

## Short term announcement returns to the bidder\*\*

Kenneth Högholm<sup>a,\*</sup>, Johan Knif<sup>a</sup>

<sup>a</sup> HANKEN School of Economics, PO Box 287, FIN-65101 Vaasa, FINLAND

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### ABSTRACT

In this paper we investigate the short term abnormal return to the bidding firm's shareholders in takeover transactions in Finland during the time period from January 2000 to December 2013. Specific features of the market for corporate acquisitions in Finland are that almost all of the transactions are friendly acquisitions and usually aim for 100 % of the target company. We estimate the abnormal return around 314 individual takeover announcements and investigate determinants of the abnormal returns. Our results show that the takeover announcement on average yields a positive abnormal return to the bidding firm's shareholders, thus, support the value creating hypothesis. The announcement effect on the announcement day is 1.4 % and statistically significant. Both pre-event and post-event abnormal returns are statistically insignificant, although there is sign of a negative revaluation in the post-event period. Among the takeover characteristics, we document a significant impact on the bidder's abnormal return on the announcement day for small deals yielding a higher abnormal return, but a positive relationship between the announcement effect and the relative size of the deal, cross-border deals giving a smaller abnormal return, and indication of diversification deals giving a higher abnormal return to the bidder's shareholders.

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### ARTICLE INFO

*Keywords:*

Event study, market model, takeover, target size, value creation

*\*Corresponding author:*

[kenneth.hogholm@hanken.fi](mailto:kenneth.hogholm@hanken.fi)  
(Kenneth Högholm)

*Article history:*

Received 22 03 2016

Revised 25 04 2016

Accepted 27 7 2016

\*\*Previously Published in EJEM, 2016, Volume 3 number 2

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## 1. INTRODUCTION

Corporate acquisition is a fast way for a company to grow compared to organic growth. Most bidding companies motivate this way to grow by the potential synergies that the acquisition creates, hence, one should expect the acquisition not only to create growth but also to create value for the acquiring firm's shareholders. However, empirical evidence from the takeover market report that bidding firm's shareholders mostly earn small and insignificant returns, while target firm's shareholders earn large and significant returns in takeover transactions.<sup>1</sup> The returns are heavily skewed in favor of the target firm also after adjusting for differences in firm size. Bradley, Desai and Kim (1988) reported a 90/10 split of the

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<sup>1</sup> For an overview of the wealth effects of takeover transactions, see, e.g., Jensen and Ruback (1983), Jarrell, Brickley and Netter (1988), Agrawal and Jaffe (2000), Bruner (2004), and Martynova and Renneboog (2008).

value-weighted takeover gain in their US sample, while Högfeltdt and Högholm (2000) observed a similar distribution in a sample of Swedish takeovers.

Several hypotheses have emerged trying to explain these empirical findings. Some suggest that takeovers do create value, but that the target firm's shareholders for some reason obtain a larger share of the gain. Grossman and Hart's (1980) free riding problem is one explanation. In the extreme case the free riding hypothesis suggests that target shareholders capture the entire gain. Alternatively, e.g., competition among bidders (Fishman (1980)), takeover defense measures (Harris (1990)), or target ownership structure (Högfeltdt and Högholm (2000)) may also explain the skewed distribution in favor of the target firm's shareholders.

Another line of thought suggests that takeovers do not create any additional value, but is more of a redistribution of wealth from shareholders in the bidding firm to shareholders in the target firm. Hence, takeovers occur because of management incentives or mistakes, i.e., takeovers occur because management of bidding firms wishes to grow (e.g., Morck, Shleifer and Vishny (1990)), or they overestimate the value of the target firm (e.g., Roll (1986)). Alternatively, the management of the bidding firm takes advantage of a temporary misvaluation of the firm, hence, taking advantage of a window of opportunity to make an acquisition (e.g., Jensen (2004)).

The purpose of this study is to investigate the short-term abnormal return to the bidding firm's shareholders in takeover transactions made by Finnish stock market listed companies during the time period from January 2000 to December 2013. To our knowledge there are very few studies looking at the Finnish takeover market, and none looking at the market during the last 15 years. Specific features of the market for corporate acquisitions in Finland are that almost all of the transactions are friendly acquisitions and usually aim for 100 % of the target company. We estimate the abnormal return around 314 individual takeover announcements and investigate determinants of the abnormal returns. Our results show that the takeover announcement on average yields a positive abnormal return to the bidding firm's shareholders, thus, support the value creating hypothesis. The announcement effect on the announcement day is 1.4 % and statistically significant. Both pre-event and post-event abnormal returns are statistically insignificant, although there is sign of a negative revaluation in the post-event period. Among the takeover characteristics, we document a significant impact on the bidder's abnormal return on the announcement day for *small deals* yielding a higher abnormal return, but a positive relationship between the announcement effect and the relative size

of the deal, *cross-border deals* giving a smaller abnormal return, and an indication of *diversification deals* giving a higher abnormal return to the bidder's shareholders.

The remainder of the paper is organized as follows. Section 2 summarizes the literature review on the motivations for takeovers and the determinants of the share price reaction to the takeover announcement. Section 3 describes the methodology and the data, while the empirical results are presented in Section 4. Section 5 concludes the study.

## 2. MOTIVES FOR TAKEOVERS

Three major takeover motives have been advanced in the literature implying gains for both the bidder and the target, or negative return to the bidder. These are the synergy motive, the agency motive and the hubris hypothesis.

The *synergy motive* assumes that managers maximize shareholders' wealth and would engage in takeover activities only if it results in gains to the shareholders. Among the synergy motives, the first set of motives is consistent with the assumption that additional value is created by takeovers. The second set of motives cast doubt on whether any additional value is created by takeovers, or if the resulting gains to shareholders' is at the expense of other stakeholders (e.g., employees, customers, suppliers, tax payers).

According to the inefficient management motive, more efficient firms will acquire less efficient firms and realize gains by improving their efficiency; this implies excess managerial capabilities in the acquiring firm (e.g., Bradley, Desai and Kim (1988)). The operating synergy motive postulates, e.g., economics of scale and that takeovers help achieve levels of activities at which they can be obtained (e.g., Williamson (1975)). The financial synergy motive hypothesizes complementarities between merging firms, not in managerial capabilities, but in the availability of investment opportunities and internal cash flows. A merged firm will have lower cost of capital due to lower cost of internal funds as well as possible risk reduction, savings in flotation costs, and improvements in capital allocation (e.g., Levy and Sarnat (1970), Galai and Masulis (1976), Prescott and Visscher (1980)).

The theory of strategic alignment to changing environments motivates takeovers to take place as a response to environmental changes. External acquisitions of needed capabilities allow firms to adapt more quickly to changes, than by developing capabilities internally (e.g., Summer (1980)). The undervaluation theory states that takeovers occur when the market value of the target firm for some reason does not reflect its true or potential value, or its value in the hands of an alternative management. Firms can acquire assets for

expansion more cheaply by buying the stock of existing firms than by buying or building the assets, when the target's stock price is below the replacement cost of its assets (e.g., Chappell and Cheng (1984)). In line with the undervaluation hypothesis, the information or signaling theory attempts to explain why target shares seem to be permanently revalued upward in a takeover whether or not it is successful. The information hypothesis states that the takeover sends a signal to the market that the target shares are undervalued, or alternatively, the offer signals information to target management which inspires them to implement a more efficient strategy on their own (e.g., Dodd and Ruback (1977), Bradley, Desai and Kim (1988)).

All of the above presented motives suggest that additional value is created in takeovers. The remaining three motives argue that the gains accruing to target and bidder shareholders are merely wealth redistribution from other stakeholders in the respective firms. The market power hypothesis states that shareholder's wealth increases at the expense of customers (or suppliers), due to increased concentration leading to collusion and monopoly effects (e.g., Eckbo (1992)). Redistribution of wealth is also the case if takeovers are motivated by tax considerations. In this case, shareholders gain at the expense of tax payers (e.g., Auerbach and Reishaus (1987)). Finally, according to the redistribution hypothesis, shareholders' gain can also accrue from bondholders due to unexpectedly increased leverage (e.g., Dennis and McConnell (1986)), or from employees, who are deprived of their benefits (e.g., Shleifer and Summers (1988)).

According to the synergy motives, there should always be a positive gain in takeovers for all shareholders, stemming from efficiency improvements or from other stakeholders. Therefore, it follows that the measured gain to both target and bidder shareholders is expected to be positive. The division of the gain between target firm and acquiring firm shareholders may, though, not be equally distributed, but may be skewed in favor of the target due to a number of reasons. Grossman and Hart (1980) argue that due to potential free riding by the target firm's atomistic shareholders, the smallest tender offer price the shareholders will accept is the full improvement value after a successful takeover by the bidder. Hence, the extreme case of the free riding problem suggests that the target captures the entire gain, and consequently, there is no incentive to make takeover bids at all. Fishman (1988), among others, offers bidder competition as one reason for a larger target share of the takeover gain. On the other hand, Harris (1990) argues that takeover defense measures, taken by the target firm's management, force the bidder to pay out a large share of the gain to target shareholders. Another reason for a larger target share of the gain is an upward-sloping supply curve as a result of heterogeneity in beliefs and differences in tax status, as suggested by, e.g., Stulz, Walking and Song (1990). Finally, one line of thought suggests that if the target has some bargaining power, mainly

because it can resist the bidder, target shareholders may be able to extract a larger fraction of the takeover gain in an explicit or implicit negotiation with the bidder (e.g., Israel (1992), Högfeldt and Högholm (2000)).

According to the *agency theory* (Jensen and Meckling (1976), Jensen (1986)) it has been suggested that some takeovers are primarily motivated by the self-interest of the acquirer management. Several reasons have been advanced to explain this divergence. Among them are diversification of management's personal portfolio (Amihud and Lev (1981), use of free cash flow to increase the size of the firm (Jensen (1986)), and acquiring assets that increase the firm's dependence on the management ((Shleifer and Vishny (1989)). The basic idea in most of these explanations is that acquisitions result in an extraction of value from the acquirer shareholders by acquirer management.

The important aspect of the above argument is that the target firm has been identified by the acquirer management as one that is most suited to increase its own welfare. Therefore, target shareholders, realizing their value to the acquirer management, will attempt to obtain some of this value. To the extent that target shareholders have some bargaining power, they will succeed in doing so, and the value they obtain will increase with the amount that the acquirer management can appropriate. Therefore, the more severe the agency problem, the higher is the target's gain. Since greater appropriation by acquirer management also results in lower (or a negative) total gain, the observed gain to acquirer shareholder's should be small (compared to target shareholder's gain) or negative.

Roll (1986) hypothesizes that managers commit errors of over optimism in evaluating takeover opportunities due to excessive *pride or hubris*. Hence, the takeover premium is a random error, a mistake by the bidder. The hubris hypothesis assumes market efficiency. Stock prices reflect all information; redeployment of productive resources cannot bring gains, and management cannot be improved through reshuffling or combinations across firms. Roll (1986) claims that the hubris hypothesis thus serves as a benchmark for comparison and is the null hypothesis against which other hypotheses should be compared. Further, the hypothesis does not require conscious pursuit of self-interest by managers. Managers may have good intentions, but can make mistakes in judgment.

Since the takeover gain, according to the hubris hypothesis, is presumed to be close to zero, the payment to target shareholders represents a transfer between the target and the acquirer. It follows that the higher the

target gain, the lower the bidder gain, and that the total gain is close to zero (e.g., Berkovitch and Narayanan (1993), Malmendier and Tate (2005)).

## 2.1. The effect of deal characteristics on bidder gains

All of the above presented motives suggest that target shareholders experience a gain in takeovers. On the basis of the presented motives, however, the effect for the acquirer firm's shareholders is not clear. This is also evident in the presented empirical results across different stock markets, where some find positive, some negative and some insignificant bidder returns. The takeover literature has also shown that the characteristics of the deal will affect takeover returns, and, hence, the gain to the shareholders.<sup>2</sup>

The *size of the target* company may affect the bidder's gain. The larger the target company, the larger a potential synergy gain to be split among the parties. However, the larger the target company, the better its negotiation power, and the more difficult the post-integration process. The empirical evidence regarding the relationship is mixed. Kane (2000) and Moeller, Schlingemann and Stulz (2004) argue that large transactions result in value creation for the shareholders. On the other hand, Bradley and Sundaram (2004) show that the announcement effect is more negative with increased target size. As argued by Hansen (1987), a possible revaluation loss will be larger for the bidder the larger the target company. Al-Sharkas (2003) and Travlos (1987) show a negative correlation between bidder abnormal return and relative size. Likewise, Tang (2015) show that acquisitions of small targets generate a larger gain than a combination of similar sized firms. On the other hand, e.g., Asquith, Bruner and Mullins (1983), show that the bidder's gain increases with the relative size of the target company to the bidder. In this paper we measure the size of the target with the value of the transaction. The relative size is defined as the transaction value to the book value of the bidder prior to the announcement (according to the last quarterly report preceding the announcement).

*Cross-border takeovers* may open up an opportunity for the bidder to exploit market imperfections and to expand their business into new, international markets (e.g., Moeller and Schlingemann (2005)). Since these effects are unavailable in domestic takeovers, one may expect a higher wealth effect in cross-border deals. Martynova and Renneboog (2008b) argue that takeover gains may be caused by improvements in

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<sup>2</sup> For an overview of the empirical evidence, see, e.g., Jensen and Ruback (1983), Agrawal and Jaffe (2000), Bruner (2004), Martynova and Renneboog (2008a).

governance of the bidder and the target firm. However, if there are large institutional differences in the bidder's and the target's countries, there may also be difficulties in the post-takeover process to utilize the perceived synergies. If the market anticipates such difficulties it may discount the expected gain. Conn, Cosh, Geust and Hughes (2005) and Moeller and Schlingemann (2005) present evidence consistent with this hypothesis. Mixed results are documented with respect to cross-border acquisitions. However, we expect to find a more positive announcement effect to a cross-border deal. Moeller and Schlingemann (2005) also find a larger positive bidder return if the target is originated in a country with a legal environment offering good shareholder protection. Hence, we also expect a larger positive bidder return for transactions where the target firm is from the US or the UK.

*Conglomerate takeovers (diversification)* may create operational and financial synergies, which may lower the financial risk, and, hence, the probability that the company goes bankrupt. This may also lower the cost of debt for the company (Agrawal, Jaffe and Mandelker (1992)). Diversification is also associated with a number of disadvantages stemming from the agency problem between managers and shareholders (e.g., Doukas, Holmen and Travos (2002), Schafstein and Stein (2000)), which may lead to lower takeover returns to bidders engaging in conglomerate takeovers. Mixed results have been documented for the value creation to the bidder's shareholders in conglomerate acquisitions. We expect, however, a more positive announcement response to a focused takeover compared to an announcement of a conglomerate takeover.

The *legal status* of the target company may also affect the takeover gain. A takeover involving a privately held target company may result in a higher return to the bidder's shareholders than a corresponding transaction involving a publicly traded target company (e.g., Moeller, Schlingemann and Stulz (2004), Faccio, McConnell and Stolin (2006)). One reason can be a required illiquidity premium, another that the bidder may have a better negotiation power buying a private company compared to launching a public tender offer. The probability of the bid to succeed is also higher in a private transaction. However, buying a private firm can also be considered being more risky, since there is less information available about the target firm. We expect a more positive announcement effect in a takeover transaction involving a privately held target company.

Martynova and Renneboog (2009) suggest that the *method of payment* may affect the short term market reaction to a takeover announcement. All cash bids are expected to generate a higher return to the shareholders than all-equity bids. The explanation is that asymmetric information implies that the bidder uses shares as a mean of payment when the share is overvalued, and uses cash when it is undervalued

(Myers and Majluf (1984)). Several studies have confirmed that the market reaction to announcements of equity offerings is significantly negative (e.g., Moeller, Schlingemann and Stulz (2004), Moeller and Schlingemann (2005), Martynova and Renneboog (2011)). In line with previous studies we expect a more positive announcement effect when the bid is an all-cash offering.

*Partial acquisitions* (acquisition of less than 100 percent of the target equity) may lead to a higher announcement day return to the bidder than acquisitions aiming for full control. The bidder may use partial acquisitions as an instrument to transfer wealth from the target's minority shareholders to themselves by, e.g., using pyramid control chains (La Porta, Lopez-de-Silanes, Shleifer and Vishny (2002)). This value extraction is expected to occur more frequently in countries where the minority shareholders are less protected.<sup>3</sup>

### 3. METHODOLOGY AND DATA

We study the short-term announcement effect to the bidder's shareholders and investigate several factors that may affect the stock market reaction to the takeover announcement. We measure the announcement effect as the sum of the daily average abnormal returns<sup>4</sup> (CAAR) over different windows around the announcement day<sup>5</sup>, with a total event window of 41 days, 20 days prior to and 20 days after the event day. We also study alternative event windows before and after the announcement day to capture any effect of a price run-up before the event, or a possible value readjustment after the announcement day. The daily abnormal return (AR) is calculated as the difference between the actual return and the expected return. The expected return is calculated using the market adjusted model, the market model, and the market model with adjusted beta (the estimated beta adjusted for mean reversion (Blume (1979))). We use the value-

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<sup>3</sup> Other proposed takeover characteristics that may affect the short-term value creation to the bidder are, e.g., *value vs. growth* (Lakonishok, Shleifer and Vishny (1994), Sudarsanam and Mahate (2003)); *friendly vs. hostile* (Goergen and Renneboog (2004)); *tender offers vs. mergers* (Rau and Vermaelen (1998)); *target ownership structure* (Högfeldt and Högholm (2000), Martynova and Renneboog (2008a)); *bidder toehold* (Stulz, Walking and Song (1990), Hamza (2011)); *investor protection* (La Porta, Lopez-de-Silanes, Shleifer and Vishny (2002), Goergen, Martynova and Renneboog (2005), Martynova and Renneboog (2008b)); *partial acquisitions* (La Porta, Lopez-de-Silanes, Shleifer and Vishny (2002)); *takeover waves* (Martynova and Renneboog (2011)).

<sup>4</sup> The returns are continuously compounded returns.

<sup>5</sup> The event day (announcement day) is defined as the day when the information of the takeover was announced for the first time (or the day after if the announcement occurred after the closing of the trading day or on a non-trading day).

weighted OMX Helsinki cap<sup>6</sup> as a proxy for the market portfolio. To estimate the parameters in the market model we use a window of 241 days, starting 300 days and ending 60 days prior to the event day. Our estimates of the abnormal returns are robust with respect to the different choices of the estimation model of the expected returns. Changing the estimation model does not materially change the results, hence, in the remainder of the paper we only report the results using the market model in estimating the expected returns.

To further study the market reaction to the takeover announcement, we regress the bidder's short term abnormal return on several explanatory factors with respect to the characteristics of the acquisition. The key characteristics we use are the size and the relative size of the transaction, the origin of the target company, the legal status of the target company, the strategic scope of the transaction (focus or diversification), and the mean of payments.

We study a sample of takeovers made by Finnish stock market listed companies during the time period from January 2000 to December 2013. The information about the acquisition is collected from the Thomson ONE Banker Database and corresponding stock exchange releases. There are a total of 1703 acquisitions during the time period where the bidder is publicly traded. We further restrict the sample to acquisitions where the bidder acquire a majority stake in the target (more than 50% ownership), leaving us with 1108 observations. We also eliminate transactions that may be considered too small to yield an observable stock market reaction to the announcement. We set the transaction value limit to 10 million USD, leaving us with a final sample of 314 transactions.

We collect information about the characteristics of the acquisition from the Thomson ONE Banker database, from stock exchange releases and from companies' homepages. In several acquisitions, when the target firm is privately held, there is a lack of reliable information mostly regarding the term of payments. Some bidders disclose all the details about the bid, but since this is not mandatory for small transactions of privately held targets, there are bidders that do not disclose all details regarding the characteristics of the bid.

Table 1 presents the total sample of 314 takeovers by deal characteristics over the time period January, 2000 – December 2013. The takeover activity was largest in year 2000 (49 transactions) and in the years

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<sup>6</sup> We use the restricted version of the market index (OMXHelsinki cap) which restricts the weight of any individual company to a maximum of ten percent in the index. This is due to the large weight of some companies in the unrestricted market index, e.g., the weight of Nokia was about 60 percent in the index in year 2000.

preceding the financial crises (2005-2007). The mean transaction value is 237 million USD (median 50 million USD). Diversification was the dominant takeover strategy for the bidders in our sample. About 63

**Table 1** Descriptive statistics of takeovers in Finland.

The table provides information about the characteristics of 314 takeovers with a Finnish acquirer that took place during the time period Jan 2000-Dec 2013. The table provides information about the distribution of takeovers over the sample period, and the distribution of the takeovers partitioned over different characteristics of the acquisition. *Value* is the value of the bid in million USD, *diversification* is when the target operates in a different industry than the bidder according to their industry classification (SIC-code), *public target* is a target company that is publicly traded, *cross-border bid* is a bid where the target company is of foreign origin, deals classified on the *terms of payment* (cash, equity, mixed bids and deals with undisclosed terms), and finally, if the bidder *acquire 100%* of the target or a smaller amount.

Year	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	Total
<i>Total number</i>	49	19	24	14	15	33	36	31	26	13	15	13	16	10	314
% of all	15.61 %	6.05 %	7.64 %	4.46 %	4.78 %	10.51 %	11.46 %	9.87 %	8.28 %	4.14 %	4.78 %	4.14 %	5.10 %	3.18 %	100 %
<i>Value – avg.</i>	317	467	163	63	165	208	122	367	247	260	113	139	262	278	237
<i>Value – max.</i>	4940	3309	1135	186	1735	1482	1191	7954	3188	2404	1128	590	3735	2221	7954
<i>Value – min.</i>	10	10	13	12	11	10	11	10	12	11	13	12	11	13	10
<i>Diversification</i>	29	7	14	8	12	17	28	25	18	7	9	7	12	5	198
% of all	59.18 %	36.84 %	58.33 %	57.14 %	80.00 %	51.52 %	77.78 %	80.65 %	69.23 %	53.85 %	60.00 %	53.85 %	75.00 %	50.00 %	63.06 %
<i>Non-diversification</i>	20	12	10	6	3	16	8	6	8	6	6	6	4	5	116
% of all	40.82 %	63.16 %	41.67 %	42.86 %	20.00 %	48.48 %	22.22 %	19.35 %	30.77 %	46.15 %	40.00 %	46.15 %	25.00 %	50.00 %	36.94 %
<i>Public target</i>	11	4	6	2	1	5	6	7	4	4	0	1	0	0	51
% of all	22.45 %	21.05 %	25.00 %	14.29 %	6.67 %	15.15 %	16.67 %	22.58 %	15.38 %	30.77 %	0.00 %	7.69 %	0.00 %	0.00 %	16.24 %
<i>Non-public target</i>	38	15	18	12	14	28	30	24	22	9	15	12	16	10	263
% of all	77.55 %	78.95 %	75.00 %	85.71 %	93.33 %	84.85 %	83.33 %	77.42 %	84.62 %	69.23 %	100.00 %	92.31 %	100.00 %	100.00 %	83.76 %
<i>Cross-border</i>	31	12	15	8	9	20	20	18	24	7	8	10	11	5	198
% of all	63.27 %	63.16 %	62.50 %	57.14 %	60.00 %	60.61 %	55.56 %	58.06 %	92.31 %	53.85 %	53.33 %	76.92 %	68.75 %	50.00 %	63.06 %
<i>Domestic</i>	18	7	9	6	6	13	16	13	2	6	7	3	5	5	116
% of all	36.73 %	36.84 %	37.50 %	42.86 %	40.00 %	39.39 %	44.44 %	41.94 %	7.69 %	46.15 %	46.67 %	23.08 %	31.25 %	50.00 %	36.94 %

Year	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	Total
Cash only	10	4	7	3	2	15	10	11	12	5	4	5	6	1	95
% of all	20.41 %	21.05 %	29.17 %	21.43 %	13.33 %	45.45 %	27.78 %	35.48 %	46.15 %	38.46 %	26.67 %	38.46 %	37.50 %	10.00 %	30.25 %
Stock only	13	5	4	3	2	2	0	1	1	4	1	1	0	1	38
% of all	26.53 %	26.32 %	16.67 %	21.43 %	13.33 %	6.06 %	0.00 %	3.23 %	3.85 %	30.77 %	6.67 %	7.69 %	0.00 %	10.00 %	12.10 %
Combined	5	2	1	0	3	2	5	2	1	1	1	2	2	1	28
% of all	10.20 %	10.53 %	4.17 %	0.00 %	20.00 %	6.06 %	13.89 %	6.45 %	3.85 %	7.69 %	6.67 %	15.38 %	12.50 %	10.00 %	8.92 %
Unknown	21	8	12	8	8	14	21	17	12	3	9	5	8	7	153
% of all	42.86 %	42.11 %	50.00 %	57.14 %	53.33 %	42.42 %	58.33 %	54.84 %	46.15 %	23.08 %	60.00 %	38.46 %	50.00 %	70.00 %	48.73 %
100 % acquired	39	17	18	11	12	29	30	24	21	9	13	11	16	9	259
% of all	79.59 %	89.47 %	75.00 %	78.57 %	80.00 %	87.88 %	83.33 %	77.42 %	80.77 %	69.23 %	86.67 %	84.62 %	100.00 %	90.00 %	82.48 %
<100 % acquired	10	2	6	3	3	4	6	7	5	4	2	2	0	1	55
% of all	20.41 %	10.53 %	25.00 %	21.43 %	20.00 %	12.12 %	16.67 %	22.58 %	19.23 %	30.77 %	13.33 %	15.38 %	0.00 %	10.00 %	17.52 %

percent of the bids were for a target company operating in a different industry than the bidder (according to their industry classification). A large proportion of the bids are for privately held target firms (84 percent). The relative number of cross-border bids is 63 percent, with year 2008 as an extreme year with 24 cross-border bids out of a total of 26 bids during that year. This is consistent with the number of cross-border bids (60 percent) for a sample of 53 Finnish bidders during the time period 1993-2001 (Martynova and Renneboog (2011)). Most of the cross-border transactions are for target companies in Sweden (43 transactions). A total of 38 acquisitions are made in countries with the highest shareholder protection (27 transactions in the US and 11 transactions in the UK). The terms of payment are undisclosed in 153 transactions (almost 49 percent). Of the bids for which the payment method is disclosed, the majority is cash bids (30 percent). Of the remaining bids, 38 are all equity bids (12 percent), while 28 bids (9 percent) are a mix of cash and equity. Only about 18 percent (55 transactions) of the bids were partial bids aiming for less than 100 % ownership.

#### 4. RESULTS

In this section we first present the results from the univariate analysis of the bidder's cumulative average abnormal return (CAAR) in takeover transactions in Finland during the time period from January 2000 to December 2013. Secondly, we analyze the determinants of the abnormal return to the takeover announcement.

Table 2, Panel A shows the descriptive statistics for the abnormal return on the announcement day, the cumulative abnormal return for a seven day event window around the announcement day, and the size related variables used in the analysis. The table shows that the announcement of a takeover bid on average yields a positive abnormal return to the bidder's shareholders on the announcement day ( $T = 0$ ). Using the market model<sup>7</sup>, the average abnormal return (AAR) is about 1.40 percent on the event day. For a longer event windows, seven days centered at the announcement day, the cumulative average abnormal return (CAAR) increases to about 2.14 percent. We also document several extreme cases with both large positive and large negative abnormal returns. The mean transaction value is about 237 million USD (median 50 million), while the relative transaction value (transaction value to the size of the bidder) is about 0.29

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<sup>7</sup> We choose to only report the results using the market model to calculate the abnormal return. Our results are robust to the choice of estimation model of the benchmark returns. The results using the market adjusted model or the market model with adjusted beta are available upon request.

(median 0.06). Table 2, Panel B shows the correlation between the variables. There seems to be a negative relationship between the announcement effect and the transaction value. An opposite relationship is evident between the announcement effect and the relative deal value, measured as the value of the transaction to the value of the bidder prior to the announcement.

**Table 2** Descriptive statistics for 314 takeover transactions

Panel A reports the descriptive statistics for 314 takeover transactions during the time period Jan 2000-Dec 2013. The average abnormal return (AAR) and the cumulative average abnormal return (CAAR) for a seven day event window is calculated using the market model to estimate the expected return. The market return is calculated using the value-weighted total return index OMX Helsinki cap. The market model parameters are estimated over a period of 241 days starting 300 days before the announcement. *TV* is the transaction value of the deal in million USD, *Relative TV* is the relative transaction value of the deal to the value of the bidder. Panel B of Table 2 presents the correlation between the variables. Statistical significance is denoted by \*/\*\*/\*\* (10%/5%/1%).

Panel A: Descriptive statistics

	AAR (%)	CAAR (%)	TV	Relative TV
Mean	1.40	2.14	237.38	0.29
Median	1.00	2.00	50.68	0.06
Min	-19.84	-29.43	10.04	0.00
Max	69.13	50.96	7953.59	14.07
Std dev	6.02	7.47	702.92	1.01

Panel B: Correlation

	AAR	CAAR	LOG(TV)	Relative DV
AAR	1	0.597***	-0.127**	0.591***
CAR		1	-0.100*	0.418***
LOG(TV)			1	0.023
Relative TV				1

Table 3 reports the cumulative abnormal return around the announcement for different event windows ranging from 20 days before to 20 days after the takeover announcement. We document a statistically significant cumulative average abnormal return (CAAR) of about 2 percent for all event windows centered at the announcement day. This result is comparable to the result (CAAR of 2.16 percent for an eleven day event window) reported in Martynova and Renneboog (2011) for a sample of Finnish bidders during the time period 1993-2001.

We do not document any evidence of a price run-up in the pre-event period (20 days to 1 day before the announcement). None of the pre-event windows exhibits a significant CAAR. We do, however, see indications of a delayed market reaction to the announcement with a positive CAAR of 0.57 percent in the

event window one day to three days after the announcement. For the longer post-event windows the CAARs are not statistically significant, although there seems to be some price reversal in the longest event window, mainly from days 14 to 20, as is also evident from Figure 1.

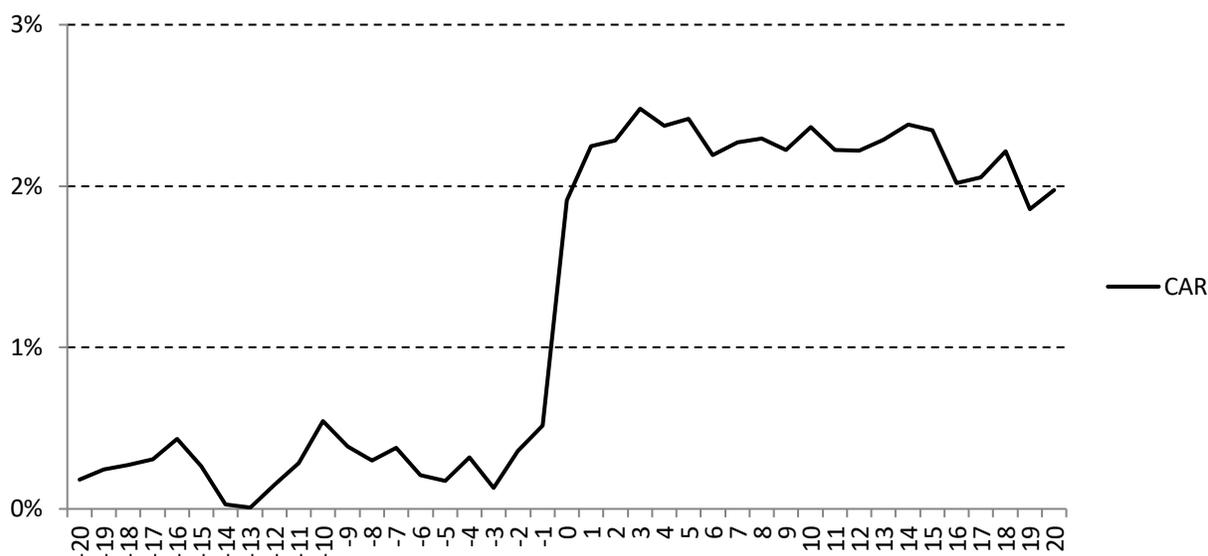
**Table 3** Cumulative average abnormal returns (CAARs) for the bidding firms

The table reports cumulative average abnormal returns for the bidding firms in 314 takeover transactions during the time period Jan 2000-Dec 2013 over different event windows. The expected return is calculated using the market model. The market return is calculated using the value-weighted total return index OMX Helsinki cap. Statistical significance is denoted by \*/\*\*/\*\* (10%/5%/1%).

Event window	Market adjusted model			
	(%)	(p-value)	Max (%)	Min (%)
[-20. +20]	1.973***	0.009	64.54	-45.29
[-10. +10]	2.083***	0.001	66.33	-46.76
[-5. +5]	2.207***	0.000	54.22	-27.74
[-3. +3]	2.140***	0.000	50.96	-29.43
[-1. +1]	1.888***	0.000	67.25	-23.61
[T=0]	1.398***	0.000	69.13	-19.84
[-20. -1]	0.516	0.366	68.79	-32.64
[-10. -1]	0.231	0.574	36.51	-26.03
[-5. -1]	0.306	0.346	39.17	-24.58
[-3. -1]	0.196	0.467	37.13	-25.86
[+1. +20]	0.060	0.909	52.81	-35.32
[+1. +10]	0.453	0.291	21.67	-45.80
[+1. +5]	0.502	0.142	20.65	-34.74
[+1. +3]	0.566**	0.030	15.17	-22.35

Overall, the results show that short term bidder returns are positive and statistically significant. The returns accumulate mostly during a seven day event window centered at the event day, with the majority of the market reaction to the bid occurring at the announcement day. Hence, the announcement is on average a value creating event for the bidder's shareholders, indicating that the main motive for the transaction is to

create value to the shareholders.<sup>8</sup> This is also evident from Table 4, in which we report the number of announcements that yields a positive and a negative market reaction, respectively. Out of the 314 announcements, 202 had a positive abnormal return on the announcement day. However, we cannot rule out that some of the acquisitions are driven by hubris or agency motives, since 112 announcements yielded a negative abnormal announcement day return.



**Figure 1** The cumulative abnormal return (CAARs) for the bidding firms. The figure shows the cumulative average abnormal return for the bidding firm in 314 takeover transactions in Finland during the time period Jan 2000-Dec 2013 for an event window of 41 days. The abnormal return is calculated using the market model. The market return is based on the value-weighted total return index OMX Helsinki Cap. The market model parameters are estimated over a period of 241 days starting 300 days before the announcement.

**Table 4** Number of positive and negative stock market reactions. The table reports the number of events with positive and negative abnormal returns in 314 takeover transactions in Finland during the time period Jan 2000-Dec 2013. The abnormal returns are calculated using the market model, where the market return is based on the value-weighted total return index OMX Helsinki cap.

	Event day [T=0]		CAR [-3,+3]	
	Number	%	Number	%
Positive	202	64.3	205	65.3

<sup>8</sup> In addition, the average abnormal return for the sample of publicly traded target firms was 38.4 percent on the announcement day.

Negative	112	35.7	109	34.7
Total	314	100	314	100

Our results are robust to the choice of estimation model of the benchmark returns and to the length of the event window. In the remainder of the paper we report the results on the announcement day and for an event window of seven days centered at the announcement day using the market model returns as the benchmark returns. Using a longer event window and/or the two alternative estimation models does not materially change the results.<sup>9</sup>

**Table 5** Average abnormal (AAR) and cumulative average abnormal return (CAAR) for the bidding firm by different characteristics of the acquisition

The table reports the average abnormal return and the cumulative average abnormal returns for the bidding firm in 314 takeover transactions in Finland during the time period Jan 2000-Dec 2013 over a seven day event window and for different characteristics of the acquisition. The abnormal returns are calculated using the market model, where the market return is based on the value-weighted total return index OMX Helsinki cap. The acquisition characteristics are the size of the bid, the origin of the target company (cross-border or domestic), the bid being for a publicly traded or privately held company, the bid being for a company within the same industry or for an unrelated company (based upon the SIC-code), the terms of payment; cash or equity, and the bid being non-partial or not. Statistical significance are denoted by \*/\*\*/\*\* (10%/5%/1%).

	AAR [t=0]			CAAR [-3:3]			Nobs
	(%)	(p-value)	Nobs	(%)	(p-value)	Nobs	
Whole sample	1.40 %***	0.00	314	Whole sample	2.14 %***	0.00	314
Large transactions	0.83 %**	0.02	157	Large transactions	2.04 %***	0.00	157
Small transactions	1.97 %***	0.00	157	Small transactions	2.28 %***	0.00	157
Difference	-1.14 %*	0.09		Difference	-0.24 %	0.78	
Cross border	0.80 %***	0.01	198	Cross border	1.51 %***	0.00	198
Domestic	2.42 %***	0.00	116	Domestic	3.26 %***	0.00	116
Difference	-1.62 %**	0.02		Difference	-1.75 %**	0.04	
US/UK target	1.74 %**	0.04	38	US/UK target	3.05 %**	0.03	38
Other	1.33 %***	0.00	276	Other	2.02 %***	0.00	276
Difference	0.41 %	0.69		Difference	1.03 %	0.46	
Diversification	1.80 %***	0.00	198	Diversification	2.55 %***	0.00	198
Non-diversification	0.71 %*	0.06	116	Non-diversification	1.49 %**	0.03	116
Difference	1.09 %	0.12		Difference	1.06 %	0.22	
Public target	0.63 %	0.43	51	Public target	0.87 %	0.43	51

<sup>9</sup> The results for alternative event windows and using the market adjusted model or the market model with adjusted beta are available upon request.

Non-public target	1.55 % <sup>***</sup>	0.00	263	Non-public target	2.41 % <sup>***</sup>	0.00	263
Difference	-0.92 %	0.32		Difference	-1.54 %	0.18	
Cash only	1.19 % <sup>***</sup>	0.00	95	Cash only	2.50 % <sup>***</sup>	0.00	95
Other payments	1.49 % <sup>***</sup>	0.00	219	Other payments	2.01 % <sup>***</sup>	0.00	219
Difference	-0.29 %	0.69		Difference	0.49 %	0.59	
Stock only	3.96 % <sup>*</sup>	0.08	38	Stock only	4.11 % <sup>*</sup>	0.07	38
Other payments	1.05 % <sup>***</sup>	0.00	276	Other payments	1.89 % <sup>***</sup>	0.00	276
Difference	2.91 % <sup>***</sup>	0.00		Difference	2.22 % <sup>***</sup>	0.00	
100 % acquired	1.59 % <sup>***</sup>	0.00	259	100 % acquired	2.27 % <sup>***</sup>	0.00	259
Less acquired	0.51 %	0.46	55	Less acquired	1.65 % <sup>**</sup>	0.04	55
Difference	1.08 %	0.23		Difference	0.62 %	0.58	

Table 5 reports the market reaction to takeover announcements by deal characteristics. Both large (above median) and small transactions yield a statistically significant abnormal return on the announcement day as well as during the seven day event window. However, large transactions, defined as transactions larger than the median transaction value, seem to yield a lower positive announcement reaction than small transactions on the event day (0.83 versus 1.97 percent). The difference is statistically significant (prob-value 0.09). The difference is, however, insignificant between the two groups during the seven day event window.

Most of the bids made by Finnish bidders are for a foreign target company. Overall, the bidder experience a positive announcement effect for both cross-border and domestic bids, but the announcement effect is significantly lower for bidders engaging in cross-border transactions (0.80 versus 2.42 percent). The same difference is also found in the seven day event window. Bidders making acquisitions in the US or in the UK have a higher announcement effect, and the measured stock market reaction to this type of acquisition is close to the reaction for a domestic acquisition.

Most of the acquisitions made by Finnish bidders are for a target company operating in an unrelated industry, i.e., a diversification takeover. In contrast to our expectations, the announcement of a diversification takeover yields a higher return than an announcement of a related takeover (1.80 versus 0.71 percent on the event day, 2.55 versus 1.49 percent during the seven day event window). The difference is, however, not significant on conventional significance levels.

The announcement of an acquisition of a private target yields a statistically significant abnormal return of 1.55 percent, whereas the announcement of an acquisition of a public target yields a small positive (insignificant) return of 0.63 percent. The same is evident for the seven day event window, i.e., a significant abnormal return in an acquisition of a private target and an insignificant abnormal return in an acquisition of a public target.

We document a statistically significant difference in the announcement effect of stock only versus other types of bids. The announcement effect is significantly higher for stock only bids at the announcement day (3.96 versus 1.05 percent).. Contrary to our expectations there is no difference in the announcement effect of cash versus non-cash bids, but a statistically significant higher announcement effect for all equity bids versus other bids. The results may, though, be affected by the fact that in almost 49 percent of the bids the terms of payment is not disclosed, hence, there may be quite a large number of acquisitions that are misclassified.

Finally, in Table 5, we also report the announcement effect for non-partial versus partial bids. The market response to the announcement is on average slightly positive to both acquisition types, and no significant difference in the response can be detected.

The univariate tests show that there is a difference in the market response to an announcement based upon the characteristics of the bid. In Table 6 we report the results from an OLS-regression of the market reaction using the bid characteristics as explanatory variables. We also add a control variable to the regression, capturing the effect of the sixth takeover wave. For example, Jensen (2004) and Moeller et al. (2005) argue that there is a positive correlation between the sentiment on the stock market and takeover activity, and that bidders in times of high stock market valuation tend to bid more aggressively and, hence, increase the bid premium. As a consequence, the gain that accrues to the bidder's shareholders decreases. Alexandridis, Mavrovitis and Travlos (2012) defined the sixth takeover wave as the time period between June 2003 and December 2007. However, in Finland the activity on the takeover market did not increase until the beginning of 2005. The increased activity continued until the end of year 2008. To control for a potential effect of this increased activity, we define the sixth takeover wave as the time period between January 2005 and December 2008, and include a dummy variable taking the value 1 if the takeover is announced during that time period. A total of 126 announcements were recorded during this time period.

In the analysis of the market response on the announcement day we see that most of the results from the regression analysis are consistent with the findings in the univariate analysis. Looking at the full model in Table 6, we see that there is a significant negative relationship between the bidder's abnormal return and the size of the deal, indicating that the market expects that the bidding firm may face large post-acquisition integration costs which will reduce the takeover synergy (Martynova and Renneboog (2011)), or that the acquisition is mainly driven by agency motives or by over optimism. However, looking at the relative size of deal to the value of the bidder we document a statistically significant positive relationship. Hence, the results suggest that the larger the deal is to the value of the bidder, the more likely it is that the transaction is driven by value creation, and that the bidder's shareholders also capture some part of this gain.

Lower bidder announcement returns are observed for cross-border acquisitions, relative to domestic acquisitions (significant in the seven day event window). The results are consistent with findings reported in Conn et al. (2005) and in Moeller and Schlingemann (2005), indicating that the bidding firm may have difficulties in the post-takeover process to utilize the perceived synergies. However, if the target company is from the US or the UK we observe a statistically significant larger announcement effect.

**Table 6** Determinants of the cumulative abnormal return (CAR)

The table reports the results of the OLS regression of the cumulative abnormal return for the bidders in 314 takeover transactions in Finland during the time period Jan 2000-Dec 2013. *LOG(Transaction value)* is the value of the bid in million USD, *relative deal value* is the relative value of the deal to the value of the bidder, *cross-border* is a dummy variable taking the value 1 when the target company is of foreign origin, *USUK target* is a dummy variable taking the value 1 when the target company is from the US or the UK, *public target* is a dummy variable taking the value 1 when the target company is publicly traded, *diversification* is a dummy variable taking the value 1 when the target operates in a different industry than the bidder according to their industry classification (SIC-code), *acquiring 100 % of shares* is a dummy variable taking the value of 1 if the bidder acquires all shares, *cash only* is a dummy variable taking the value 1 when the acquisition is paid for in cash, *stock only* is a dummy variable taking the value 1 when the acquisition is paid for in stock and *sixth wave* is a dummy variable taking the value 1 if the acquisition takes place during the time period January 2005 to December 2008. All regressions contain White's heteroskedastic-consistent standard errors. Statistical significance are denoted by \*/\*\*/\*\* (10%/5%/1%).

Dependent variable	AR [0]						CAR [-3:3]					
	(1)		(2)		(3)		(1)		(2)		(3)	
	<i>coeff.</i>	<i>p-value</i>										
Intercept	0.010	0.27	0.012	0.23	0.019***	0.00	0.025*	0.05	0.029**	0.03	0.029***	0.00
LOG(Transaction value)	-0.006***	0.01	-0.006***	0.01	-0.006***	0.01	-0.005	0.13	-0.005	0.14	-0.006*	0.09
Relative deal value	0.035***	0.00	0.035***	0.00	0.036***	0.00	0.031***	0.00	0.031***	0.00	0.031***	0.00
Cross-border	-0.009	0.16	-0.009	0.17	-0.009	0.18	-0.015*	0.06	-0.013*	0.09	-0.015*	0.07
USUK target	0.015*	0.05	0.014*	0.05	0.015*	0.07	0.023*	0.06	0.023**	0.04	0.028*	0.07
Public target	-0.003	0.70	-0.003	0.70			-0.013	0.28	-0.011	0.35		
Diversification	0.008	0.16	0.009	0.14			0.009	0.24	0.008	0.26		
Acquiring 100 % of shares	0.002	0.80	0.002	0.82			-0.004	0.65	-0.005	0.58		
Cash only	0.002	0.68			0.001	0.78	0.011	0.19			0.009	0.28
Stock only	-0.025	0.86			-0.004	0.74	-0.003	0.85			-0.007	0.68
Sixth wave	0.004	0.46					0.001	0.84				
F-stat.	18.84***	0.00	26.99***	0.00	30.99***	0.00	8.05***	0.00	11.22***	0.00	13.06***	0.00

Adjusted R <sup>2</sup>	0.363	0.368	0.365	0.184	0.186	0.188
Number of acquisitions	314	314	314	314	314	314

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There are indications of the market perceiving diversification announcements to be good news, rewarding the bid with a higher positive (not significant) abnormal return than a corresponding announcement of a focused acquisition. Hence, the investors consider the positive effect of risk reduction being larger than the negative effect of the agency problem.

In the univariate analysis there were some indications of a lower bidder abnormal return when the target company is publicly listed. We also documented a positive announcement effect for stock only bids versus other types of bids. However, in the multivariate setting these differences disappear, indicating that the results may be driven by size related issues instead. There is no difference in the announcement effect whether the bidder acquire 100 percent of the target or a smaller amount. The control variable for the sixth takeover wave is also insignificant.

Finally, in Table 6, we also report the results from different specifications of the model. In model specification two we exclude the term of payments variables and the takeover wave dummy, and in specification three we exclude the public target, diversification, non-partial and the takeover wave dummy. The alternative specifications do not change the estimated coefficients for the size related variables or the target origin related variables.

## 5. CONCLUSIONS

In this study, we analyze the short term market reactions to takeover announcements in a sample of 314 acquisitions made by a stock market listed Finnish company during the time period from January 2000 to December 2013. The acquisitions of Finnish companies during the studied period were characterized by a diversification strategy involving a foreign target company. The acquisition was typically friendly, and aimed for the entire capital of the target company. We document, on average, a significant positive stock market reaction to the announcement. The announcement effect is statistically significant yielding an average abnormal return of 1.4 percent on the announcement day. This result is consistent with the assumption that most of the acquisitions are motivated by synergy. Neither the pre-event nor the post-event abnormal returns are statistically significant, although there is sign of a negative price revaluation in the post-event period.

We also investigate the relationship between the market reaction to the announcement and deal characteristics. We document a significant, negative relationship between deal size and the abnormal return on the announcement day. However, looking at the size of the deal in relation to the size of the bidder we find a reversed relationship, i.e., the larger the relative size of the deal, the more positive the announcement effect. The market reaction is more favorable to an acquisition of a domestic target company, indicating that the market believes that the acquirer may face substantial post-acquisition integration costs in cross-border transactions. If the target company is from the US or from the UK the negative cross-border effect is smaller. We also document that an acquisition motivated by diversification may yield a higher abnormal return to the bidder shareholders than an acquisition of a target firm within the same industry. Hence, the decrease in the financial risk seems to be more important than a potential increase in the agency costs. We do not find any significant relationship between the announcement effect and legal status of the target, the terms of payment, full acquisition of the target, or the sixth takeover wave.

#### **Acknowledgement**

An early version of this paper was presented at the 11<sup>th</sup> International Scientific Conference on Economic and Social Development – Building Resilient Society, Zagreb, Croatia.

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