

VALUETRUST

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Preface

Dear finexpert members,

We proudly present the 2020 issue of the finexpert German takeover report. It covers all takeover offers and delisting tender offers of the year 2019 according to the German takeover code WpÜG and provides extensive information on relevant variables like bid types, premia offered, market reaction of target's and (if available) on bidder's stock prices. In addition, our extensive database allows to compare last year's figures of these variables against the moving average of the preceding years and thus to highlight trends and long term developments. Finally, the finexpert German takeover report contains a unique and extensive analysis of fairness opinions and statements of management and supervisory board of the target company (§27 WpÜG), allowing for a detailed analysis of the relationship of these factors upon target stock price reaction and success rates of the takeover bid. Along with the "traditional" success definitions of takeover offers, we analyse an alternative success measure that takes potential bidder toeholds into account.

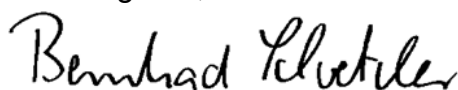
Our results reveal high public M&A activity in 2019 with a large number of offers many of which were unsuccessful. None of the offers' volume exceeded EUR 5bn, and the takeover offer of EP Global Commerce VI GmbH to the shareholders of Metro AG was the largest (EUR 4.8bn). Most of the bids were launched by foreign investors.

This report contains a detailed description of events surrounding the takeover attempts for OSRAM Licht AG from a joint entity of private equity investors: Bain Capital, and Carlyle Group, and later from an Austrian company ams AG.

Finexpert members have free access to download this (and all other) finexpert reports from our website www.finexpert.info. We hope that the information provided in this report is helpful in your day to day business.



Best regards,



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Market Overview

The M&A market in 2019 attracted a great deal of public attention with the stream of vibrant acquisition announcements. In Germany, the year is notable for a large number of public takeovers. After a decline in public M&A activity over the previous three years with a record-low number of primary takeover bids¹ last year, 2019 reports an increase by 109% (+12) and the highest number for the last 5 years. Further, there were 5 delisting tender offers² in 2019, which we henceforth treat as a separate category of public offers. In total 14 delisting offers were published since the regulation amendment in 2015 which set a requirement of an offer document prior delisting application. Figure 1 shows the development of all offers from 2012 to 2019.

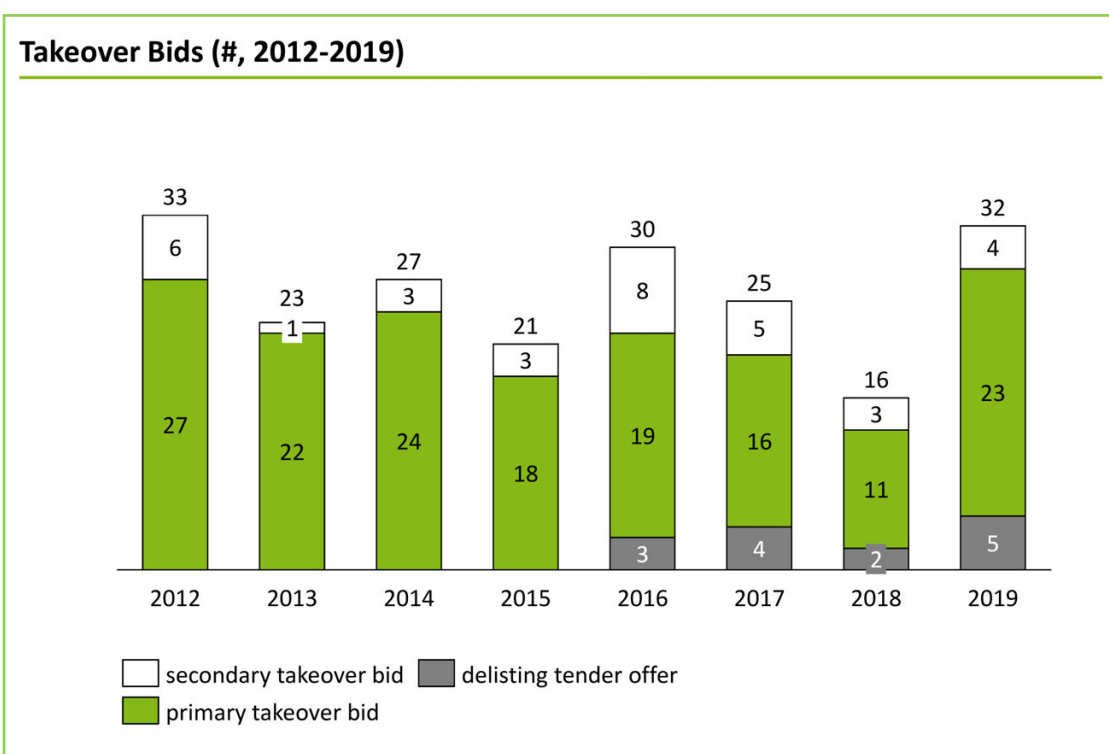


Figure 1: Takeover Bids (#, 2012-2019)

¹ A primary takeover bid denotes the initial offer, while a secondary takeover bid refers to a change of the previous offer (e.g. increase of acquisition premium, extension of deadlines).

² A delisting tender offer is a voluntary public compensation offer as a legal prerequisite for a withdrawal of the admission to trading of the shares on a regulated market.

Market Overview

The total volume of the primary takeover bids in 2019 rose by 26% (EUR 29.2bn) compared to 2018 (EUR 23.2bn). The average volume of bids, however, was the lowest over the last three years (EUR 1.3bn/bid). For the first time since 2014 none of the offers' volume exceeded EUR 5bn. The takeover offer of EP Global Commerce VI GmbH to the shareholders of Metro AG was the largest in 2019: the offer volume amounted EUR 4.8bn. The second largest offer had a total bid volume of EUR 4.7bn, and was published in March 2019 by the Pulver BidCo GmbH for acquisition of the shares of Scout24 AG. The average volume of delisting offers in 2019 was relatively high (considering that the average value in 2018 was mainly driven by a delisting tender offer for STADA Arzneimittel AG shares of EUR 5.1bn). The delisting tender offer for VTG AG shares was the largest in 2019 with a bid volume of EUR 439m.

Figure 2 depicts the development of the bid volumes between 2012 and 2019.

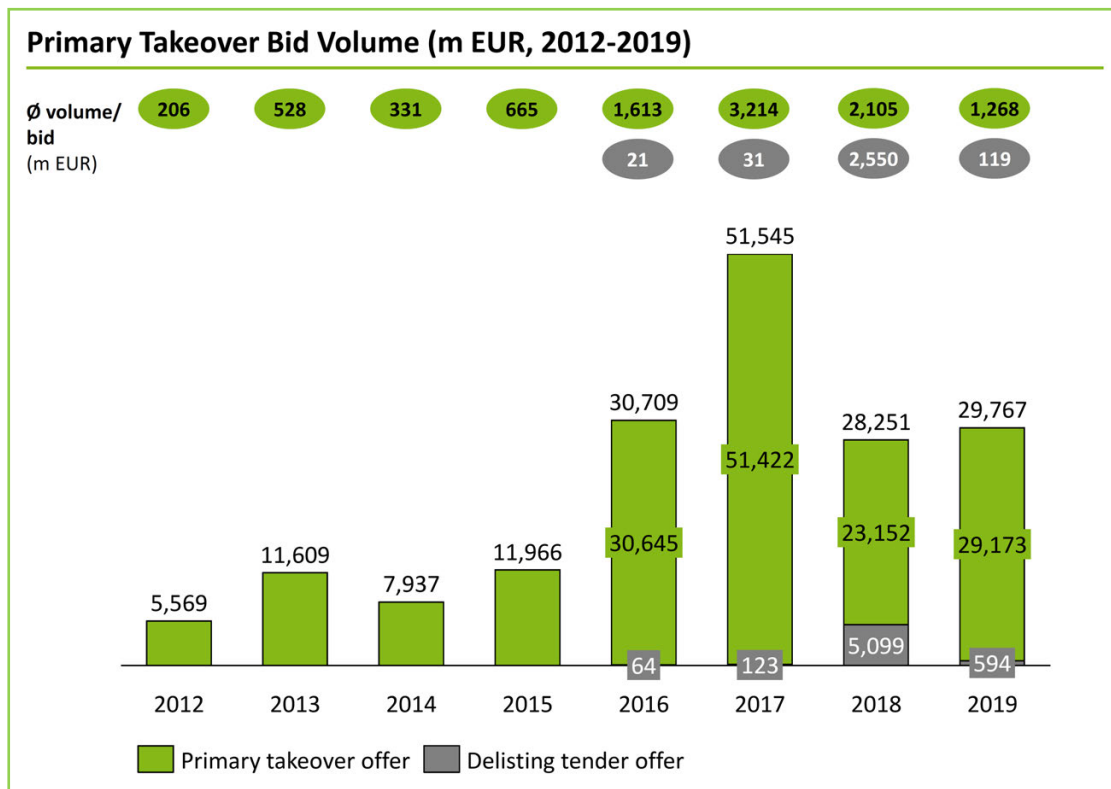


Figure 2: Primary Takeover Bid Volume (m EUR, 2012-2019)

Market Overview

When differentiating between financial and strategic investors, we find that following the last year's trend the bids from financial investors are prevailing in 2019. 57% of primary takeover bids were made by financial investors. Here again we set apart the delisting tender offers. Remarkably, the average volume of financial bids is even higher than the volume of bids made by strategic investors (EUR 1,345m vs. EUR 1,169m). Further, the share of bids by foreign investors continues to grow: 69% of financial investors and 80% of strategic investors were foreign in 2019.

Figure 3 presents the distribution of primary takeover bids by the type and origin of investor over the last five years. Strategic investors held responsible for 49.4% of all primary takeover bids representing 82% of the total bid volume.

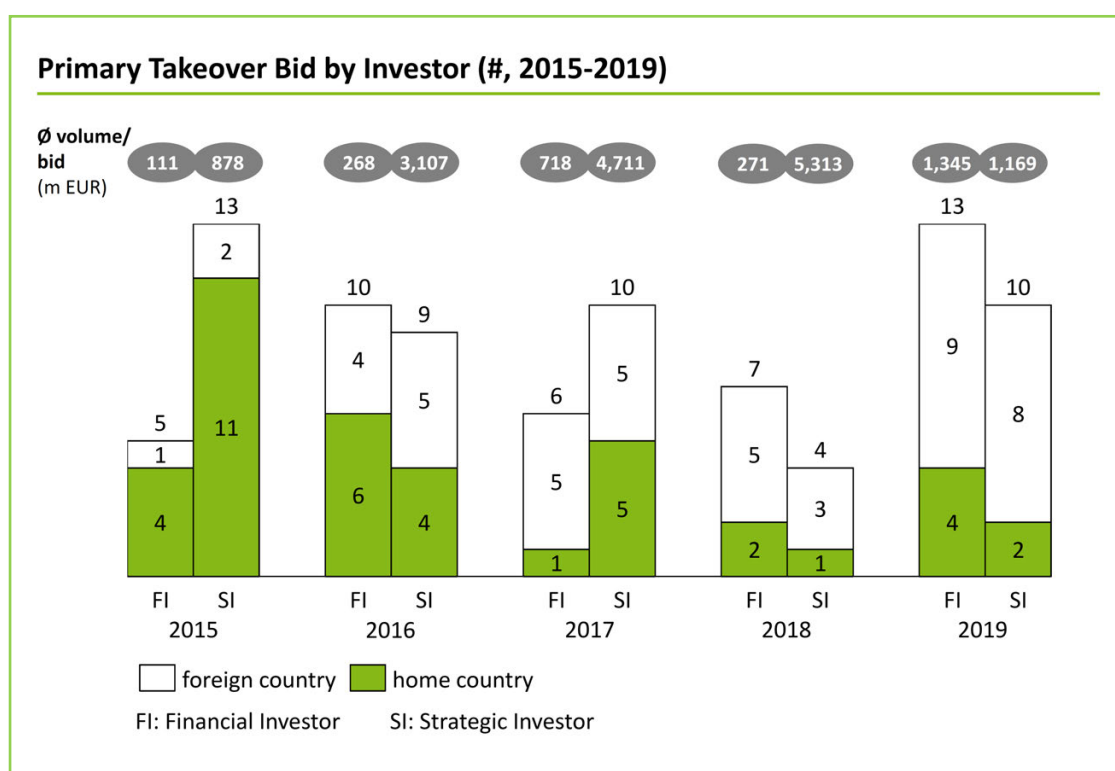


Figure 3: Primary Takeover Bid by Investor (#, 2015-2019)

Market Overview

Figure 4 depicts separately a distribution for delisting tender offers differentiating the financial and strategic bidders. The average volume of delisting offers by financial investors is generally higher than the volume of delisting bids made by strategic investors. Most of the delisting offers in 2019 were launched by foreign investors.

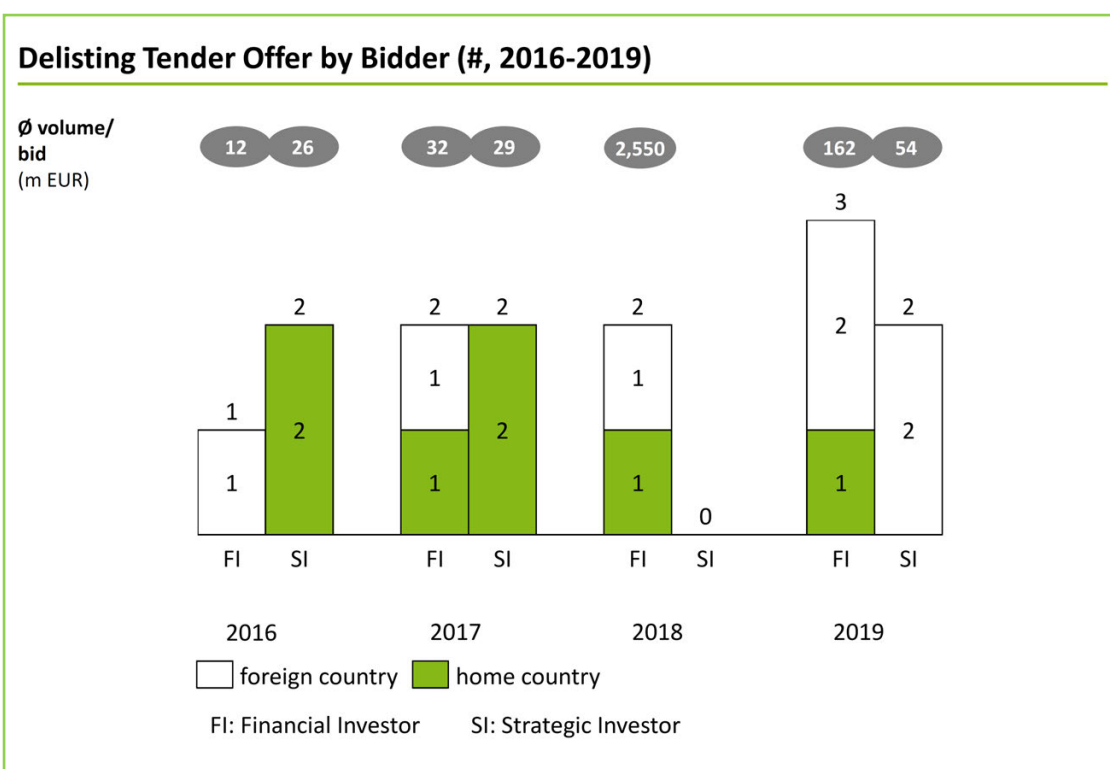


Figure 4: Delisting Tender Offer by Bidder (#, 2016-2019)

Market Overview

The bid premiums offered, both weighted³ and unweighted, have been significantly higher than in 2018. We define the bid premium as the mark-up of the bid price compared to the three-month average stock price of the target firm prior to the bid. This definition is in accordance with the WpÜG which requires the potential acquirer to report this metric.⁴ The average weighted offer premium of 15.6% was 2.3%-pts. higher than in 2018. The unweighted one rose even to 18.6% (+9.7%-pts.). Driven by extremely high values in 2012 and 2016, the average offer premium for 2012-2019 period remains comparably large in weighted and unweighted terms (19.4% and 19.6% resp.).

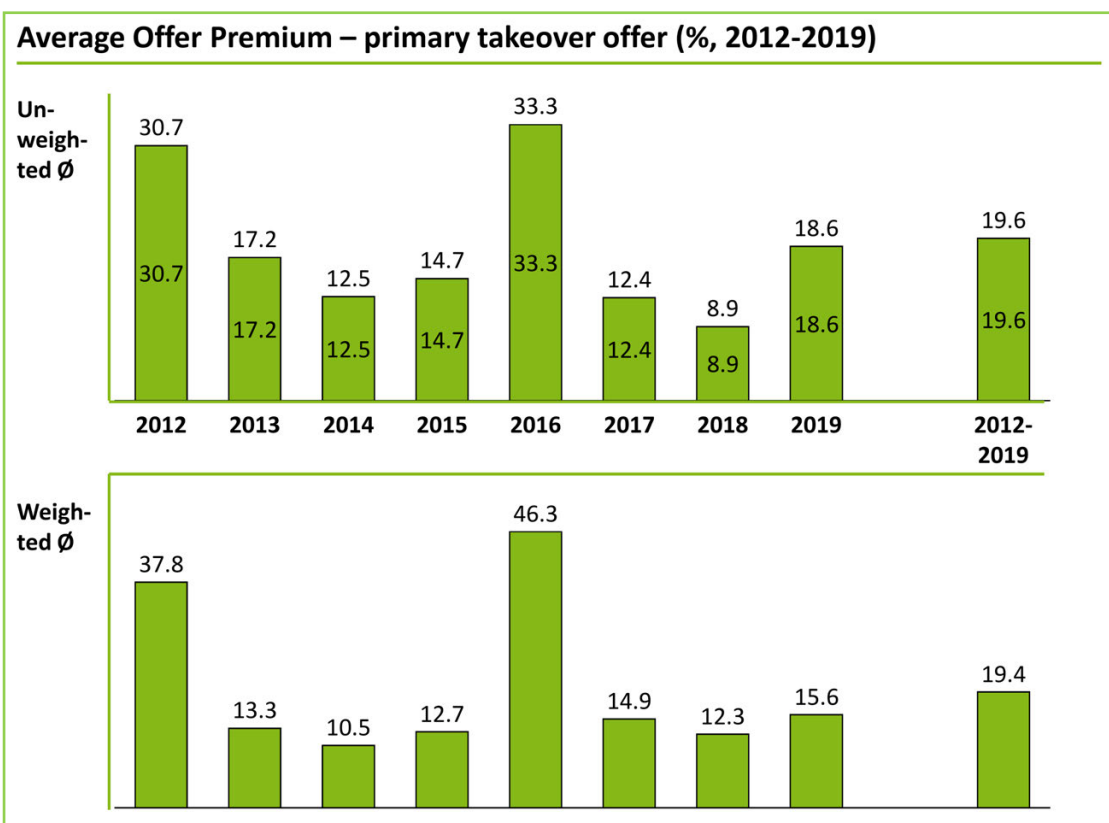


Figure 5: Average Offer Premium (% , 2012-2019)⁵

³ Weighted bid premiums account for the takeover value (outstanding shares not owned by the bidder times the bid price), i.e. bids with a higher takeover value are assigned a higher weight.

⁴ The three-month average stock price prior to the bid is the minimum required bid price defined by the WpÜG and, thus, the basis for premium calculation. If the three-month average stock price is not available or not reliable, the highest price of preemptions is taken or a valuation by an independent third party in accordance with § 5 para. 4 WpÜG-AV is done.

⁵ The values reported for 2016-2018 slightly diverge from those reported in Takeover Report 2019 due to exclusion of delisting tender offers from this overview.

Market Overview

Looking at the offer premiums in clustered intervals of 5% reveals that more than 20% of all primary takeover bids did not offer any premium. The zero-premium bids are generally made when the offer is mandatory (i.e. required to be made by the WpÜG), and when the target company is financially constrained or distressed. There was one takeover offer with an exceptionally high premium in 2019: forced by a high price of preemptions Advert Finance B.V. offered 158% premium to the shareholders of Fyber N.V. Other than that, the primary bid premiums are uniformly distributed over the cluster intervals. Most of the delisting tender offers had an offer premium between 0% and 5%. For the delisting tender offer towards Kremlin AG shares, neither average stock price nor enterprise value could be determined, and as a result the offer premium for this bid was not estimated.

By and large, the offer premiums cumulated for the last 8 years are distributed similarly to the figures presented in Takeover Report 2019. Figure 6 displays the distribution of offer premiums for 2019 and cumulated for the years 2012 to 2019.

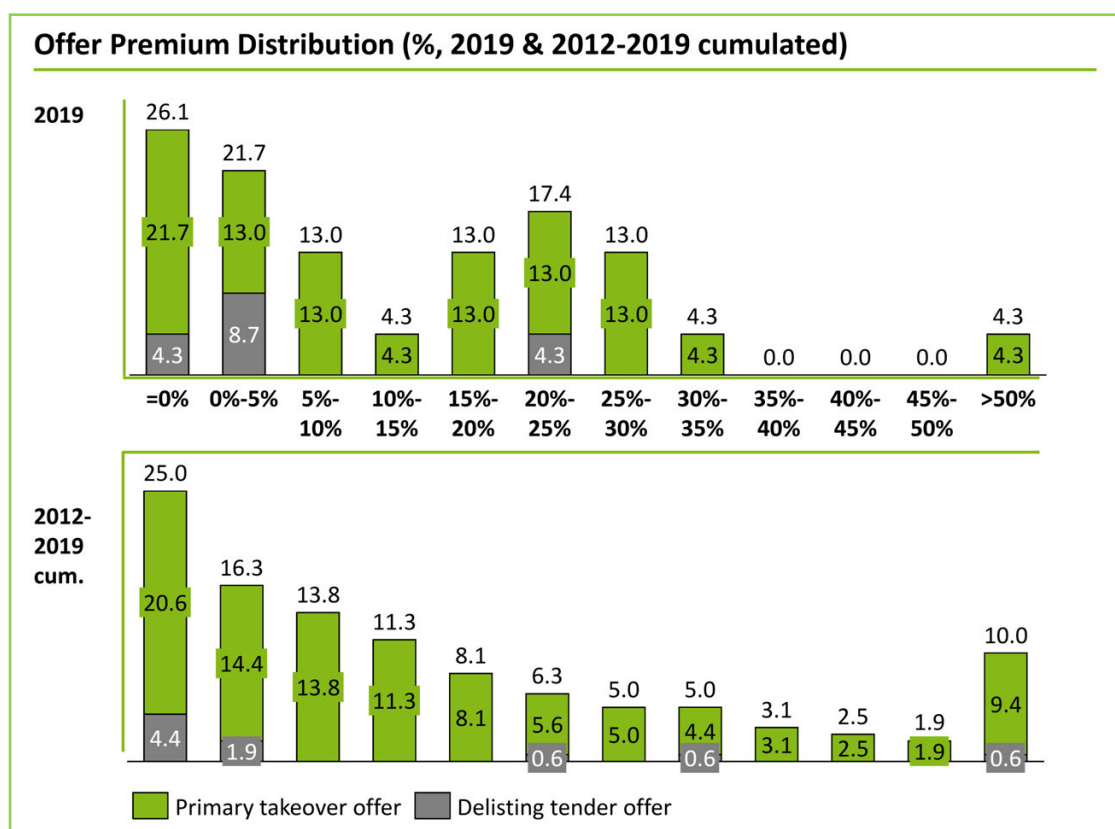


Figure 6: Offer Premium Distribution (% , 2019 & 2012-2019 cumulated)

Market Overview

A differentiated view on strategic and financial investors shows that the conventional wisdom of strategic investors paying a higher premium due to their synergy potentials erodes over time. With the only exception of last year, the annual average premiums by financial investors were higher, and in 2019 comprised 22.2% in contrast to the 13.8% average offer premium by the strategic investors. Examining weighted offer premiums by investor type provides us with similar results: premiums paid by financial investors in 2019 are on average by 5.2%-pts. higher than premiums for strategic investors' bids (17.7% vs. 12.6%). The five years average values corroborate the finding of higher premiums in offers by financial investors (2015-2019: 19.0% vs. 18.2% in takeover offers and 11.09% vs. 3.83% in delisting offers).

Figure 7 provides the average unweighted offer premiums by investor type over the last 5 years.

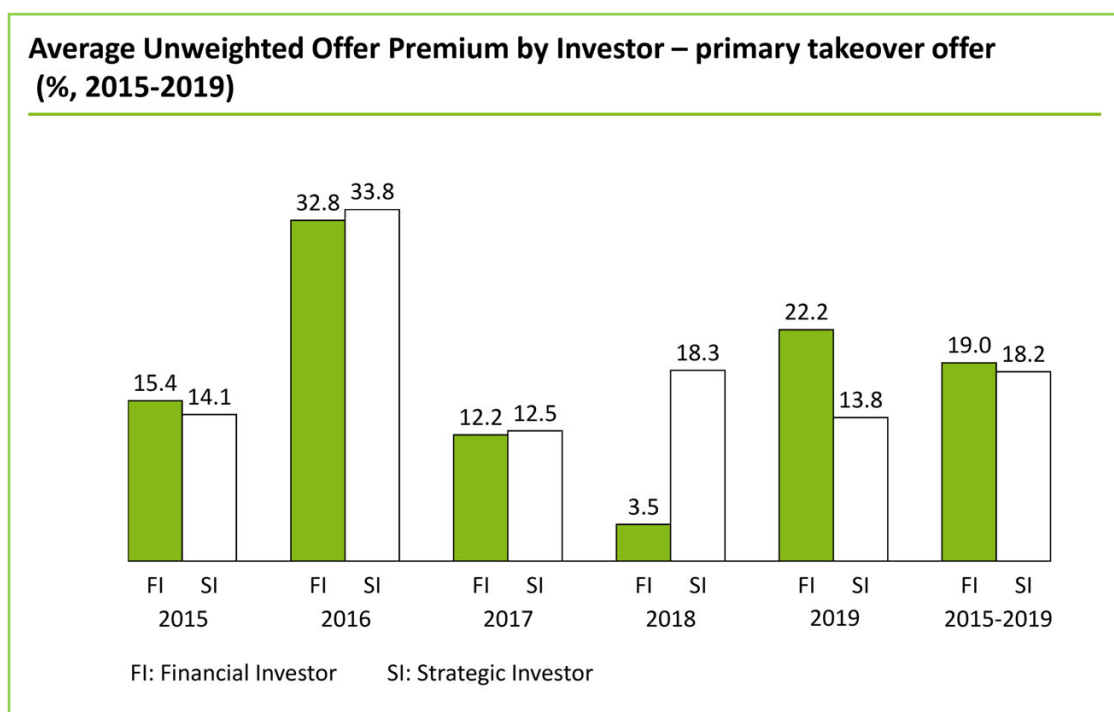


Figure 7: Average Unweighted Offer Premium by Investor (%, 2015-2019)⁵

⁵ Delisting tender offers are excluded from this overview.

Market Overview

Cash is still the dominant method of payment and accounts for 91.3% in the 2019 bids. In the remaining 8.7% of the cases the consideration provided by the offeror was in form of own shares. The exchange offers were the bid of Voltaire Finance B.V. for Wild Bunch AG and the bid of Aroundtown SA for TLG IMMOBILIEN AG. Neither of the acquisition offers in 2019 was made in return for a combination of cash and shares.

Figure 8 depicts the overview of the annual distribution of different payment methods with respect to all takeover bids in the previous five years.

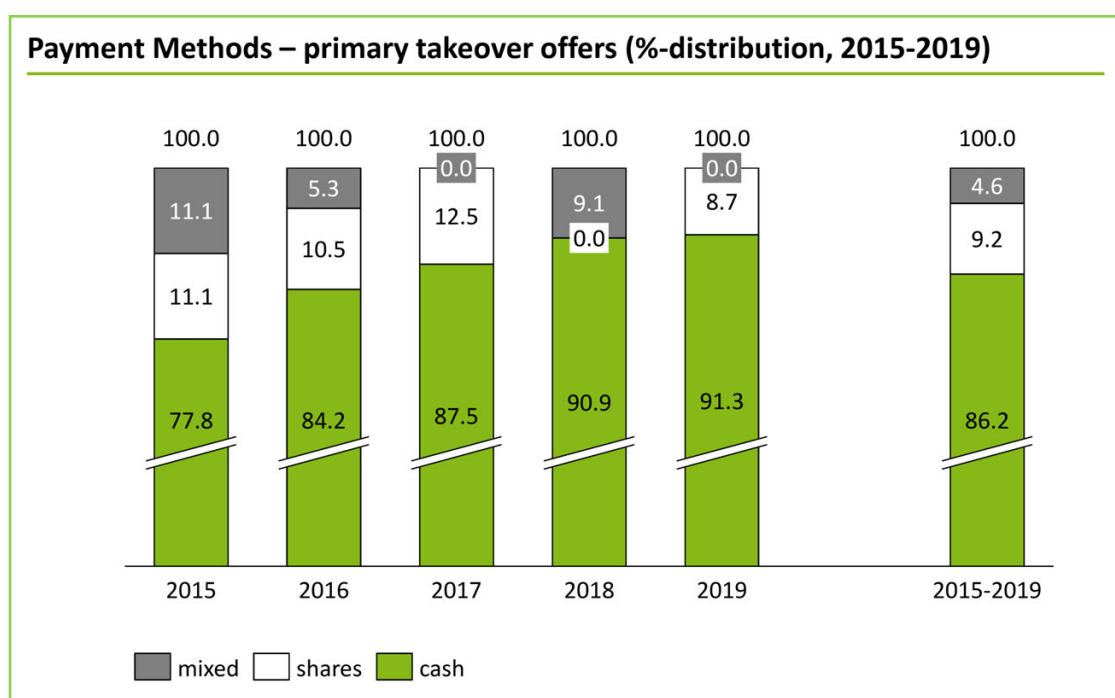


Figure 8: Payment Methods (%-distribution, 2015-2019)

Capital Market Reaction

To evaluate the capital market reaction on the first bids, we calculated the cumulated abnormal returns (CARs) for bidder and target companies around the day of offer publication. We concentrate on **primary** bids where the bidder owns less than 75% of the target before the bid. As a 75% majority allows the shareholder to sign a domination agreement with the corporation, he or she already has full control. Thus, beyond 75% ownership we believe that the market reaction is not representative. We calculate CARs for two different event windows: -1 to +1 days and -7 to +7 days around the day of offer publication. DAX Prime All Share index is used as a benchmark for the calculation of CARs, as this index is domestic, broad and the listed companies comply with the highest level of reporting requirements of Deutsche Börse AG.

For the target companies, we find the average CARs to be positive throughout all years and closely related to the average offer premiums. For this analysis, offer premiums are calculated based on the last observable stock price before beginning of the event window. In contrast to takeover offers, the average CAR and premium in delisting offers are generally low or even negative.

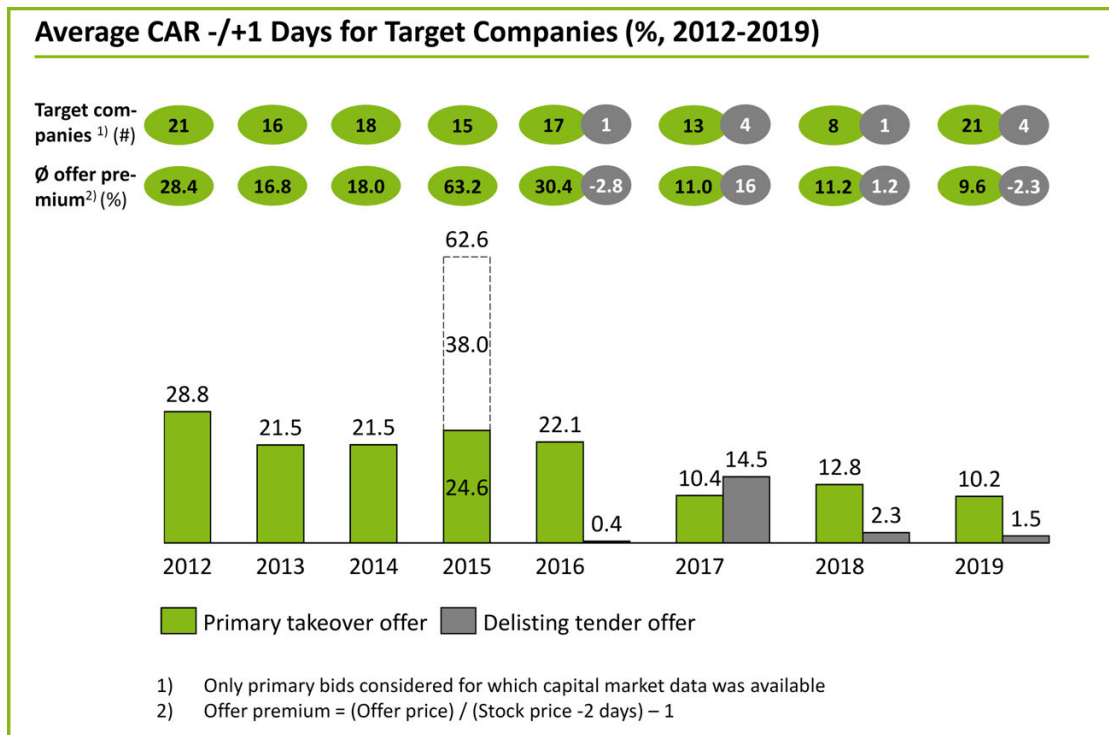


Figure 9: Average cumulated abnormal return -/+1 days for target companies (% , 2012-2019)

* The market reactions in 2015 contain one exceptional case: When Livia Corporate Development Group SE submitted a bid of EUR 13.49 per share (highest price of preemptions) to the owners of the insolvent Softmatic AG, the share price spiked up from EUR 2.43 (-1 day) to EUR 12.50 (+1 day). The dotted boxes in figure 9 and 10 highlight the effect.

Capital Market Reaction

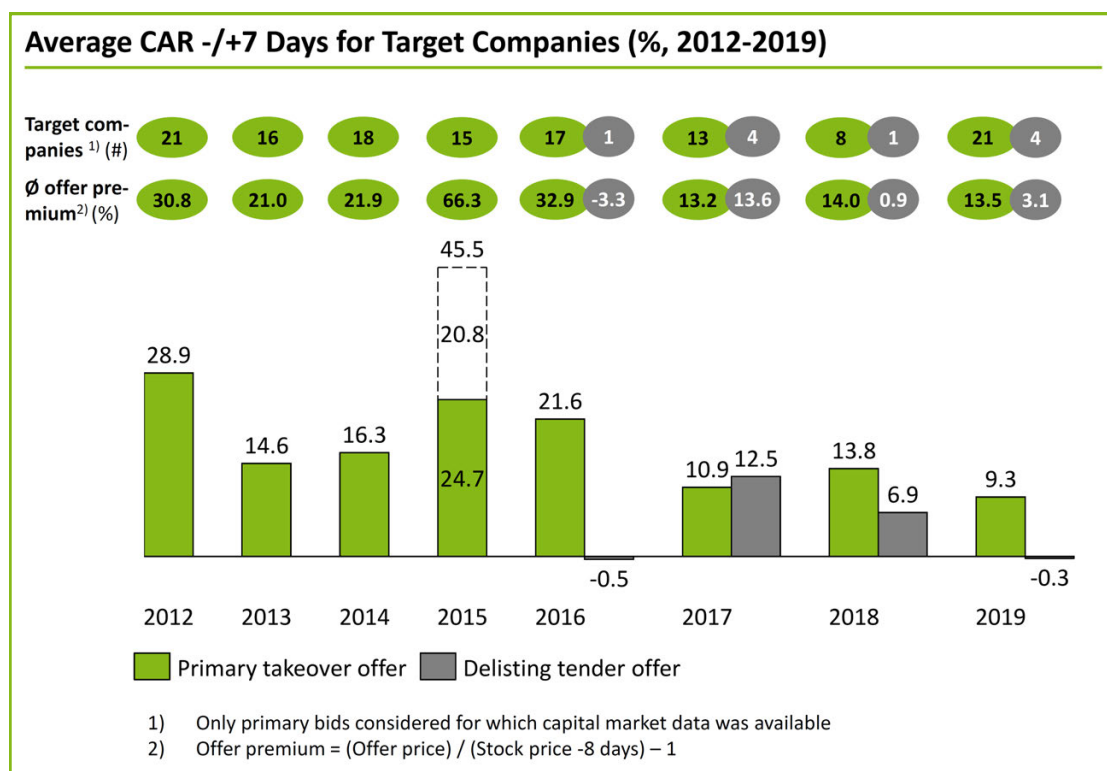


Figure 10: Average cumulated abnormal return -/+7 days for target companies (% , 2012-2019)

For the bidding firms we find different results: there are no consistent patterns of capital market reaction at the offer announcement neither over the entire range nor on an annual basis. Presumably, due to the lack of capital market availability for bidder companies, the obtained results are also below a statistical meaningful level of confidence (see figures 11 and 12).

Capital Market Reaction

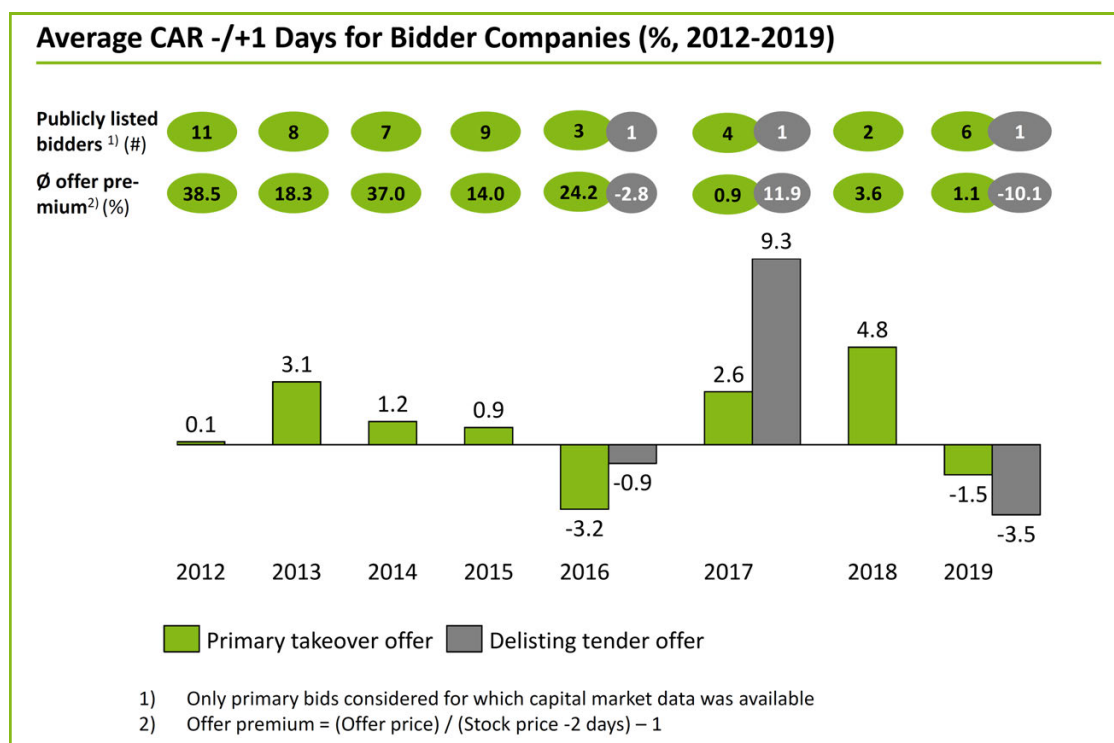


Figure 10: Average cumulated abnormal return +/-1 days for bidder companies (% , 2012-2019)

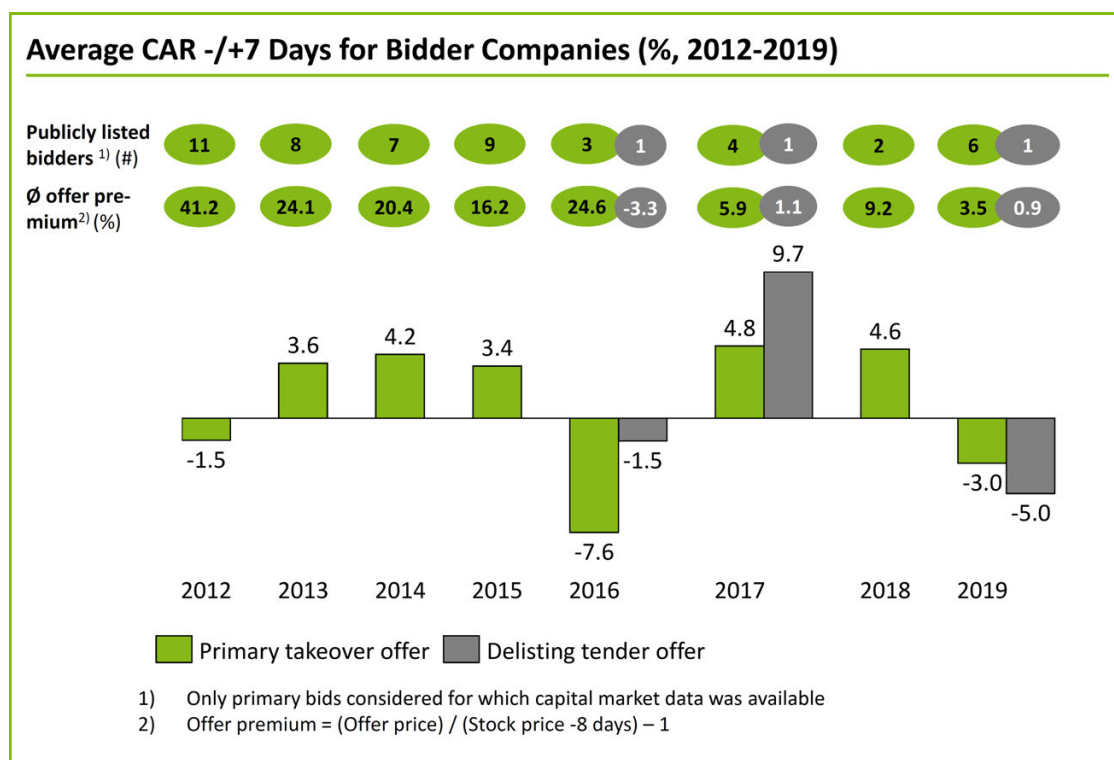


Figure 11: Average cumulated abnormal return +/-7 days for bidder companies (% , 2012-2019)

Capital Market Reaction

Finally, we plot the individual offer premiums against target CARs for the event window of $-1/+1$ day. We find a strong positive relationship shown in figure 13 (Correlation coefficient is equal to 87.2%).

Such an analysis gives insights into the market expectation on the success of the bid and is interpreted as follows: If the target CAR stays behind the offer premium, the market attaches a low probability to a successful execution of the deal. Contrary, if the target CAR is significantly above the offer premium, the capital market expects an improved offer. When target CAR and offer premium are in line, then there is a significant probability for a bid's success.

We have tested this interpretation for the observation period 2012 to 2019, by comparing the results from figure 13 against the realized outcomes of the transactions. As we cannot assume a strict equality of offer premium and target CAR, we have put a tolerance area of $\pm 5\%$ -percentage points around the equilibrium line to measure the category "success of offer expected." Based on this definition, the capital market would have predicted the bid outcomes correctly for 46.0% of the transactions. This value is significantly higher than the expectation of a random drawing (33.3%⁶).

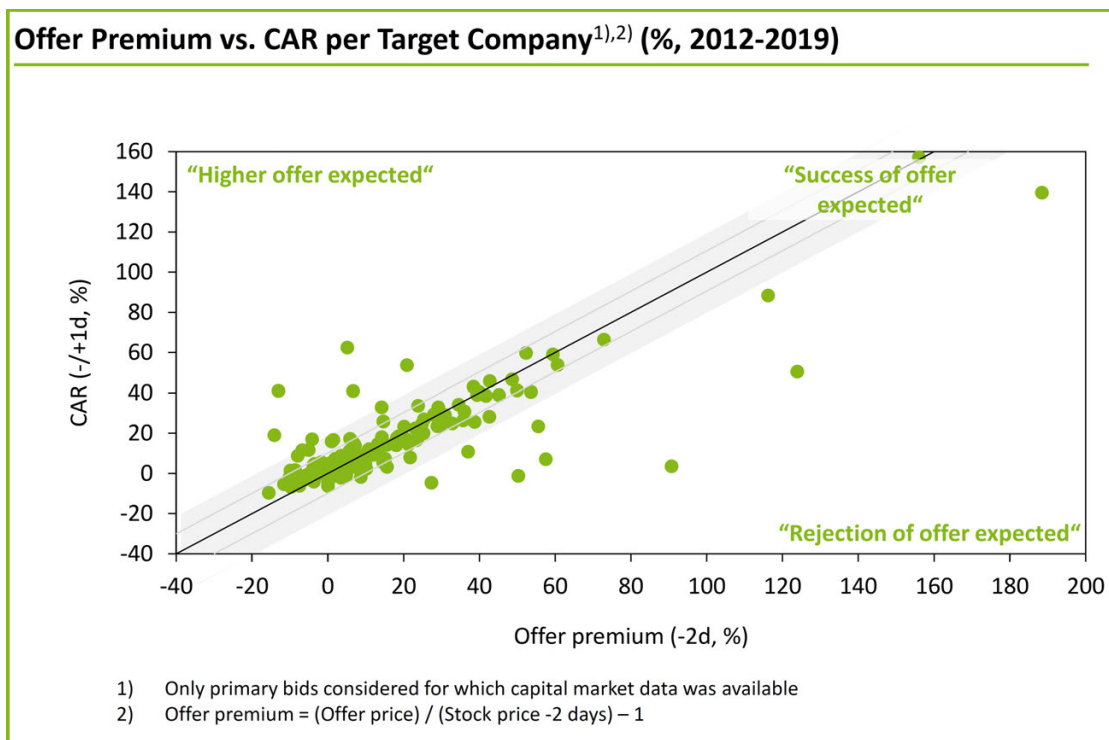


Figure 13: Offer premium vs. cumulated abnormal return per target company (% , 2012-2019)

⁶ The probability of one out of three independent events occurring: success of the bid (bidder reached an ownership share of at least 50% or the minimum acceptance threshold), increase in offer premium, rejection of the offer.

Statements & Fairness Opinions

Both the supervisory board and the executive board of the target company are, according to §27 WpÜG, required to issue an opinion statement regarding the adequacy of the takeover bid. Over the last few years more and more target companies additionally requested a Fairness Opinion by a third party to evaluate the offer's adequacy. The target company's statements as well as the Fairness Opinion are important tools for the communication between management and shareholders of the target company and influence the takeover bid's success. The supervisory and the executive board normally issue a joint statement (2015-2019: 96.5% of all statements). Only few opinion statements were issued by the boards separately in 2015, and in 2019 we observe again joint statements only.

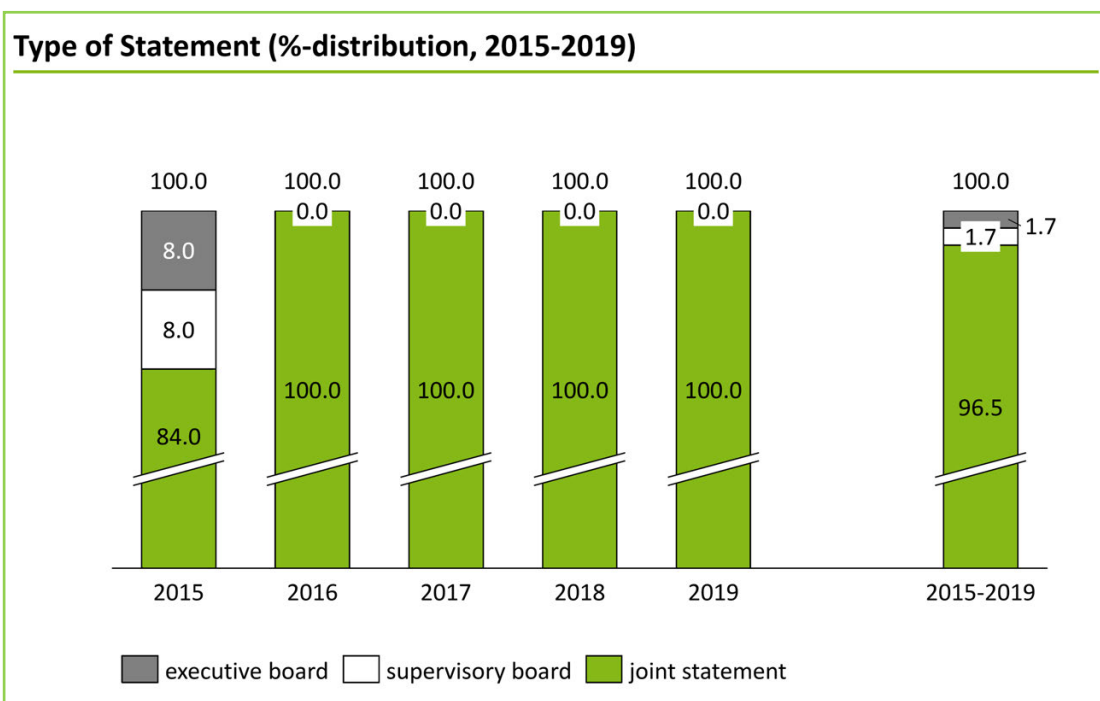


Figure 14: Type of Statement (%-distribution, 2015-2019)

Statements & Fairness Opinions

Under the §27 WpÜG the opinion statement should contain a recommendation to the shareholders whether to accept or reject the takeover bid. The supervisory and executive board's statements between 2015 and 2019 have given a distinct suggestion in 83.5% of all cases: 58.3% advised the shareholders to accept the offer whereas 25.2% recommended a rejection. No recommendation was given in 16.5% of all cases. The share of statements without a recommendation continues to grow and reaches a record-high level in 2019: for 29.6% of all bids the statements did not advance an opinion towards the acceptance or rejection of the offer. More than a half of the given recommendations in 2019 were to accept the offer.

The opinion statements to delisting tender offers recommend an acceptance of the offer in 75% cases. No recommendation was given for 18.8% delisting offers. Only in one case the statement recommended to reject the delisting offer: in 2017 the board of Clere AG considered the compensation offered by Elector GmbH to be not adequate.

Figure 15 shows the development for the takeover bids over the past 5 years.

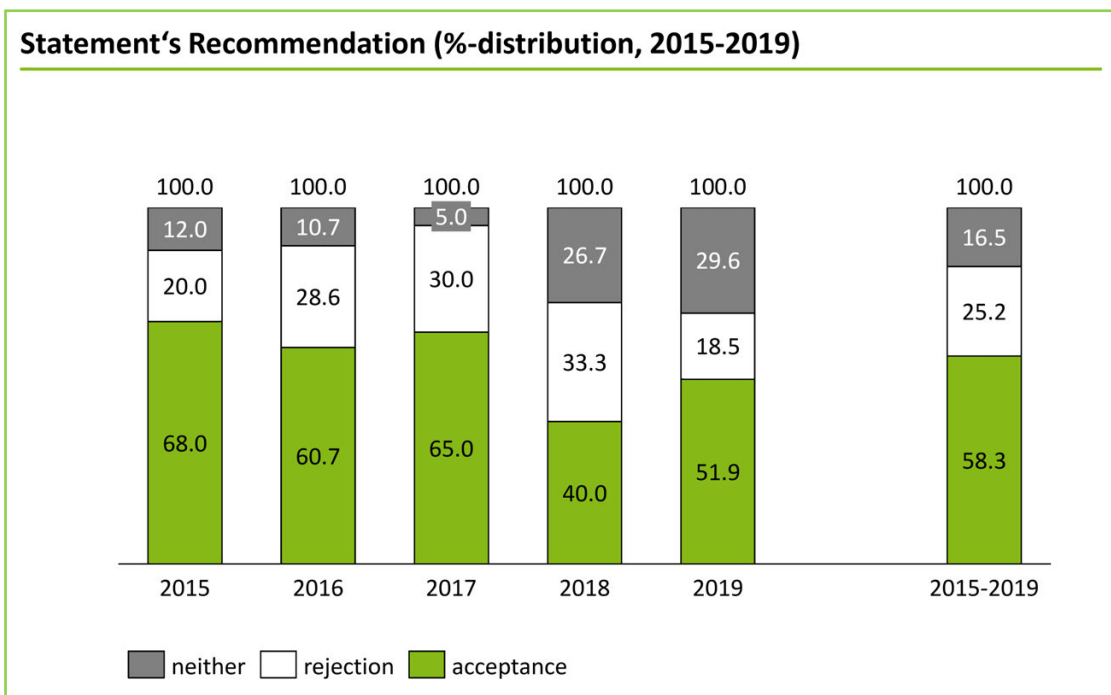


Figure 15: Statement's Recommendation (%-distribution, 2015-2019)⁷

⁷ Delisting tender offers are excluded from this overview.

Statements & Fairness Opinions

A Fairness Opinion is an external expert's statement regarding the adequacy of a takeover bid or of another company transaction. Investment banks or financial advisers consulting the management regarding the transaction in question usually issue these Fairness Opinions. In Germany the target companies usually obtain a Fairness opinion for legal coverage and as an independent third party opinion. The Fairness Opinion's content and requirements are not regulated by law. The DVFA⁸ and the IDW⁹ published guidelines concerning content, publication and the handling of conflicts of interest in a Fairness Opinion. In 2019 the adequacy of 85.2% of the takeover bids were assessed by the external experts providing Fairness Opinions. For 7 takeover offers the Fairness Opinion was requested from more than 1 external expert. Over the past 5 years 69.1% of the target company's statements to takeover offers were complemented by Fairness Opinions. Figure 16 shows the development since 2012 excluding delisting tender offers.

The Fairness Opinions were issued for 60% (3 out of 5) of delisting offers in 2019. However, since 2016 the compensation adequacy for only 35.7% of delisting offers was assessed by an external fairness opinion.

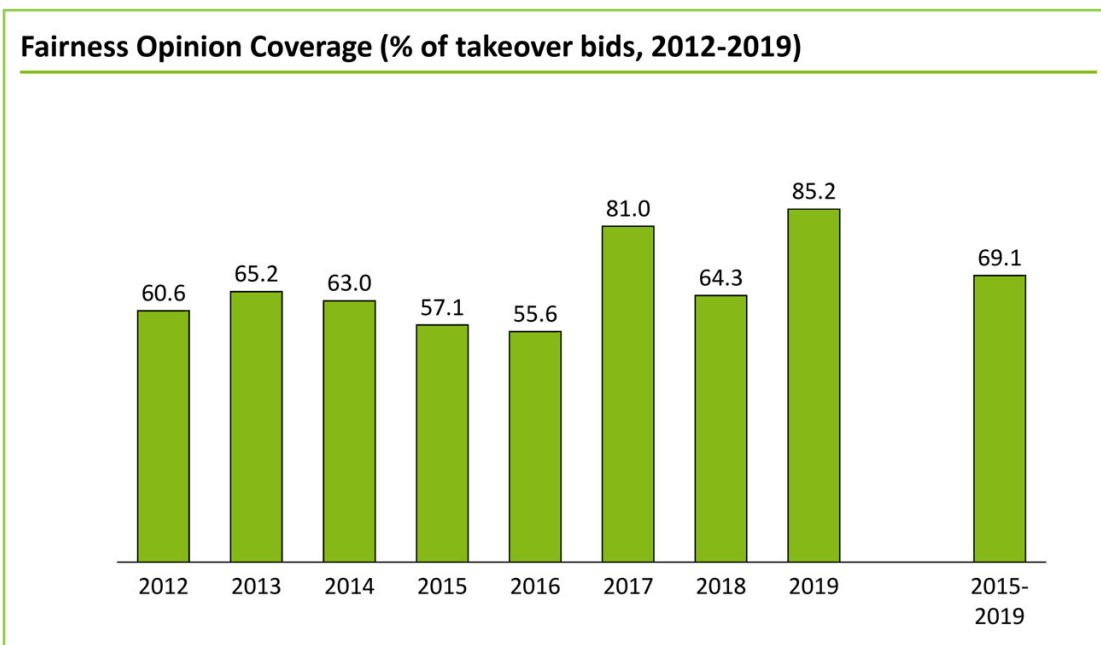


Figure 16: Fairness Opinion Coverage (% of takeover bids, 2012-2019)

⁸ DVFA Expert Group „Fairness Opinions“, The principles of compiling a Fairness Opinions, available online at http://www.dvfa.de/files/die_dvfa/kommissionen/application/pdf/grundsaeetze_fairness_opinions.pdf

⁹ IDW S8 „Grundsätze für die Erstellung von Fairness Opinions“

Statements & Fairness Opinions

In 2019 one third of all Fairness Opinions claimed the bidder's takeover offer to be inappropriate. The distribution over the Fairness Opinion's published judgment of all takeover offer's adequacy in 2015-2019 is similar: 68.4% of the evaluated takeover bids were considered adequate. All Fairness Opinions to delisting offers confirmed an adequacy of the compensation.

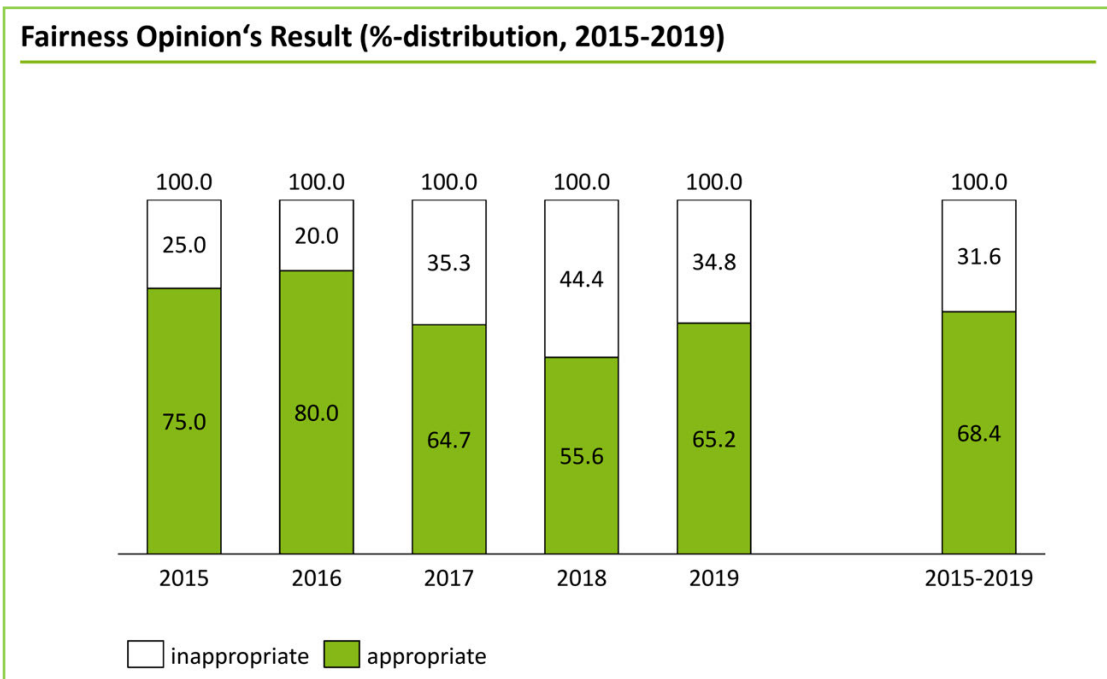


Figure 17: Fairness Opinion's Result (%-distribution, 2015-2019)

Statements & Fairness Opinions

The Fairness Opinion's result is usually in agreement with the recommendations of the target company statements as can be seen in Figure 18. Similarly to last year, we observe a large number of all the cases in 2019 with divergence between fairness opinion's and statement's recommendations (31.3%). The reason for that is an increasing number of opinion statements without recommendation. In 8 cases the supervisory board and executive boards gave no recommendation to the shareholders whether to reject or accept the bid, even though for 6 of them the opinion writers testified the adequacy of the offer and for the other 2 opinions concluded the offer price to be inappropriate. For one of the takeover offers the target's management recommended an acceptance of the offer, while the fairness opinion stated that the offer price was inadequate: In view of strategical importance the board of Biofrontera AG encouraged its shareholders to accept the economically unjustified partial takeover offer from Maruho Deutschland GmbH. Fairness Opinions to all delisting tender offers were in consensus with statements' recommendation and testified the adequacy of the offer.

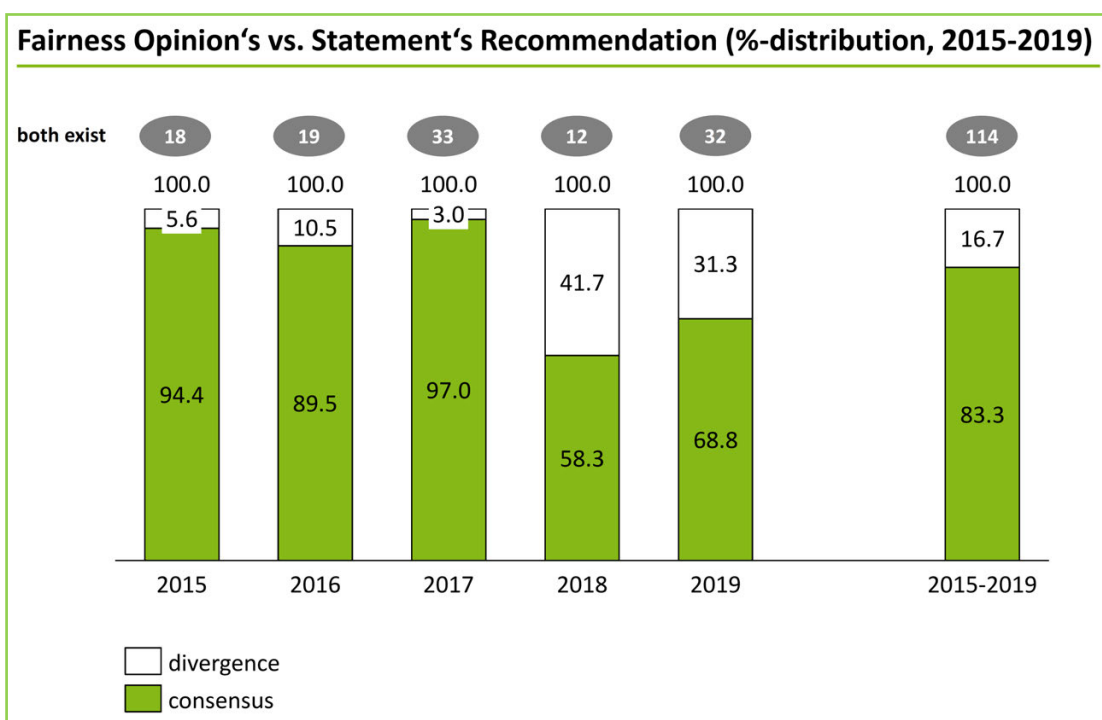


Figure 18: Fairness Opinion's vs. Statement's Recommendation (%-distribution, 2015-2019)

Statements & Fairness Opinions

Fairness opinions are written by different originators which can be divided into four groups: consultants, auditors, private banks and major banks (commercial/investment banks). The market share of commercial/investment banks drops to 50% in 2019, yet remains prevailing. The market share of consultants in turn regained its position after a large drop last year, and increased up to 21.9% in 2019. The auditors kept their second largest market share of 25%, whereas private banks hold only minor market position following the tendency developed after 2015. Considering 2015 to 2019 cumulated results, more than half of all the fairness opinions were provided by major banks (53.5%) while consultants and auditors have the market shares almost equal in size, and private banks being least represented. All developments over the past 5 years are shown in Figure 19¹⁰.

Out of 3 fairness opinions issued to delisting tender offers in 2019, 2 were written by auditors and 1 by consultant.

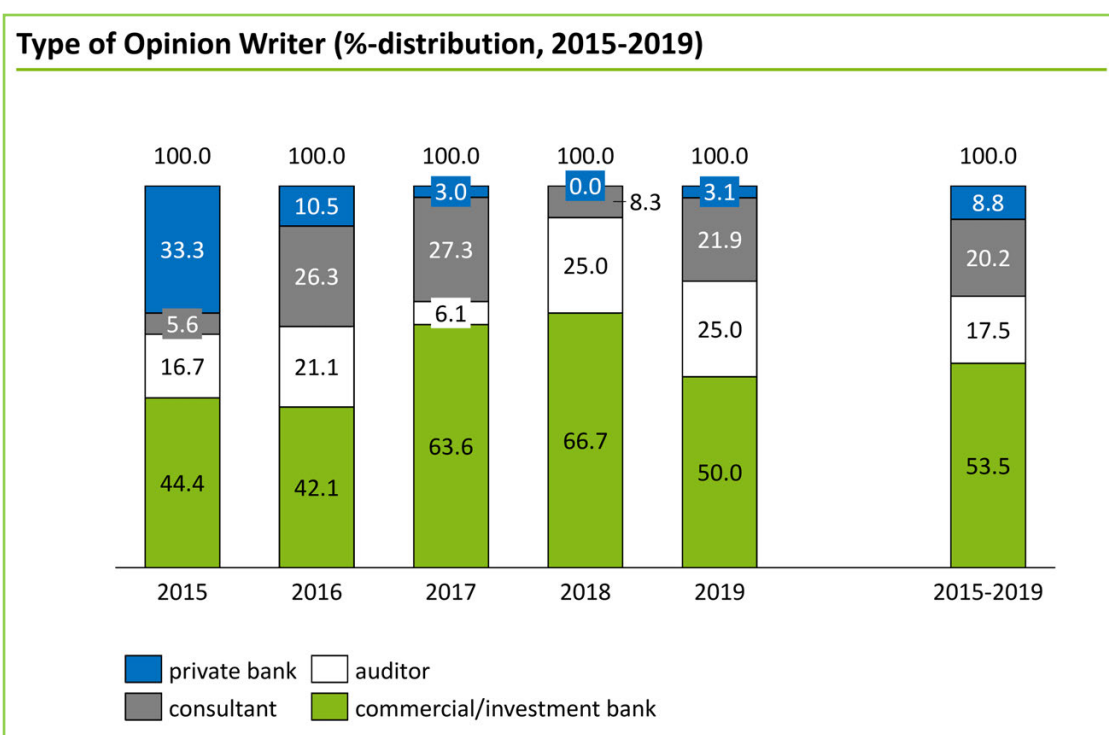


Figure 19: Type of Opinion Writer (%-distribution, 2015-2019)

¹⁰ Delisting tender offers are excluded from this overview.

Success Rates

The takeover bid success rates are of particular interest. However finding a meaningful measure for “success” is not trivial. As in the preceding reports we employ two different measures for “success”. We start by considering a takeover bid’s success in terms of two states: completed or discontinued acquisition. We define a binary variable “success” as equal to one if a bidder reached an ownership share of at least 50% or the minimum acceptance threshold determined by the bidder within the defined term of acceptance according to WpÜG¹¹, and zero otherwise. Since delisting offers usually do not aim at gaining control of the target by takeover, we set them apart.¹²

Using this definition, we find that 64.9% of takeover offers over the past 5 years were successful. The other 35.1% of takeover bids failed either in round one (23.4%) or thereafter (11.7%). The distribution of takeover bid’s outcomes over 2015-2019 as well as the cumulated results are presented in figure 20. The success rate of the takeover offers in 2019 was the lowest for the last five years: 50%. Furthermore, even the additional bid-rounds for most of the offers (in case available) did not lead to an acquisition success.

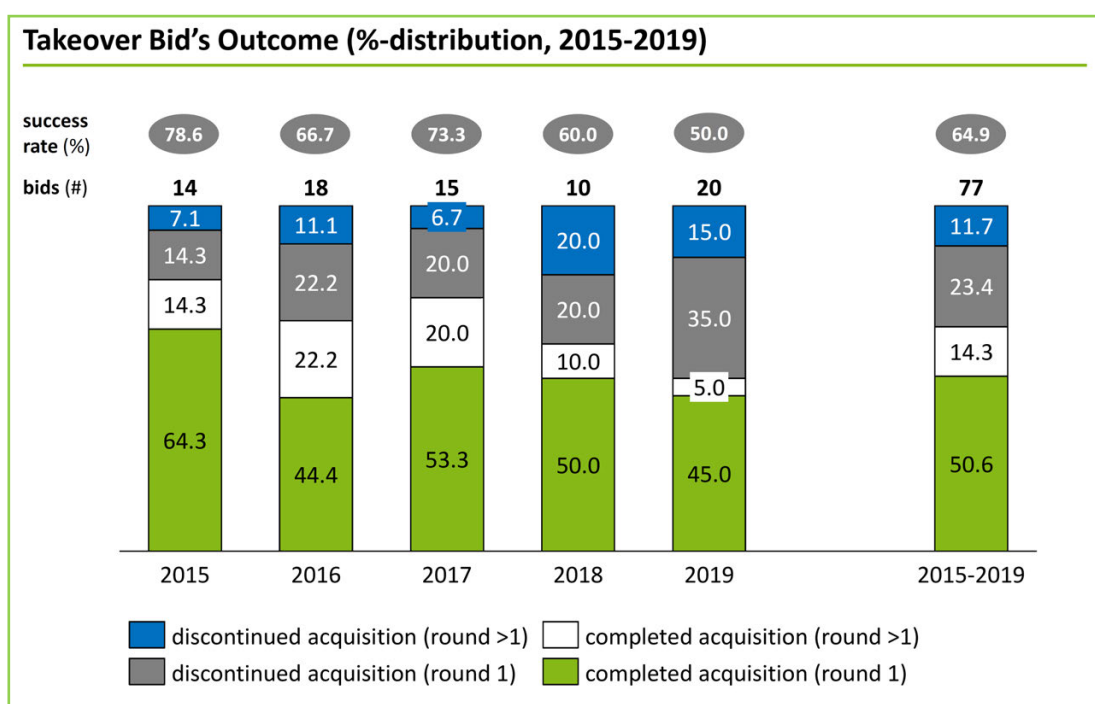


Figure 20: Takeover Bid’s Outcome (%-distribution, 2015-2019)

¹¹ We exclude cases where the ownership share has already been above 50% prior to the six months period before the bid. Cases where the bidder has gained a majority within the six months before the bid due to buying arrangements with blockholders are considered as successful.

¹² This yields to discrepancy compared to the previous takeover report.

Success Rates

Which factors influence the takeover bid's success? While academic studies dealing with this question usually perform complex multivariate analyses, this report concentrates on the offer premium as the most important factor.

Our (obvious) hypothesis is that takeover offers with higher premium c.p. have higher probability of success. Our initially defined measure "success" reflects largely the consummation of the deal regardless of the intermediate negotiation process. Thus, for 2012-2019 we observe a remarkably high share of acquisitions among takeover bids with a zero offer premium over VWAP (73.1%) which are considered as "completed" according to the above measure. This can be explained by bidder's prior arrangements with blockholders of a target company. On average, the takeover offers with a premium of 15-25% have the highest success rate. The success rate observed in 2019 (50% on average) has a very low correlation with the offer premium: an average 50% takeover bid success holds for almost all premium ranges. Each represented interval of a premium range in 2019 comprises at least three takeover bids.

Figure 21 depicts the distribution of takeover bid success in 2019 compared to the cumulated percentages of 2012 to 2019.



Figure 21: Takeover Bid Success per Offer Premium Range (% , 2019 & 2012-2019 cumulated)

* We aligned the clustering for the success rate to the one for the premium from above.

Success Rates

Looking at all delisting tender offers since 2016, there were only 4 bids where the bidder held less than 50% ownership share prior the bid. Three of them can be categorized as successful: in 2 cases the bidders held slightly below 50% stake at bid announcement and slightly above 50% after the acceptance period; in the other case the bidder has gained 75% shares due to buying arrangements with blockholders.

Due to the strong minority protection in the German Stock Corporation Akt (AktG) the success definition used above is ambiguous. E.g. the mandatory takeover offer of Hevella Capital GmbH & Co. KGaA for NeXR Technologies SE shares was submitted with a premium of 0% and had an acceptance rate of 1.6%. Regardless, the offer was categorized as “successful” since the bidder has gained a majority within the six months before the bid due to buying arrangements with the blockholders. On the other hand, the voluntary offer of Opal BidCo GmbH to OSRAM Licht AG with a premium of 25% was accepted by 30.1% of the shareholders, but still was categorized as “unsuccessful” as the majority and the minimum acceptance threshold were not reached.

A recent working paper is observing effects of various takeover success factors, and ETF ownership in particular, in a German setting¹³. This study analyzes 323 German takeover offers between 2006 and 2018. When constructing a “takeover success” variable the following specifics shall be considered. In 43% of the cases the offer was made while the acquirer already holds the majority of the shares of the target company. According to the German Stock Corporation Act (AktG) a domination and profit and loss transfer agreement (DPLTA), allowing for a direct control of company’s management board by major shareholder, requires a min. 75% vote in a shareholder meeting. There are therefore many voluntary offers conditional on the acquisition of at least 75%. However, using a minimum acceptance threshold as a binary success variable generally is not advisable as only 26% of all offers in Germany between 2006 and 2018 contain such a threshold. (Mandatory offers are not allowed to be conditional.)

Finally, when analyzing the impact of certain variables as e.g. offer premium on takeover success the binary success variables do not always allow for meaningful results and interpretations as they do not take the toehold of the bidders when making the offer into account. Obviously crossing the 75% threshold requires a lower premium when already owning 74.5% of the shares compared to start the offer from 0% ownership. So the success measure used has to take the number and fraction of outstanding shares not yet under control of the bidder into account.

¹³ Dobmeier/Lavrova/Schwetzler, Index Fund and ETF Ownership and the German Market for Corporate Control, https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3443622

Success Rates

As a second alternative measure, we define a “success rate” variable as the number of shares acquired by the bidder during the full acceptance period divided by the number of shares not under bidders control when the offer is launched. This variable takes the bidders toehold into account and has a value range of 0% to 100% for all offers.

Figure 22 represents the average success rates of takeover bids across offer premium intervals in 2019 compared to the cumulated average values of 2012 to 2019.

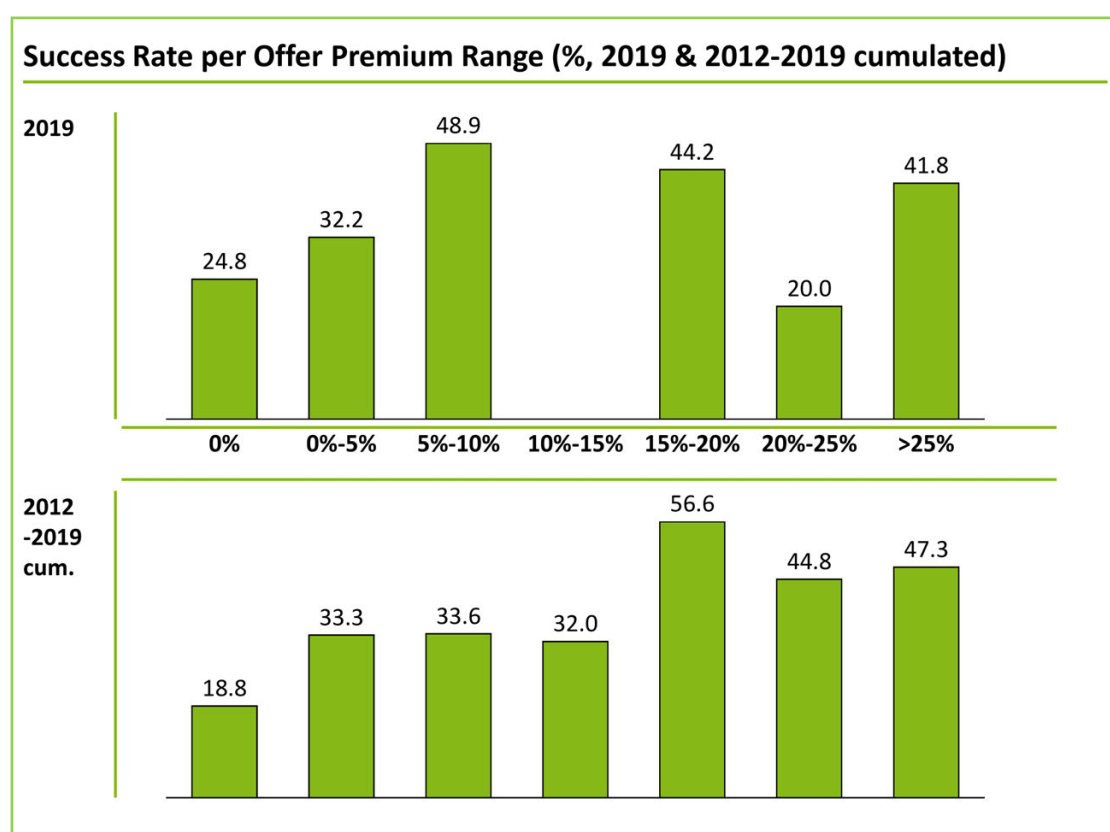


Figure 22: Success Rate per Offer Premium Range (% , 2019 & 2012-2019 cumulated)

Indeed, for 2012-2019 we observe the hypothesized relationship: cumulated average success rates are higher for the ranges with higher offer premiums in it. Yet, we also observe that an offer premium is not the only determining factor for a takeover success. In particular, the price offered by Commerzbank Inlandsbanken Holding GmbH to the shareholders of comdirect bank AG included a premium of 22% and was testified by 2 external experts, but the bidder obtained only 0.32% of the target shares not owned by the bidder through the offer.

Success Rates

Figure 23 is a scatter plot with the trend line (line of best fit) that displays the link between success rate and offer premium of takeover bids for the cases from 2012 to 2019.

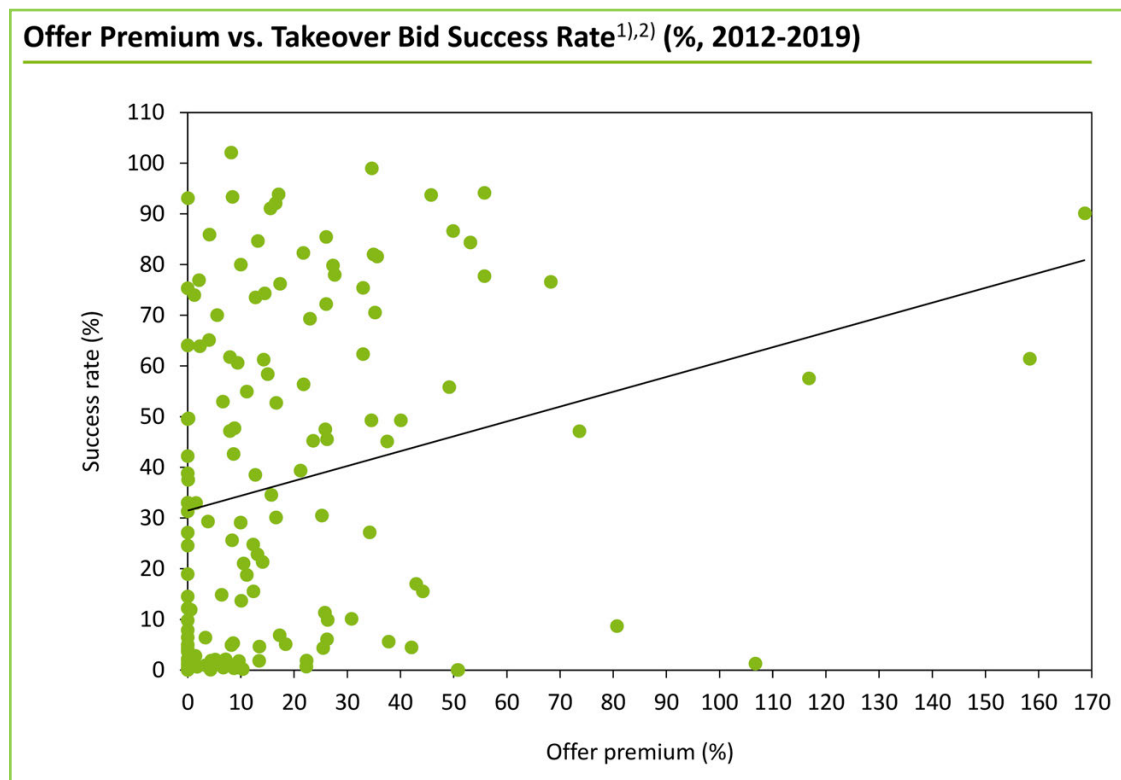


Figure 23: Offer Premium vs. Takeover Bid Success Rate (% , 2012-2019)

1) Only takeover bids considered where the ownership share has already been below 50% prior to the six months period before the bid

2) Offer premium = (Offer price) / (3-Month Weighted Average Stock Price) – 1

Success Rates

Finally, we analyze the connection between the statement's recommendations and the Fairness Opinion's results concerning the success rate of takeover bids. Figure 24 illustrates the analysis in a cross table. It shows that the success rate rises if both the statement and the Fairness Opinion give a positive recommendation (2015-2019: 51.4%). One possible explanation is the fact that target companies that recommend accepting an offer in their statement have no reason to publish a Fairness Opinion that might have a negative opinion on the adequacy of the offer. For the cases when both the target company's statement and the Fairness Opinion took a negative position, the success rate is relatively low (24.9%) but not negligible. A closer analysis of these cases reveals that a previous agreement with a large blockholder of the target company was the foundation of the bid's acceptance. More precise, before publishing the public takeover bid, the bidder already had already collected a sufficient number of selling commitments from target blockholders to achieve the majority.

Success Rate by Statement & FO recommendation (% , 2015-2019 cumulated)				
Statement	Fairness Opinion			
	fair	not mentioned	inadequate	
	acceptance	51.4%	NA	9.8%
	neither	22.0%	NA	21.4%
	rejection	84.6%	NA	24.9%

Figure 24: Success Rate by Statement & FO recommendation (% , 2015-2019 cumulated)

* Note that this table uses the second success definition from above. This explains the (on first glance) confusing combination of a success rate of 84.6% with a positive fairness opinion and a negative management recommendation. It was a single case in 2016: The Fairness Opinion of UBS Deutschland AG concerning Marsella Holdings S.a.r.l. takeover bid for Braas Monier Building Group S.A. testified the adequacy of the offer. However, the supervisory board and executive board gave the recommendation to reject the bid. At an offer premium of 13.22% and a toehold (ownership fraction at the moment of the bid) of 36.25% the additional fraction of votes/shares obtained during the acceptance period was 53.93%. Thus, the success measure from above is $53.93\% / (100\% - 36.25\%) = 84.6\%$.

Takeover Case Study: OSRAM Licht AG

On July 4, 2019, Luz (C-BC) Bidco GmbH (Luz Bidco) announced their decision to launch the public takeover offer to all shareholders of the Munich-based OSRAM Licht AG (OSRAM). In this context, Luz Bidco acted as the joint entity of Bain Capital Investors, LLC (Bain Capital), and Carlyle Group L.P. (Carlyle). Bain Capital and Carlyle offered OSRAM shareholders EUR 35.00 per share, including a 22.29% premium compared to the minimum offer price according to sec. 4 and 5 of the German Takeover Act (WpÜG).

Sparked through ongoing speculations of an upcoming takeover and poor operating performance results, OSRAM's share price though underwent a volatile development since November 2018. Moreover, pessimistic performance forecasts and warnings of profit reduction led to a share price drop in January 2019. First rumors regarding the potential acquisition of OSRAM by Bain Capital became public on November 20, 2018. The news led to a prompt increase of OSRAM's previous closing price of EUR 33.78 by 16.3%. On February 13, 2019, OSRAM furthermore confirmed discussions with Bain Capital and Carlyle. This was followed by a peak in share prices of EUR 41.46 on February 15, 2019. Although OSRAM's share prices declined afterwards, the decrease is much smaller than previously expected by analysts suggesting a positive impact of the takeover speculations.

On July 22, 2019, the bidding consortium publicized the voluntary public takeover bid offering a takeover price of EUR 35.00 and conditioned to a minimum acceptance threshold of 70.0%. The offer followed an Investor Agreement dated as of July 4, 2019, in which OSRAM and the two investors already agreed upon the main conditions of the offer as well as their future collaboration and strategy. The executive and non-executive boards of Directors of OSRAM concluded that the takeover is in the general interest of the firm, the compensation is financially adequate and advised shareholders to accept the offer.

On August 7, 2019, OSRAM's biggest institutional shareholder with 9.4%, Allianz Global Investors (Allianz GI), released a press statement that they consider the price to be inadequately low and will not accept the offer. Immediately, OSRAM's share price dropped significantly by 6.5% to EUR 31.47.

Shortly before the end of the acceptance period on September 5, 2019, one of OSRAM's competitors, ams AG (ams), announced a counter bid regarding all OSRAM shares through the bidding consortium of Opal BidCo GmbH on August 21, 2019. As publicized on September 3, 2019, ams offers a takeover price of EUR 38.50 per OSRAM share and has a minimum acceptance threshold of 70.0%, which was later reduced to 62.5%. The offer price represents a 4.05% premium compared to the minimum offer price according to

Takeover Case Study: OSRAM Licht AG

sec. 4 and 5 of the German Takeover Act (WpÜG). Due to this offer, the acceptance period of the Luz Bidco offer was extended to October 1, 2019.

On September 27, 2019 - with the sole aim to win the takeover battle - ams purchased 100 shares on the London stock exchange for EUR 41, which lead to a statutory increase of the offer price. After the close of trading on October 1, 2019, Bain Capital and Carlyle announced that the takeover offer was not successful and annulled it since it failed to reach the minimum acceptance threshold of 70.0% having an acceptance rate of only 0.7% of all shares. The offer of ams was, however, also unsuccessful. While acquiring 30.1% of OSRAM shares through the offer and 19.9% on the market, ams still did not meet the reduced minimum acceptance threshold of 62.5%. In particular, activist investors did not tender sufficient shares into the takeover offer as they were speculating on an additional backend premia subsequent to the takeover offer.

Section 26 of the WpÜG stipulates a blocking period of one year, within which a new takeover bid by the bidder for the same target company is not permitted if the bidder has previously failed with an offer. Nonetheless, the Germany's Federal Financial Supervisory Authority (BaFin) granted a permission to ams for a second offer from another wholly-owned subsidiary: AMS Offer GmbH. On October 18, 2019, ams submitted a renewed takeover offer, that compared to the previous offer had a takeover price of EUR 41 per OSRAM share and a minimum acceptance threshold of 55.0%. At this time, the activist hedge funds had already interfered in the takeover and within the following weeks continued massively investing into OSRAM. Towards the end of the acceptance period, the activist shareholders jointly held more than 35% of OSRAM shares. The hedge funds speculated on selling their shares to ams after the successful takeover with a significant markup. On December 10, 2019, ams announced that the second takeover offer had been successful. In total, ams acquired 59.3% of all OSRAM shares. Within the extended acceptance period, ams then acquired 59.9%.

By the extraordinary general meeting on January 24, 2020, ams shareholders approved a EUR 1.65bn capital increase to fund the OSRAM takeover. On February 10, 2020, holding just about 60% OSRAM shares ams announced an intention to sign a DPLA with OSRAM. An agreement will require an approval from 75% of OSRAM shareholders at an extraordinary shareholder meeting. Ams expects to close the takeover transaction in the second quarter of 2020.

Takeover Case Study: OSRAM Licht AG

Altogether, the takeover of OSRAM was exceptionally long, and has resulted in a successful acquisition only after the minimum acceptance threshold was lowered to 55%. The outcome of the takeover was largely influenced by the acceptance behavior of the hedge funds.

Transaction Details 2019

The last chapter of this report gives a detailed overview of all takeovers and takeover bids in 2019, see Figure 25. For each transaction we provide all parameters that have been analyzed on an aggregated level in the previous chapters.

Offer date	Bidder	Target	Offer type	Investor type	Bid round	Payment method	Share before offer	Share before offer from major inv.	Acceptance rate
31/01/2019	ZEAL Network SE	Lotto 24 AG	Takeover	SI	1	Share	0.0%	0.0%	93.0%
15/02/2019	Voltaire Finance B.V.	Wild Bunch AG	Takeover	SI	1	Cash	8.0%	8.0%	28.8%
11/03/2019	Warwick Holding GmbH	VTG Aktiengesellschaft	Delisting	FI	1	Cash	71.2%	0.0%	9.5%
20/03/2019	Shareholder Value Beteiligungen AG, Shareholder Value Management AG	Intershop Communications AG	Takeover	FI	1	Cash	29.2%	0.0%	1.9%
28/03/2019	Pulver BidCo GmbH	Scout24 AG	Takeover	FI	1	Cash	5.3%	0.0%	28.5%
01/04/2019	Fosun International Limited	TOM TAILOR Holding SE	Takeover	FI	1	Cash	35.4%	0.0%	41.4%
15/04/2019	Deutsche Balaton Aktiengesellschaft	EASY SOFTWARE AG	Takeover	FI	1	Cash	21.4%	1.6%	0.7%
15/04/2019	Maruho Deutschland GmbH	Biofrontera AG	Takeover	SI	1	Cash	20.3%	0.0%	0.6%
15/04/2019	Maruho Deutschland GmbH	Biofrontera AG	Takeover	SI	2	Cash	20.3%	0.0%	7.8%
24/05/2019	Pierer Industrie AG	SHW AG	Delisting	SI	1	Cash	50.2%	0.0%	24.6%
21/06/2019	Deutsche Balaton Biotech AG, DELPHI Unternehmensberatung AG	Biofrontera AG	Takeover	FI	1	Cash	25.7%	6.7%	0.0%
21/06/2019	Deutsche Balaton Biotech AG, DELPHI Unternehmensberatung AG	Biofrontera AG	Takeover	FI	2	Cash	25.7%	6.7%	8.4%
24/06/2019	Advert Finance B.V.	Fyber N.V.	Takeover	FI	1	Cash	84.8%	8.1%	9.3%
27/06/2019	Accenture Digital Holdings GmbH	SinnerSchrader AG	Delisting	FI	1	Cash	68.7%	0.0%	11.8%
05/07/2019	Traviata II S.a r.l.	Axel Springer SE	Takeover	FI	1	Cash	45.4%	0.0%	42.5%
08/07/2019	TE Connectivity Sensors Germany Holding AG	First Sensor AG	Takeover	SI	1	Cash	0.0%	0.0%	72.2%
10/07/2019	EP Global Commerce VI GmbH	Metro AG	Takeover	FI	1	Cash	17.4%	5.4%	24.0%
22/07/2019	Luz (C-BC) Bidco GmbH	OSRAM Licht AG	Takeover	FI	1	Cash	0.0%	0.0%	0.7%
23/07/2019	united vertical media GmbH	11 88 0 Solutions AG	Takeover	SI	1	Cash	45.5%	44.5%	26.8%
31/07/2019	Highlight Communications AG	Constantin Medien AG	Delisting	SI	1	Cash	79.4%	0.3%	14.2%
03/09/2019	Opal BidCo GmbH	OSRAM Licht AG	Takeover	SI	1	Cash	1.1%	0.0%	0.7%
03/09/2019	Opal BidCo GmbH	OSRAM Licht AG	Takeover	SI	2	Cash	1.1%	0.0%	30.1%
25/10/2019	Ersa IV S.à r.l.	AGROB Immobilien AG	Takeover	FI	1	Cash	0.0%	0.0%	58.3%
30/10/2019	Commerzbank Inlandsbanken Holding GmbH	comdirect bank Aktiengesellschaft	Takeover	SI	1	Cash	82.3%	0.0%	0.3%
31/10/2019	Photon Management GmbH	PNE AG	Takeover	FI	1	Cash	0.6%	0.0%	41.2%
31/10/2019	Photon Management GmbH	PNE AG	Takeover	FI	2	Cash	0.6%	0.0%	39.1%
07/11/2019	ams Offer GmbH	OSRAM Licht AG	Takeover	SI	1	Cash	20.0%	0.0%	38.1%
08/11/2019	Nucleus Beteiligungs GmbH	All for One Group AG	Takeover	FI	1	Cash	50.1%	0.0%	0.1%
15/11/2019	GE Getreide Einlagerungs AG	Kremlin AG	Delisting	FI	1	Cash	23.4%	0.0%	0.0%
18/11/2019	Acciona S.A.	Nordex SE	Takeover	SI	1	Cash	36.3%	0.0%	0.1%
29/11/2019	Hevella Capital GmbH & Co. KGaA	NeXR Technologies SE	Takeover	FI	1	Cash	56.2%	26.2%	1.6%
18/12/2019	Aroundtown SA	TLG IMMOBILIEN AG	Takeover	SI	1	Share	0.3%	0.0%	69.8%

Figure 25: Transaction Details — Part 1

Transaction Details 2019

Offer date	Bidder	Target	Offer premium	Take-over value (m EUR)	CAR (-/+1) Bidder	CAR (-/+1) Target	Joint Statement Recomm.	FO exists	FO result (Adequacy)
31/01/2019	ZEAL Network SE	Lotto 24 AG	0.0%	325.0	-6.0%	4.6%	Accept	yes	yes
15/02/2019	Voltaire Finance B.V.	Wild Bunch AG	0.0%	11.9		59.8%	Neither nor	no	
11/03/2019	Warwick Holding GmbH	VTG Aktiengesellschaft	1.6%	439.4		4.0%	Neither nor	no	
20/03/2019	Shareholder Value Beteiligungen AG, Shareholder Value Management AG	Intershop Communications AG	1.5%	38.6	-0.7%	1.5%	Neither nor	yes	yes
28/03/2019	Pulver BidCo GmbH	Scout24 AG	16.6%	4,686.5		10.9%	Accept	yes	yes
01/04/2019	Fosun International Limited	TOM TAILOR Holding SE	0.0%	63.2	1.5%	6.9%	Neither nor	yes	no
15/04/2019	Deutsche Balaton Aktiengesellschaft	EASY SOFTWARE AG	3.4%	24.8	-0.3%	4.2%	Reject	yes	no
15/04/2019	Maruho Deutschland GmbH	Biofrontera AG	15.8%	234.8		3.3%	Accept	yes	no
15/04/2019	Maruho Deutschland GmbH	Biofrontera AG	26.3%	256.1		3.3%	Accept	yes	no
24/05/2019	Pierer Industrie AG	SHW AG	0.0%	63.7	-3.5%	-1.7%	Neither nor	no	
21/06/2019	Deutsche Balaton Biotech AG, DELPHI Unternehmensberatung AG	Biofrontera AG	13.2%	238.8		3.3%	Reject	yes	no
21/06/2019	Deutsche Balaton Biotech AG, DELPHI Unternehmensberatung AG	Biofrontera AG	25.8%	265.3		3.3%	Reject	yes	no
24/06/2019	Advert Finance B.V.	Fyber N.V.	158.3%	17.1		69.7%	Neither nor	yes	yes
27/06/2019	Accenture Digital Holdings GmbH	SinnerSchrader AG	0.1%	46.3		2.2%	Accept	no	
05/07/2019	Traviata II S.a r.l.	Axel Springer SE	27.7%	3,708.1		9.9%	Accept	yes	yes
08/07/2019	TE Connectivity Sensors Germany Holding AG	First Sensor AG	26.1%	289.0		7.8%	Accept	yes	yes
10/07/2019	EP Global Commerce VI GmbH	Metro AG	9.9%	4,789.9		5.6%	Reject	yes	no
22/07/2019	Luz (C-BC) BidCo GmbH	OSRAM Licht AG	22.3%	3,389.7		14.5%	Accept	yes	yes
23/07/2019	united vertical media GmbH	11 88 0 Solutions AG	34.5%	19.5		9.1%	Neither nor	yes	yes
31/07/2019	Highlight Communications AG	Constantin Medien AG	23.0%	44.3	2.9%	14.2%	Accept	yes	yes
03/09/2019	Opal BidCo GmbH	OSRAM Licht AG	25.2%	3,686.0		4.4%	Accept	yes	yes
03/09/2019	Opal BidCo GmbH	OSRAM Licht AG	25.2%	3,686.0		4.4%	Accept	no	
25/10/2019	Ersa IV S.à r.l.	AGROB Immobilien AG	15.1%	118.4		29.4%	Accept	yes	yes
30/10/2019	Commerzbank Inlandsbanken Holding GmbH	comdirect bank Aktiengesellschaft	22.4%	285.8		-0.5%	Neither nor	yes	yes
31/10/2019	Photon Management GmbH	PNE AG	21.2%	303.6		0.5%	Accept	yes	yes
31/10/2019	Photon Management GmbH	PNE AG	21.2%	303.6		0.5%	Accept	no	
07/11/2019	ams Offer GmbH	OSRAM Licht AG	8.8%	3,177.0		3.8%	Accept	yes	yes
08/11/2019	Nucleus Beteiligungs GmbH	All for One Group AG	0.0%	103.3		6.2%	Reject	no	
15/11/2019	GE Getreide Einlagerungs AG	Kremlin AG		0.0 *		-	Neither nor	no	
18/11/2019	Acciona S.A.	Nordex SE	0.0%	703.0	-5.9%	7.4%	Neither nor	yes	no
29/11/2019	Hevella Capital GmbH & Co. KGaA	NeXR Technologies SE	0.0%	2.2		17.3%	Neither nor	yes	yes
18/12/2019	Aroundtown SA	TLG IMMOBILIEN AG	5.5%	2,957.2	2.3%	3.5%	Accept	yes	yes

Figure 25: Transaction Details — Part 2

* Takeover value EUR 10.5 thousand

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