beta_2 EU10 + \beta_3 EU + \beta_4 West + \beta_5 East + \beta_6 Assets + \\
 & \beta_7 Cross*Assets + \beta_8 EU10*Assets + \beta_9 EU*Assets + \beta_{10} SIC + \beta_{11} SIC*Assets + \beta_{12} Cross*SIC + \\
 & \beta_{13} Cross*Sic*Assets + \beta_{14} CloselyHeld + \beta_{15} Cross*CloselyHeld + \beta_{16} EU10*CloselyHeld + \\
 & \beta_{17} EU*CloselyHeld + \beta_{18} ForeignSales + \beta_{19} Cross*ForeignSales + \\
 & \beta_{20} EU10*ForeignSales + \beta_{21} EU*ForeignSales + \beta_{22} RelSize + \beta_{23} Cross*RelSize + \\
 & \beta_{24} EU10*RelSize + \beta_{25} EU*RelSize + \beta_{26} EFI + \beta_{27} Cross*EFI + \beta_{28} EU10*EFI + \beta_{29} EU*EFI + \\
 & \beta_{30} SharesAcq + \beta_{31} Cross*SharesAcq + \beta_{32} EU10*SharesAcq + \beta_{33} EU*SharesAcq + \\
 & \beta_{34} Hostile + \beta_{35} Cross*Hostile + \beta_{36} MTB + \beta_{37} Cash + \beta_{38} CDI + \beta_{39} English + \beta_{40} French + \\
 & \beta_{41} CountryFixedEffects + \beta_{42} IndustryFixedEffects + \beta_{43} YearFixedEffects + \epsilon \quad (7)
 \end{aligned}$$

Where $CAR(T_1, T_2)$ is (-2, +2), (-1, 0), (-1, +1), (-2, +1), (-5, +1), (-5, +5), (-10, +5), and (-10, +10), which gives 8 different models. The variables are as described in table 1, and the regression do and don't adjust for country, industry, and year fixed effects.

To determine the cross-sectional variation in the buy-and-hold abnormal returns, and the return on assets, two different regressions are used:

$$\begin{aligned}
 BHAR(T_1, T_2) = & \beta_1 Cross + \beta_2 EU10 + \beta_3 EU + \beta_4 West + \beta_5 East + \beta_6 Assets + \\
 & \beta_7 Cross*Assets + \beta_8 EU10*Assets + \beta_9 EU*Assets + \beta_{10} SIC + \beta_{11} SIC*Assets + \beta_{12} Cross*SIC + \\
 & \beta_{13} Cross*Sic*Assets + \beta_{14} CloselyHeld + \beta_{15} Cross*CloselyHeld + \beta_{16} EU10*CloselyHeld + \\
 & \beta_{17} EU*CloselyHeld + \beta_{18} ForeignSales + \beta_{19} Cross*ForeignSales + \\
 & \beta_{20} EU10*ForeignSales + \beta_{21} EU*ForeignSales + \beta_{22} RelSize + \beta_{23} Cross*RelSize + \\
 & \beta_{24} EU10*RelSize + \beta_{25} EU*RelSize + \beta_{26} EFI + \beta_{27} Cross*EFI + \beta_{28} EU10*EFI + \beta_{29} EU*EFI + \\
 & \beta_{30} SharesAcq + \beta_{31} Cross*SharesAcq + \beta_{32} EU10*SharesAcq + \beta_{33} EU*SharesAcq +
 \end{aligned}$$

$$\beta_{34}Hostile + \beta_{35}Cross*Hostile + \beta_{36}MTB + \beta_{37}Cash + \beta_{38}CDI + \beta_{39}English + \beta_{40}French + \beta_{41}CountryFixedEffects + \beta_{42}IndustryFixedEffects + \beta_{43}YearFixedEffects + \epsilon \quad (8)$$

Where BHAR(T_1, T_2) is (1, +3) and (1, +5) with T in years.

$$\begin{aligned} ROE(T_1, T_2) = & \beta_1Cross + \beta_2EU10 + \beta_3EU + \beta_4West + \beta_5East + \beta_6Assets + \beta_7Cross*Assets + \\ & \beta_8EU10*Assets + \beta_9EU*Assets + \beta_{10}SIC + \beta_{11}SIC*Assets + \beta_{12}Cross*SIC + \\ & \beta_{13}Cross*Sic*Assets + \beta_{14}CloselyHeld + \beta_{15}Cross*CloselyHeld + \beta_{16}EU10*CloselyHeld + \\ & \beta_{17}EU*CloselyHeld + \beta_{18}ForeignSales + \beta_{19}Cross*ForeignSales + \\ & \beta_{20}EU10*ForeignSales + \beta_{21}EU*ForeignSales + \beta_{22}RelSize + \beta_{23}Cross*RelSize + \\ & \beta_{24}EU10*RelSize + \beta_{25}EU*RelSize + \beta_{26}EFI + \beta_{27}Cross*EFI + \beta_{28}EU10*EFI + \beta_{29}EU*EFI + \\ & \beta_{30}SharesAcq + \beta_{31}Cross*SharesAcq + \beta_{32}EU10*SharesAcq + \beta_{33}EU*SharesAcq + \\ & \beta_{34}Hostile + \beta_{35}Cross*Hostile + \beta_{36}MTB + \beta_{37}Cash + \beta_{38}CDI + \beta_{39}English + \beta_{40}French + \\ & \beta_{41}CountryFixedEffects + \beta_{42}IndustryFixedEffects + \beta_{43}YearFixedEffects + \epsilon \quad (9) \end{aligned}$$

Where ROE(T_1, T_2) is (-1, +1), (-2, +2), and (-3, +3), excluding year 0. Again, the variables are as describe in table 1, and the regressions are with and without country, industry, and year fixed effects.

Results

Comparing cross-border CARs, BHARs, and ROAs with domestic shows no significance difference for the t-test for the two distinctions made in the variables Cross and EU10 (table 4). Similarly, the sign test and Wilcoxon signed rank test result in no significant difference between domestic and cross border acquisitions for Cross. This implies no significant difference between cross border and domestic acquisitions for any of the performance measures. Furthermore, for the CAR of the event window (-10, +5) is significantly different for EU10 by the sign test. This means that a cross border acquisition of an EU10 company earns a different return compared to a cross border acquisition of a firm in a non-EU10 country. This is the same for the Wilcoxon signed rank test for ROA (-2, +2), and ROA (-3, +3). In addition, the returns during the event window of CAR(-1, 0) and CAR(-1,+1) differ significantly from the returns expected during this period. Therefore, the acquisition returned an abnormal return. Also, both the BHARs periods show a significantly different return than expected after the acquisition. At last, the ROAs show significant difference between the pre- and post-acquisition ROAs for all the periods examined.

In the next part, a cross-sectional regression analysis shows whether a cross-border effect exists for acquisitions based on the Cross, EU10, EU, and regions variables, controlling for other variables that can influence the CARs.

The correlation matrix in table 5 is used to check for collinearity between the variables. A high correlation between two variables can induce problems to the model. Therefore, if the correlation exceeds 0.75, a variable is excluded from the model. Based on this, the logarithm of the market value (logMV) is excluded, since it has a correlation of 0.9133 with the logarithm of assets (logAssets).

The cross-sectional regression analysis tests whether there is a cross border effect while controlling for other factors that are expected to affect the acquirer returns. The dependent variables are the CARs for the different event windows (T_1, T_2), the BHARs(0, T), and ROAs(T_1, T_2) mentioned before. The independent variables are Cross, EU10, EU, West, and East as described in table 1. The control variables are the other factors that are expected to influence the CARs, as also described in table 1.

Table 6 shows the results of the cross-sectional regression analysis, which shows that the coefficients of the EU variable are significant for most of the models, except for model (5) and (8). For the models that are significant, this implies that, if the acquisition is cross border, it matters if the target company is in Europe or not. For a cross border acquisition in Europe, the returns are 110.04%, 84.07%, 90.86%, 79.99%, 88.22%, and 113.94% lower, respectively, for the models 1 to 4, 6, and 7, then if the acquisition would not be in Europe. In addition, the Cross variable is only significant for the 6th and 7th model, implying that a cross border acquisition earns (47.65% & 51.49%) higher returns than a domestic acquisition. The other variables of interest, EU10, West, and East, are not significant, suggesting that it makes no significant difference if the cross-border acquisition is in West or East Europe, or of a firm in an EU10 country, or not.

Next, we look at the control variables, and at their interactions with Cross, EU10, and EU, to examine if there is a difference in returns for these control variables based on the difference in target region. Since, the target can be domestic or cross border, and if it is cross border, the target can be in an EU10 country, or in Europe. The variable CloselyHeld is significant for all the interactions, Cross, EU10, and EU, for some of the models. If the percentage of closely held shares increases by 1%, for a cross border acquisition, the returns decreases by 10.61%, and 11.00%, respectively for the models (2) and (3). For a cross border

acquisition of an EU10 country, this decrease is 20.90%, and 24.77% for the same models. While for a cross border acquisition of a country in Europe, the returns of these models increase (29.50% & 33.57). In addition, for the EU interaction with CloselyHeld, models (4) to (8) are significant as well, meaning an increase of 1% in closely held shares, increases the returns (17.12%, 21.09%, 27.87%, 36.04%, 40.17%, respectively) for these models as well. So, firms in a cross-border acquisition earn higher returns if they have a lower percentage of closely held shares. This also applies to a cross border acquisition of an EU10 country. Contrary, companies involved in European acquisition earn higher returns if they have a higher percentage of closely held shares. Model (8) is also significantly negative for ForeignSales and EU*ForeignSales, implying a firm involved in a domestic acquisition, or in a European acquisition earns lower returns (4.65% & 23.54%) when it's percentage of foreign sales is (1%) higher. This is 15.05%, and 22.70% for the 6th, and 7th model for EU*ForeignSales, indicating higher returns for a European acquisition when the percentage of foreign sales is higher. RelSize is only significant for the Cross interaction for the 5th and 6th model, therefore firms involved in a cross-border acquisition earn lower returns (1.65% & 2.04%) if the percentage of the transaction value of the acquisition to the market value of its firm increases (1%). Furthermore, companies in a country with a 1-point higher EFI, i.e. more economic freedom, receive higher returns of 2.77%, 2.37%, 3.08%, 3.57%, 3.95%, 4.57%, and 5.92%, respectively in the models (2) to (8) for a domestic acquisition, and 14.47%, 10.98%, 10.96%, and 10.10% in the models (1) to (3), and (6) for an European acquisition. Contrary, a cross border acquisition earns lower returns (3.19%, 5.16%, 5.67%, and 5.74%) for firms in a country with higher economic freedom in the 2nd, and 6th to 8th model. Cross*SharesAcq is positively significant in model (2), and EU10*SharesAcq negatively significant in the 1st model, meaning a cross border acquisition makes 5.90% higher returns if the amount of shares acquired during the deal is 1% higher for the 2nd model, while a cross border acquisition in an EU10 country makes 17.08% lower returns for the 1st model. Moreover, domestic acquisition with a hostile nature in the models (4) to (8) earn higher returns of 4.65%, 7.54%, 5.85%, 6.25%, and 6.98%, respectively. While cross border acquisitions with a hostile nature earn lower returns of 5.07%, 7.73%, and 8.75%, respectively in the models (4), (5), and (8). At last, Cash is positively significant for the 1st model, indicating a 1% higher amount of cash in a domestic acquisition, earns 3.45% higher returns. And, firms in countries that fall under the English legal system

earn lower returns (1.87%, 2.67%, 2.57%, 4.09%, 3.37%, 3.87%, and 3.51%) for domestic acquisitions in the models (2) to (8).

In summary, a domestic acquisition earns higher returns when the bidder has lower foreign sales to total sales, and/or lower market-to-book ratio. Also, if the bid is a hostile bid, and/or financed with more cash. As well, when the country has a higher economic freedom index, and or when the country does not belong to the English legal tax system. Cross-border acquisitions generate higher returns when the bid is not hostile, a higher amount of shares is acquired, and/or the acquisition value to the acquirers market value is lower. Cross-border acquisitions also generate higher returns by a country with a lower percentage of closely held shares, and/or a lower economic freedom index. A cross-border acquisition of an EU10 country earns only lower returns when a lesser amount of shares is acquired. While a cross-border acquisition in Europe generates higher returns if the acquiring company is less involved in foreign sales, or with a higher economic freedom index and/or higher percentage of closely held shares in the country. These interpretations however only apply to some of the eight models, as discussed before.

The R-squared for the models is between 4.93% and 8.90% which means that the explanation power of the models is not high, and thus not representative enough. Therefore, industry, year, and country fixed effects are included in table 7 and 8. The R-squared for these models lies between 25.07% and 59.43% which means that the explanation power is higher than without fixed effects.

The models with fixed affects, for the CARs (table 7), illustrate that the coefficient of the Cross, EU10, EU, West, and East not significant (anymore), except for EU for the 1st model. This suggests that there is no evidence for a cross border effect when accounting for firm, deal, industry, and country characteristics. And if the acquisition is cross border, it suggests that it does not matter if the acquisition takes place in Europe, West Europe, East Europe, or in an EU10 country, accounting for fixed effects. Only for the 1st model, it implies that a cross border acquisition earns higher returns of 275.27% if the acquisition takes place in a European country, than if it would not.

Concerning the control variables, all are not significant anymore with introducing fixed effects, except Hostile, Cross*Hostile in the models (4), and (5), and Cash only in the 4th model. This means that hostile domestic acquisitions earn 5.99%, and 7.22% higher returns than friendly acquisitions, while cross border acquisition earn 7.61%, and 10.73% lower returns

than friendly acquisitions. At last, deals with a 1% higher percentage of cash involved, make 2.41% higher returns.

In short, for some models, a hostile bid, or more cash involved in the transaction generates higher returns for domestic acquisitions. While a non-hostile bid generates higher returns for a cross-border acquisitions.

Table 8 displays the results of the cross-sectional regression analysis of the BHARs and ROAs. The results show no significant coefficients for Cross, EU10, or EU, therefore I find no evidence for a cross border effect, or significant difference for EU10 or EU acquisitions, when accounting for firm, deal, industry, and country characteristics the BHAR and ROA model. West and East are only significant for the ROA models, meaning cross border acquisitions in West, and Eastern Europe earn higher returns than if they were not in West or East Europe.

Model (10) is only significant for Cash, so a 1% higher percentage of cash involved in the deal, declines the long-term returns by 93.55%. $EU10 * Assets$, and $EU10 * SharesAcq$ are significant for the 9th model. Bigger firms, i.e. logarithm of assets increases by 1%, earn lower long-term returns (0.25%) than smaller firms, and deals in which a 1% higher amount of shares is acquired, earn higher long-term returns (261.39%) than deals in which a lower amount of shares is acquired, in the acquisition of an EU10 country.

Besides, the ROA models show significance for MTB, which means that a 1% increase in the market-to-book ratio, reduces the return on assets by 21.29%, 17.50%, and 20.79%. In addition, a 1% increase in assets, increases the return on assets by 0.05% for deals involving two companies of different industries in the 13th model. Model (11), and (12), show for a 1% higher amount closely held shares, return on assets increase by 97.83%, and 117.59%, respectively for a domestic acquisition. This is a decrease of 96.62% for an acquisition of an EU10 country in model (11). A 1% increase in the percentage of foreign sales, increases the return on assets by 25.00% for a cross border acquisition in model the 12th model. While a 1% increase in the percentage of foreign sales, decreases return on assets by 50.32% for an acquisition of in an EU10 country in the 11th model. At last, for a cross border acquisition, a 1% higher transaction value to market value of the acquirer, decreases the return on assets in the 11th (15.09%), and 12th (13.15%) model.

Summarized, for certain models, domestic acquisitions have higher return on assets if the bidding company has a lower market-to-book ratio, and/or when the target company has a lower percentage of closely held shares. Also, with lesser cash involved in the transaction,

results in higher long-term returns for domestic acquisitions. Firms earn higher returns on assets if it is more involved in foreign sales, and/or if the transaction value to acquiring market value is lower. At last, an acquisition in an EU10 country has higher long-term returns if the bidding company is smaller, and/or if a lesser amount of shares is acquired during the transaction. Besides, the return on assets are lower with the acquiring firm less involved in foreign sales, and/or when the country has a lower percentage of closely held shares.

Conclusion

This paper examines differences in shareholders' returns around the announcement day between cross-border and domestic acquisitions during the period 1993 and 2018. I found no difference in performance of cross-border acquisitions relative to domestic acquisitions, except a positive effect in the cumulative abnormal returns of ten and fifteen days around the announcement day for cross-border acquisitions. This implies that the stock price reflects a positive effect of cross-border acquisitions in these days around the announcement day, and that synergies are well accomplished since it is a positive effect. Especially, when controlling for industry, country, and year fixed effect, there is no cross-border effect in acquisitions within an industry, country, or year.

In addition, this study analyzes if it matters with a cross-border acquisitions in which region the target is located. The results show that it matters if the target is in Europe or not, because returns are lower with the target in Europe. This means that there might still be a big difference between European countries that complicates acquisition between these European countries. This effect however disappears when introducing industry, country, and year fixed effects, meaning that European targets do not differ from other target countries within an industry, county, or year.

Furthermore, the long-term returns do not differ for cross-border acquisition relative to domestic acquisitions. Also, it does not matter in which region the cross-border acquisition takes place.

At last, regarding financial performance, this paper reveals that the return on assets are not significantly different between cross-border and domestic acquisition. On the other hand, it does matter if the cross-border acquisition is in Western, and Eastern Europe as return on assets are higher for acquisitions with the target in West-, or East-Europe. Which

means that countries in Western, or Eastern Europe are better suited to effectively use the assets within the company.

Overall, the target country of an acquisition does not seem to matter for the wealth of shareholder's in the acquiring firm, implying that globalization and advanced technological development has simplified acquisition between different regions. Further, in future research it would be interesting to see the effect for the target shareholders instead of the acquirer's shareholders. The research in this paper is extended to as many aspects as possible, but there are some limitations that should be addressed, and follow for future research. The first limitation is the sample size of only 709 acquisitions. A larger sample is preferred because the coefficients are more reliable in that case, since a bigger sample size makes the improves the normal distribution of the dependent variable. Therefore, it would be interesting to include more acquisitions by acquiring firms in Europe, other than the ten countries considered in this paper. In addition, future research can focus on comparing these ten highest trading countries to the least trading countries to find out if these ten countries have a reason to trade more than other countries. The second limitation is that the control variables are as taken from previous research, while there could be other explanatory variables that lead to significant results. At last, this paper considers only publicly-listed acquiring firms as firm level data is only accessible for these kinds of firms. As such, the results cannot be applied in the case of private firms, which would be another interesting topic as public and private companies have different fundamentals.

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Appendix

Table 4: Univariate analysis of the cumulative abnormal returns, buy-and-hold abnormal returns, and return on assets

		EU10			Cross		
<i>Panel A: test of difference in announcement day CARs for cross border and domestic acquisitions based on EU10, and Cross</i>							
CAR(T ₁ ,T ₂)	Significant companies (%)	Ttest	Signtest	Signrank (Wilcoxon)	Ttest	Signtest	Signrank (Wilcoxon)
(-2,+2)	11.98 (0.7509)	-0.0012 (0.9693)	-0.0009 (0.8383)	-0.0009 (0.7866)	-0.0012 (0.2854)	-0.0009 (0.9452)	-0.0009 (0.9752)
(-1,+0)	26.75* (0.0996)	0.0023 (0.4758)	-0.0009 (0.8383)	-0.0009 (0.8427)	0.0023 (0.9097)	-0.0009 (0.2161)	-0.0009 (0.3649)
(-1,+1)	17.15** (0.0277)	0.0041 (0.8324)	0.0003 (0.8383)	0.0003 (0.2540)	0.0041 (0.9428)	0.0003 (0.2427)	0.0003 (0.6111)
(-2,+1)	13.56 (0.9054)	-0.0005 (0.6716)	-0.0008 (0.1174)	-0.0008 (0.6834)	-0.0005 (0.4082)	-0.0008 (0.9452)	-0.0008 (0.7824)
(-5,+1)	8.81 (0.5715)	-0.0043 (0.7610)	-0.0012 (0.3764)	-0.0012 (0.4750)	-0.0043 (0.3322)	-0.0012 (0.7312)	-0.0012 (0.4628)
(-5,+5)	8.23 (0.3840)	-0.0072 (0.8230)	-0.0011 (0.4543)	-0.0011 (0.2915)	-0.0072 (0.3262)	-0.0011 (0.7834)	-0.0011 (0.7236)
(-10,+5)	7.55 (0.3322)	-0.0120 (0.8527)	-0.0015* (0.0887)	-0.0015 (0.4871)	-0.0120 (0.3358)	-0.0015 (0.7834)	-0.0015 (0.7499)
(-10,+10)	7.39 (0.2410)	-0.0137 (0.9440)	-0.0030 (0.3764)	-0.0030 (0.6215)	-0.0137 (0.4149)	-0.0030 (0.3717)	-0.0030 (0.8426)
<i>Panel B: tests of difference in the BHARs for cross border and domestic acquisitions based on EU10, and Cross</i>							
BHAR (0, T)	Mean	Ttest	Signtest	Signrank (Wilcoxon)	Ttest	Signtest	Signrank (Wilcoxon)
(0,3)	0.0470** (0.0268)	0.0470 (0.6836)	-0.0586 (0.2267)	-0.0586 (0.2279)	0.0470 (0.6125)	-0.0586 (0.4080)	-0.0586 (0.1492)
(0, 5)	0.1133*** (0.0011)	0.1133 (0.8279)	-0.1054 (0.7730)	-0.1054 (0.5562)	0.1133 (0.8807)	-0.1054 (0.4356)	-0.1054 (0.4571)
<i>Panel C: tests of difference in the ROAs for cross border and domestic acquisitions based on EU10, and Cross</i>							
ROA (T ₁ , T ₂)	Mean	Ttest	Signtest	Signrank (Wilcoxon)	Ttest	Signtest	Signrank (Wilcoxon)
(-1, +1)	0.0615*** (0.0000)	-0.0615 (0.5833)	-0.0126 (0.5630)	-0.0126 (0.2902)	-0.0615 (0.3500)	-0.0126 (0.1571)	-0.0126 (0.3610)

(-2, +2)	0.0704*** (0.0000)	-0.0704 (0.9446)	-0.0208 (0.8634)	-0.0208* (0.0991)	-0.0704 (0.1922)	-0.0208 (0.1439)	-0.0208 (0.4192)
(-3, +3)	0.0822*** (0.0000)	-0.0822 (0.9452)	-0.0259 (0.7117)	-0.0259** (0.0396)	-0.0822 (0.9585)	-0.0259 (0.6628)	-0.0259 (0.2060)

Table of the univariate analysis of the CARs, BHARs, and ROAs. Panel A shows if there is a significant difference between the CAR of the event window (T_1, T_2) between the cross border and domestic acquisitions based on EU10, and Crossborder. The percentages of significant companies represent the amount of companies in the sample who have significant different returns during the corresponding event window, and the p-value between brackets denoting if the overall sample has significant different returns during the corresponding event window. Panel B illustrates the mean and its corresponding p-value for significant difference from zero, in the first column. The other columns show if there is a significant difference in BHAR of the event window (0, T), T in years, between cross border and domestic acquisitions based on EU10, and Crossborder. Panel C demonstrates the difference in means for the post-acquisition compared to the pre-acquisition ROA of the corresponding T years, in the first column. Further, the columns show if there is significant difference in ROA of the event window (T_1, T_2), T in years and excluding year 0, between cross border and domestic acquisitions based on EU10, and Crossborder. Definitions of EU10, and Crossborder are as described in table 1. Significance at the 10%, 5%, and 1% level is denoted with *, **, and *** (p-values in italics and between brackets).

Table 5: Correlation matrix

Correlation	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1 LogAssets	1														
2 LogMV	0.9135	1													
3 LogMTB	0.0073	0.3009	1												
4 ForeignSales	0.2511	0.3527	0.1809	1											
5 SharesAcq	-0.0524	0.0071	0.0877	0.0197	1										
6 RelSize	-0.2633	-0.3654	-0.2515	-0.1412	0.0648	1									
7 Hostile	0.0095	0.0135	0.0134	0.0111	-0.0651	0.0521	1								
8 Cash	0.1732	0.1984	0.015	0.1788	-0.0978	-0.177	-0.005	1							
9 SIC	0.0416	0.0658	0.0484	-0.0097	-0.0718	-0.0798	-0.0361	-0.0105	1						
10 EFI	-0.2939	-0.2327	0.128	-0.1612	0.1863	0.1021	0.0285	-0.138	0.0087	1					
11 CDI	0.347	0.3659	0.1045	0.3935	0.033	-0.1248	-0.0067	0.1775	0.0759	-0.3051	1				
12 CloselyHeld	0.3827	0.3076	-0.1168	0.1403	-0.208	-0.081	0.0219	0.1736	-0.0112	-0.7449	0.4122	1			
13 Cross	-0.3422	-0.408	-0.1759	-0.4432	-0.0699	0.1469	0.0442	-0.1914	-0.0933	0.1815	-0.7042	-0.2666	1		
14 English	-0.3669	-0.3194	0.0625	-0.2303	0.2036	0.1034	-0.0132	-0.1727	0.0508	0.6951	-0.4336	-0.8845	0.3059	1	
15 French	0.2432	0.204	-0.0318	0.1145	-0.1839	-0.0874	-0.0418	0.1299	-0.0011	-0.6184	0.2439	0.5805	-0.1057	-0.5931	1

The table displays the correlation coefficients of the independent and control variables in the regression model. The variables are as described in table 1.

Table 6: Cross-sectional regression analysis of cumulative abnormal returns

CAR	(-2,+2)	(-1,+0)	(-1,+1)	(-2,+1)	(-5,+1)	(-5,+5)	(-10,+5)	(-10,+10)
Model	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Cross	0.3241 (0.258)	0.2453 (0.125)	0.2135 (0.204)	0.3103 (0.124)	0.3247 (0.148)	0.4765* (0.069)	0.5149* (0.092)	0.4955 (0.129)
EU10	0.7903 (0.148)	0.5876 (0.225)	0.6953 (0.127)	0.4021 (0.351)	0.4545 (0.309)	0.3681 (0.374)	0.6897 (0.298)	0.6424 (0.379)
EU	-1.1004** (0.024)	-0.8407* (0.076)	-0.9086** (0.041)	-0.7999* (0.065)	-0.7572 (0.205)	-0.8822** (0.035)	-1.1394* (0.084)	-0.8611 (0.234)
West	-0.0548 (0.472)	0.0113 (0.678)	0.0051 (0.859)	-0.0067 (0.824)	-0.0006 (0.987)	-0.0184 (0.584)	-0.0393 (0.501)	-0.0377 (0.535)
East	-0.0295 (0.669)	-0.0143 (0.594)	-0.0424 (0.140)	-0.0180 (0.511)	-0.0339 (0.964)	-0.0395 (0.116)	-0.0263 (0.589)	-0.0470 (0.387)
Assets	0.0092 (0.423)	-0.0059 (0.153)	-0.0019 (0.669)	0.0009 (0.864)	-0.0045 (0.478)	-0.0016 (0.810)	-0.0023 (0.775)	0.0005 (0.961)
Cross*Assets	0.0763 (0.469)	-0.0008 (0.914)	-0.0057 (0.485)	-0.0112 (0.339)	-0.0091 (0.491)	-0.0154 (0.248)	-0.0064 (0.650)	-0.0094 (0.551)
EU10*Assets	0.0020 (0.940)	0.0101 (0.528)	0.0012 (0.932)	-0.0084 (0.535)	-0.0136 (0.396)	-0.0044 (0.778)	0.0036 (0.869)	0.0197 (0.406)
EU*Assets	-0.0364 (0.534)	-0.0008 (0.956)	0.0088 (0.484)	0.0156 (0.239)	0.0170 (0.270)	0.0169 (0.271)	0.0032 (0.876)	-0.0101 (0.625)
SIC	0.0578 (0.434)	0.0246 (0.521)	0.0296 (0.470)	0.0369 (0.427)	-0.0184 (0.721)	0.0188 (0.760)	0.0384 (0.566)	0.0259 (0.743)
SIC*Assets	-0.0091 (0.465)	-0.0028 (0.643)	-0.0035 (0.597)	-0.0041 (0.574)	0.0061 (0.465)	0.0005 (0.959)	-0.0038 (0.735)	-0.0019 (0.885)
Cross*SIC	0.4576 (0.440)	-0.0447 (0.464)	-0.0635 (0.381)	-0.0566 (0.503)	0.0041 (0.964)	-0.0294 (0.762)	-0.0244 (0.819)	-0.0538 (0.650)
Cross*SIC*Assets	-0.0634 (0.450)	0.0054 (0.567)	0.0076 (0.491)	0.0069 (0.598)	-0.0045 (0.749)	0.0007 (0.965)	0.0016 (0.923)	0.0058 (0.759)
CloselyHeld	-0.0393 (0.696)	0.0286 (0.544)	0.0097 (0.839)	0.0058 (0.935)	-0.0622 (0.494)	-0.0289 (0.752)	-0.0055 (0.958)	0.0191 (0.867)
Cross*CloselyHeld	-0.2228 (0.127)	-0.1061** (0.050)	-0.1100** (0.048)	-0.0712 (0.347)	-0.0427 (0.628)	-0.0958 (0.337)	-0.1918 (0.105)	-0.1669 (0.182)
EU10*CloselyHeld	-0.1331 (0.365)	-0.2090* (0.061)	-0.2477** (0.016)	-0.0978 (0.318)	-0.1337 (0.187)	-0.1542 (0.157)	-0.2426 (0.183)	-0.4021* (0.060)
EU*CloselyHeld	0.2869 (0.161)	0.2950*** (0.008)	0.3357*** (0.001)	0.1712* (0.080)	0.2109** (0.045)	0.2787** (0.012)	0.3604** (0.043)	0.4017* (0.054)

ForeignSales	-0.0342 (0.160)	-0.0111 (0.307)	-0.0114 (0.332)	-0.0112 (0.365)	-0.0174 (0.249)	-0.0277 (0.146)	-0.0238 (0.325)	-0.0465* (0.066)
Cross* ForeignSales	-0.1441 (0.306)	-0.0008 (0.960)	-0.0068 (0.731)	-0.0075 (0.746)	0.0035 (0.891)	0.0217 (0.470)	0.0179 (0.611)	0.0302 (0.438)
EU10* ForeignSales	-0.0006 (0.992)	0.1245 (0.141)	0.0789 (0.343)	0.0648 (0.408)	0.0568 (0.452)	0.0811 (0.197)	0.1396 (0.214)	0.1455 (0.205)
EU* ForeignSales	0.1518 (0.366)	-0.0920 (0.271)	-0.0549 (0.505)	-0.0865 (0.271)	-0.1060 (0.156)	-0.1505** (0.016)	-0.2270** (0.040)	-0.2354* (0.059)
RelSize	0.0034 (0.660)	-0.0003 (0.866)	0.0010 (0.604)	0.0013 (0.563)	0.0017 (0.440)	0.0011 (0.683)	-0.0009 (0.802)	-0.0017 (0.683)
Cross*RelSize	0.0242 (0.417)	-0.0050 (0.346)	-0.0046 (0.656)	-0.0097 (0.264)	-0.0165* (0.057)	-0.0204** (0.037)	-0.0084 (0.488)	-0.0083 (0.546)
EU10*RelSize	0.0774 (0.203)	0.0745 (0.428)	0.0598 (0.442)	0.0305 (0.702)	0.0750 (0.325)	0.0235 (0.691)	0.0354 (0.716)	0.0441 (0.667)
EU*RelSize	-0.0858 (0.194)	-0.0679 (0.468)	-0.0576 (0.457)	-0.0222 (0.780)	-0.0607 (0.426)	-0.0058 (0.923)	-0.0293 (0.764)	-0.0342 (0.739)
EFI	0.0106 (0.539)	0.0277** (0.026)	0.0237** (0.050)	0.0308** (0.029)	0.0357** (0.030)	0.0395* (0.055)	0.0457* (0.072)	0.0592* (0.026)
Cross*EFI	-0.0927 (0.302)	-0.0319* (0.059)	-0.0234 (0.187)	-0.0323 (0.132)	-0.0364 (0.124)	-0.0516* (0.065)	-0.0567* (0.084)	-0.0574* (0.098)
EU10*EFI	-0.0806 (0.165)	-0.0908 (0.133)	-0.0950 (0.102)	-0.0454 (0.401)	-0.0473 (0.371)	-0.0494 (0.307)	-0.0853 (0.300)	-0.0871 (0.339)
EU*EFI	0.1447* (0.053)	0.1098* (0.067)	0.1096* (0.056)	0.0852 (0.114)	0.0803 (0.132)	0.1010** (0.037)	0.1342 (0.103)	0.1200 (0.188)
SharesAcq	-0.0491 (0.367)	0.0070 (0.747)	-0.0040 (0.879)	-0.0397 (0.132)	-0.0365 (0.259)	-0.0349 (0.385)	-0.0468 (0.306)	-0.0239 (0.640)
Cross*SharesAcq	-0.0081 (0.921)	0.0590* (0.090)	0.0604 (0.166)	0.0676 (0.112)	0.0739 (0.148)	0.0907 (0.143)	0.0452 (0.530)	0.0734 (0.412)
EU10*SharesAcq	-0.1708* (0.070)	0.0071 (0.934)	0.0288 (0.738)	-0.0247 (0.763)	-0.0368 (0.663)	0.0395 (0.593)	-0.0542 (0.636)	-0.0701 (0.605)
EU*SharesAcq	0.1162 (0.323)	-0.0190 (0.830)	-0.0320 (0.720)	0.0464 (0.589)	0.0350 (0.698)	-0.0237 (0.779)	0.1140 (0.356)	0.0252 (0.861)
Hostile	-0.0398 (0.246)	0.0150 (0.287)	0.0191 (0.332)	0.0465** (0.028)	0.0754*** (0.001)	0.0585** (0.026)	0.0625** (0.040)	0.0698* (0.051)
Cross*Hostile	0.0520 (0.329)	-0.0157 (0.427)	-0.0179 (0.482)	-0.0507* (0.053)	-0.0773** (0.011)	-0.0479 (0.140)	-0.0551 (0.142)	-0.0875** (0.049)
MTB	0.0722 (0.393)	0.0059 (0.361)	0.0037 (0.613)	0.0036 (0.660)	-0.0088 (0.346)	-0.0134 (0.239)	-0.0274* (0.071)	-0.0198 (0.157)
Cash	0.0345**	-0.0023	0.0075	0.0177	0.0090	0.0083	-0.0026	-0.0032

	<i>(0.036)</i>	<i>(0.776)</i>	<i>(0.421)</i>	<i>(0.123)</i>	<i>(0.474)</i>	<i>(0.573)</i>	<i>(0.880)</i>	<i>(0.866)</i>
CDI	0.0231	0.0010	-0.0058	0.0034	0.0219	0.0148	0.0247	0.0378
	<i>(0.577)</i>	<i>(0.941)</i>	<i>(0.678)</i>	<i>(0.831)</i>	<i>(0.229)</i>	<i>(0.487)</i>	<i>(0.318)</i>	<i>(0.210)</i>
English	-0.0415	-0.0187*	-0.0267**	-0.0257**	-0.0409***	-0.0337**	-0.0387**	-0.0351*
	<i>(0.177)</i>	<i>(0.072)</i>	<i>(0.012)</i>	<i>(0.024)</i>	<i>(0.005)</i>	<i>(0.024)</i>	<i>(0.024)</i>	<i>(0.073)</i>
French	-0.0078	-0.0007	-0.0021	-0.0005	0.0003	0.0108	0.0125	0.0106
	<i>(0.552)</i>	<i>(0.909)</i>	<i>(0.750)</i>	<i>(0.948)</i>	<i>(0.972)</i>	<i>(0.307)</i>	<i>(0.306)</i>	<i>(0.435)</i>
Constant	-0.1031	-0.1927*	-0.1735	-0.2261*	-0.2067	-0.2657	-0.2903	-0.4341*
	<i>(0.489)</i>	<i>(0.074)</i>	<i>(0.111)</i>	<i>(0.060)</i>	<i>(0.137)</i>	<i>(0.134)</i>	<i>(0.163)</i>	<i>(0.059)</i>
N	709	709	709	709	709	709	709	709
R-squared	0.0493	0.0675	0.0593	0.0672	0.0890	0.0774	0.603	0.562

The cross-sectional regression results of the different CARS. In model (1), (2), (3), (4), (5), (6), (7), and (8), the dependent variable is 5 days, 2 days, 3 days, 7 days, 6 days, 11 days, 16 days, and 21 days CAR of the acquiring firms around the announcement date of the acquisition, respectively. The independent variables are as described in table 1. Significance at 10%, 5%, and 1% level is denoted with *, **, and *** (*p-values in italics and between brackets*).

Table 7: Cross-sectional regression analysis of cumulative abnormal returns with industry, year, and country fixed effects

	CAR	(-2,+2)	(-1,+0)	(-1,+1)	(-2,+1)	(-5,+1)	(-5,+5)	(-10,+5)	(-10,+10)
Model	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	
Cross	1.8799	0.0906	0.0972	0.3040	0.3103	0.4732	0.5421	0.4921	
	<i>(0.226)</i>	<i>(0.730)</i>	<i>(0.720)</i>	<i>(0.317)</i>	<i>(0.376)</i>	<i>(0.252)</i>	<i>(0.241)</i>	<i>(0.358)</i>	
EU10	0.8853	-0.2964	-0.0947	-0.2182	-0.0672	-0.3860	-0.4672	-0.7898	
	<i>(0.442)</i>	<i>(0.500)</i>	<i>(0.839)</i>	<i>(0.683)</i>	<i>(0.909)</i>	<i>(0.606)</i>	<i>(0.633)</i>	<i>(0.441)</i>	
EU	2.7527*	0.2085	0.0151	-0.1096	-0.0525	-0.1497	-0.1010	0.5803	
	<i>(0.099)</i>	<i>(0.662)</i>	<i>(0.975)</i>	<i>(0.843)</i>	<i>(0.932)</i>	<i>(0.843)</i>	<i>(0.918)</i>	<i>(0.571)</i>	
West	-0.1047	0.0016	-0.0271	-0.0423	-0.0410	-0.0735	-0.1018	-0.1094	
	<i>(0.445)</i>	<i>(0.963)</i>	<i>(0.445)</i>	<i>(0.321)</i>	<i>(0.427)</i>	<i>(0.185)</i>	<i>(0.136)</i>	<i>(0.120)</i>	
East	0.0047	-0.0071	-0.0442	-0.0341	-0.0530	-0.0650	-0.0534	-0.0636	
	<i>(0.966)</i>	<i>(0.830)</i>	<i>(0.164)</i>	<i>(0.375)</i>	<i>(0.219)</i>	<i>(0.151)</i>	<i>(0.332)</i>	<i>(0.285)</i>	
Assets	0.0575	0.0005	0.0043	0.0050	-0.0115	-0.0042	-0.0114	-0.0051	
	<i>(0.180)</i>	<i>(0.951)</i>	<i>(0.647)</i>	<i>(0.608)</i>	<i>(0.319)</i>	<i>(0.766)</i>	<i>(0.526)</i>	<i>(0.773)</i>	
Cross*Assets	0.1052	0.0022	-0.0044	-0.0066	-0.0012	-0.0121	0.0036	-0.0109	
	<i>(0.487)</i>	<i>(0.839)</i>	<i>(0.722)</i>	<i>(0.704)</i>	<i>(0.953)</i>	<i>(0.563)</i>	<i>(0.753)</i>	<i>(0.649)</i>	
EU10*Assets	-0.0377	0.0098	0.0001	-0.0026	0.0109	0.0083	0.0154	0.0318	
	<i>(0.551)</i>	<i>(0.638)</i>	<i>(0.997)</i>	<i>(0.911)</i>	<i>(0.394)</i>	<i>(0.806)</i>	<i>(0.695)</i>	<i>(0.443)</i>	
EU*Assets	0.0492	-0.0103	0.0014	0.0103	-0.0112	0.0164	0.0146	0.0104	
	<i>(0.419)</i>	<i>(0.547)</i>	<i>(0.941)</i>	<i>(0.643)</i>	<i>(0.724)</i>	<i>(0.601)</i>	<i>(0.677)</i>	<i>(0.750)</i>	
SIC	0.2137	0.0181	0.0614	0.0639	-0.0565	-0.0143	-0.0417	-0.0213	

	<i>(0.257)</i>	<i>(0.759)</i>	<i>(0.359)</i>	<i>(0.347)</i>	<i>(0.471)</i>	<i>(0.887)</i>	<i>(0.729)</i>	<i>(0.868)</i>
SIC*Assets	-0.0306	-0.0019	-0.0087	-0.0089	0.0109	0.0042	0.0045	0.0033
	<i>(0.292)</i>	<i>(0.836)</i>	<i>(0.418)</i>	<i>(0.422)</i>	<i>(0.394)</i>	<i>(0.795)</i>	<i>(0.816)</i>	<i>(0.876)</i>
Cross*SIC	0.6360	-0.0086	-0.1022	-0.0949	-0.0273	-0.0649	0.0238	-0.0330
	<i>(0.451)</i>	<i>(0.924)</i>	<i>(0.312)</i>	<i>(0.419)</i>	<i>(0.844)</i>	<i>(0.667)</i>	<i>(0.891)</i>	<i>(0.859)</i>
Cross*SIC*Assets	-0.0947	-0.0008	0.0134	0.0125	-0.0003	0.0068	-0.0023	0.0048
	<i>(0.457)</i>	<i>(0.953)</i>	<i>(0.385)</i>	<i>(0.498)</i>	<i>(0.989)</i>	<i>(0.774)</i>	<i>(0.932)</i>	<i>(0.869)</i>
CloselyHeld	-0.1494	0.0856	0.0053	0.1023	-0.1005	-0.0971	-0.0803	0.0051
	<i>(0.731)</i>	<i>(0.632)</i>	<i>(0.973)</i>	<i>(0.655)</i>	<i>(0.758)</i>	<i>(0.781)</i>	<i>(0.841)</i>	<i>(0.991)</i>
Cross*CloselyHeld	-0.6432	-0.0541	-0.0481	-0.0995	-0.0631	-0.1264	-0.2733	-0.1450
	<i>(0.271)</i>	<i>(0.550)</i>	<i>(0.581)</i>	<i>(0.361)</i>	<i>(0.621)</i>	<i>(0.401)</i>	<i>(0.137)</i>	<i>(0.457)</i>
EU10*CloselyHeld	0.0964	-0.0345	-0.1729	-0.0838	-0.2632	-0.2683	-0.3032	-0.4462
	<i>(0.745)</i>	<i>(0.770)</i>	<i>(0.160)</i>	<i>(0.568)</i>	<i>(0.131)</i>	<i>(0.182)</i>	<i>(0.218)</i>	<i>(0.111)</i>
EU*CloselyHeld	0.3388	0.0900	0.2017	0.1443	0.2159	0.2457	0.3041	0.2124
	<i>(0.385)</i>	<i>(0.491)</i>	<i>(0.104)</i>	<i>(0.353)</i>	<i>(0.267)</i>	<i>(0.286)</i>	<i>(0.275)</i>	<i>(0.489)</i>
ForeignSales	-0.1245	-0.0140	-0.0199	-0.0134	-0.0136	-0.0230	-0.0191	-0.0522
	<i>(0.203)</i>	<i>(0.473)</i>	<i>(0.382)</i>	<i>(0.557)</i>	<i>(0.626)</i>	<i>(0.502)</i>	<i>(0.648)</i>	<i>(0.240)</i>
Cross* ForeignSales	-0.1817	-0.0020	-0.0093	-0.0229	-0.0077	0.0068	0.0121	0.0495
	<i>(0.423)</i>	<i>(0.939)</i>	<i>(0.760)</i>	<i>(0.520)</i>	<i>(0.852)</i>	<i>(0.891)</i>	<i>(0.834)</i>	<i>(0.449)</i>
EU10* ForeignSales	-0.2346	0.0073	0.0074	-0.0212	-0.0038	0.0727	0.0930	0.1037
	<i>(0.389)</i>	<i>(0.916)</i>	<i>(0.929)</i>	<i>(0.800)</i>	<i>(0.970)</i>	<i>(0.484)</i>	<i>(0.461)</i>	<i>(0.454)</i>
EU* ForeignSales	0.3428	0.0432	0.0412	0.0237	-0.0303	-0.1082	-0.1131	-0.1076
	<i>(0.341)</i>	<i>(0.469)</i>	<i>(0.569)</i>	<i>(0.763)</i>	<i>(0.751)</i>	<i>(0.273)</i>	<i>(0.327)</i>	<i>(0.375)</i>
RelSize	0.0093	-0.0012	-0.0025	-0.0027	-0.0024	-0.0038	-0.0089	-0.0107
	<i>(0.532)</i>	<i>(0.727)</i>	<i>(0.503)</i>	<i>(0.564)</i>	<i>(0.574)</i>	<i>(0.496)</i>	<i>(0.174)</i>	<i>(0.170)</i>
Cross*RelSize	0.0547	0.0071	0.0006	0.0054	-0.0043	-0.0151	-0.0158	-0.0216
	<i>(0.377)</i>	<i>(0.510)</i>	<i>(0.961)</i>	<i>(0.689)</i>	<i>(0.812)</i>	<i>(0.451)</i>	<i>(0.527)</i>	<i>(0.491)</i>
EU10*RelSize	-0.0941	0.0450	-0.0224	-0.0552	-0.0106	-0.0546	-0.0905	-0.0738
	<i>(0.665)</i>	<i>(0.609)</i>	<i>(0.781)</i>	<i>(0.561)</i>	<i>(0.916)</i>	<i>(0.612)</i>	<i>(0.493)</i>	<i>(0.596)</i>
EU*RelSize	0.0700	-0.0445	0.0315	0.0572	0.0232	0.0846	0.1211	0.1111
	<i>(0.749)</i>	<i>(0.621)</i>	<i>(0.701)</i>	<i>(0.557)</i>	<i>(0.820)</i>	<i>(0.442)</i>	<i>(0.373)</i>	<i>(0.437)</i>
EFI	-0.0283	0.0218	-0.0001	0.0106	0.0006	-0.0163	0.0104	0.0321
	<i>(0.777)</i>	<i>(0.541)</i>	<i>(0.997)</i>	<i>(0.779)</i>	<i>(0.990)</i>	<i>(0.777)</i>	<i>(0.875)</i>	<i>(0.674)</i>
Cross*EFI	-0.2959	-0.0177	-0.0053	-0.0248	-0.0291	-0.0462	-0.0634	-0.0467
	<i>(0.307)</i>	<i>(0.543)</i>	<i>(0.857)</i>	<i>(0.473)</i>	<i>(0.466)</i>	<i>(0.334)</i>	<i>(0.234)</i>	<i>(0.441)</i>
EU10*EFI	-0.0471	0.0213	0.0033	0.0263	0.0208	0.0390	0.0600	0.0925
	<i>(0.706)</i>	<i>(0.636)</i>	<i>(0.946)</i>	<i>(0.628)</i>	<i>(0.720)</i>	<i>(0.607)</i>	<i>(0.557)</i>	<i>(0.382)</i>
EU*EFI	0.2381	-0.0123	-0.0017	-0.0043	-0.0082	0.0059	-0.0048	-0.0804
	<i>(0.139)</i>	<i>(0.811)</i>	<i>(0.975)</i>	<i>(0.942)</i>	<i>(0.898)</i>	<i>(0.943)</i>	<i>(0.965)</i>	<i>(0.487)</i>

SharesAcq	-0.1785 <i>(0.391)</i>	-0.0021 <i>(0.948)</i>	0.0009 <i>(0.982)</i>	-0.0366 <i>(0.324)</i>	0.0023 <i>(0.962)</i>	-0.0074 <i>(0.898)</i>	0.0222 <i>(0.754)</i>	0.0470 <i>(0.548)</i>
Cross*SharesAcq	0.0255 <i>(0.909)</i>	0.0737 <i>(0.175)</i>	0.0089 <i>(0.894)</i>	-0.0057 <i>(0.929)</i>	-0.0280 <i>(0.744)</i>	0.0210 <i>(0.839)</i>	-0.0089 <i>(0.949)</i>	-0.0415 <i>(0.787)</i>
EU10*SharesAcq	-0.1244 <i>(0.604)</i>	0.0637 <i>(0.382)</i>	0.1391 <i>(0.141)</i>	0.1106 <i>(0.254)</i>	0.0740 <i>(0.543)</i>	0.1107 <i>(0.371)</i>	0.0097 <i>(0.942)</i>	-0.0063 <i>(0.965)</i>
EU*SharesAcq	0.2997 <i>(0.209)</i>	-0.0976 <i>(0.228)</i>	-0.0903 <i>(0.370)</i>	0.0084 <i>(0.933)</i>	-0.0105 <i>(0.935)</i>	-0.0184 <i>(0.890)</i>	0.0261 <i>(0.875)</i>	-0.0099 <i>(0.955)</i>
Hostile	-0.0144 <i>(0.764)</i>	-0.0014 <i>(0.945)</i>	0.0113 <i>(0.672)</i>	0.0599** <i>(0.033)</i>	0.0722** <i>(0.046)</i>	0.0292 <i>(0.464)</i>	0.0357 <i>(0.466)</i>	0.0482 <i>(0.437)</i>
Cross*Hostile	0.1195 <i>(0.469)</i>	-0.0048 <i>(0.865)</i>	-0.0245 <i>(0.487)</i>	-0.0761** <i>(0.039)</i>	-0.1073** <i>(0.014)</i>	-0.0365 <i>(0.483)</i>	-0.0348 <i>(0.597)</i>	-0.0800 <i>(0.293)</i>
MTB	0.1083 <i>(0.440)</i>	-0.0057 <i>(0.588)</i>	-0.0014 <i>(0.897)</i>	0.0103 <i>(0.371)</i>	0.0065 <i>(0.646)</i>	0.0047 <i>(0.788)</i>	-0.0111 <i>(0.577)</i>	0.0019 <i>(0.938)</i>
Cash	0.0486 <i>(0.224)</i>	0.0013 <i>(0.910)</i>	0.0149 <i>(0.248)</i>	0.0241* <i>(0.075)</i>	0.0215 <i>(0.155)</i>	0.0167 <i>(0.357)</i>	0.0026 <i>(0.905)</i>	-0.0061 <i>(0.811)</i>
CDI	-0.0010 <i>(0.988)</i>	0.0114 <i>(0.591)</i>	0.0035 <i>(0.866)</i>	0.0041 <i>(0.871)</i>	0.0255 <i>(0.366)</i>	0.0225 <i>(0.516)</i>	0.0315 <i>(0.436)</i>	0.0532 <i>(0.276)</i>
Constant	0.0080 <i>(0.993)</i>	-0.1381 <i>(0.661)</i>	-0.0013 <i>(0.997)</i>	-0.0896 <i>(0.804)</i>	0.1926 <i>(0.665)</i>	0.2713 <i>(0.613)</i>	0.1113 <i>(0.854)</i>	-0.1870 <i>(0.796)</i>
N	709	709	709	709	709	709	709	709
R-squared	0.2507	0.4963	0.4901	0.4899	0.4811	0.4597	0.4629	0.4378

The cross-sectional regression results of the different CARS. In model (1), (2), (3), (4), (5), (6), (7), and (8), the dependent variable is 5 days, 2 days, 3 days, 7 days, 6 days, 11 days, 16 days, and 21 days CAR of the acquiring firms around the announcement date of the acquisition, respectively. The independent variables are as described in table 1. In the regression, there is accounted for industry, year, and country fixed effects. Significance at 10%, 5%, and 1% level is denoted with *, **, and *** (p-values in italics and between brackets).

Table 8: Cross-sectional regression analysis of buy-and-hold abnormal returns and return on assets with industry, year, and country fixed effects

	BHAR3	BHAR5	ROA1	ROA2	ROA3
Model	(9)	(10)	(11)	(12)	(13)
Cross	1.1792 <i>(0.778)</i>	2.4609 <i>(0.678)</i>	0.8108 <i>(0.463)</i>	0.9085 <i>(0.432)</i>	1.1022 <i>(0.423)</i>
EU10	1.0716 <i>(0.866)</i>	10.6575 <i>(0.322)</i>	1.1392 <i>(0.601)</i>	0.4618 <i>(0.867)</i>	-3.2580 <i>(0.280)</i>
EU	-1.4564 <i>(0.817)</i>	-7.0570 <i>(0.489)</i>	-1.1241 <i>(0.518)</i>	-2.0880 <i>(0.372)</i>	-0.8444 <i>(0.722)</i>
West	-0.0160	-1.6937	0.3287*	0.3480*	0.4352**

	(0.975)	(0.151)	(0.069)	(0.086)	(0.034)
East	-0.3567	-1.4967	0.3063*	0.4261**	0.5226***
	(0.437)	(0.158)	(0.088)	(0.023)	(0.007)
Assets	-0.1505	-0.1772	0.0009	-0.0175	-0.0399
	(0.375)	(0.503)	(0.985)	(0.343)	(0.487)
Cross*Assets	0.0009	-0.0424	0.0370	0.0349	0.0510
	(0.996)	(0.900)	(0.443)	(0.551)	(0.416)
EU10*Assets	-0.5757**	-0.2498	0.0251	-0.0083	0.1533
	(0.034)	(0.620)	(0.781)	(0.945)	(0.193)
EU*Assets	0.3602	0.2287	-0.0069	0.0187	-0.1257
	(0.133)	(0.647)	(0.915)	(0.845)	(0.126)
SIC	-0.2114	0.8404	-0.1456	-0.3664	-0.5929
	(0.862)	(0.710)	(0.708)	(0.369)	(0.154)
SIC*Assets	0.0672	-0.0509	0.0431	0.0765	0.1098*
	(0.716)	(0.878)	(0.472)	(0.222)	(0.084)
Cross*SIC	-0.7142	-2.3030	0.1606	0.0859	0.3883
	(0.636)	(0.417)	(0.741)	(0.872)	(0.508)
Cross*SIC*Assets	0.0441	0.2498	-0.0372	-0.0222	-0.0631
	(0.844)	(0.555)	(0.611)	(0.780)	(0.469)
CloselyHeld	-0.0495	0.4054	0.9783*	1.1759*	0.8656
	(0.987)	(0.922)	(0.097)	(0.051)	(0.350)
Cross*CloselyHeld	-0.0289	0.0182	-0.2865	-0.2367	-0.3014
	(0.980)	(0.992)	(0.511)	(0.594)	(0.571)
EU10*CloselyHeld	1.1561	-0.6643	-0.9662*	-0.5090	0.2066
	(0.504)	(0.820)	(0.066)	(0.445)	(0.803)
EU*CloselyHeld	0.4373	0.7985	0.1149	0.0921	-0.1947
	(0.810)	(0.801)	(0.811)	(0.875)	(0.764)
ForeignSales	-0.4070	-0.6974	-0.0472	-0.0156	0.0900
	(0.374)	(0.266)	(0.703)	(0.897)	(0.471)
Cross* ForeignSales	0.2285	0.5036	0.1741	0.2500*	0.1049
	(0.629)	(0.479)	(0.220)	(0.096)	(0.558)
EU10* ForeignSales	-0.5300	-0.2237	-0.5032**	-0.4415	-0.3378
	(0.516)	(0.879)	(0.047)	(0.130)	(0.320)
EU* ForeignSales	0.8320	0.6617	0.2598	0.1895	0.0980
	(0.251)	(0.579)	(0.261)	(0.466)	(0.731)
RelSize	-0.0421	0.0759	-0.0352	0.0510	-0.0133
	(0.649)	(0.730)	(0.310)	(0.937)	(0.845)
Cross*RelSize	0.0571	-0.2589	-0.1509***	-0.1315*	-0.0934

	(0.803)	(0.516)	(0.008)	(0.060)	(0.278)
EU10*RelSize	-1.1395 (0.308)	0.9200 (0.604)	0.3886 (0.202)	0.3628 (0.352)	0.8366* (0.095)
EU*RelSize	1.1342 (0.355)	-0.6624 (0.729)	-0.2046 (0.511)	-0.2095 (0.598)	-0.6864 (0.171)
EFI	-0.1339 (0.817)	-0.1968 (0.853)	0.2426 (0.125)	0.2372 (0.143)	0.1715 (0.347)
Cross*EFI	0.0053 (0.991)	-0.2240 (0.752)	-0.1221 (0.323)	-0.1374 (0.281)	-0.1560 (0.312)
EU10*EFI	0.1177 (0.867)	-1.2731 (0.274)	-0.1543 (0.480)	-0.0838 (0.757)	0.2175 (0.477)
EU*EFI	-0.0776 (0.915)	0.8447 (0.476)	0.0950 (0.625)	0.2161 (0.392)	0.1743 (0.530)
SharesAcq	0.4103 (0.465)	-0.5976 (0.532)	-0.0513 (0.776)	-0.0128 (0.937)	0.0646 (0.763)
Cross*SharesAcq	-1.2273 (0.171)	-0.1393 (0.915)	0.0397 (0.893)	-0.0670 (0.812)	-0.1495 (0.664)
EU10*SharesAcq	2.6139** (0.037)	1.8001 (0.402)	0.4274 (0.230)	0.6992 (0.137)	0.5014 (0.297)
EU*SharesAcq	-1.4415 (0.255)	-0.3236 (0.868)	-0.0385 (0.908)	-0.2404 (0.588)	0.0775 (0.858)
Hostile	0.5064 (0.103)	0.5595 (0.350)	-0.2195 (0.212)	-0.1713 (0.109)	-0.1792 (0.251)
Cross*Hostile	-0.3953 (0.388)	-0.3138 (0.674)	0.2175 (0.287)	0.1548 (0.343)	0.1393 (0.516)
MTB	0.0740 (0.826)	0.2366 (0.812)	-0.2129** (0.032)	-0.1750** (0.046)	-0.2079** (0.036)
Cash	-0.3512 (0.281)	-0.9355* (0.064)	-0.0050 (0.952)	-0.0118 (0.891)	-0.0387 (0.710)
CDI	0.2572 (0.467)	0.4258 (0.398)	-0.1209 (0.257)	-0.0101 (0.928)	-0.0134 (0.919)
Constant	2.1242 (0.692)	4.7992 (0.622)	-2.0579 (0.183)	-1.9983 (0.211)	-1.3070 (0.445)
N	599	535	669	615	572
R-squared	0.4524	0.4705	0.5860	0.5943	0.5750

The cross-sectional regression results of the different BHARS and ROA. In model (9) and (10) the dependent variable is the 3- and 5-year BHAR, respectively. Model (11), (12), and (13) have the difference of the 1, 2, and 3 year pre- and post-acquisition ROA as the dependent variable, respectively. The independent variables are as described in table 1. In the regression, there is accounted for industry, year, and country fixed effects. Significance at 10%, 5%, and 1% level is denoted with *, **, and *** (p-values in italics and between brackets).