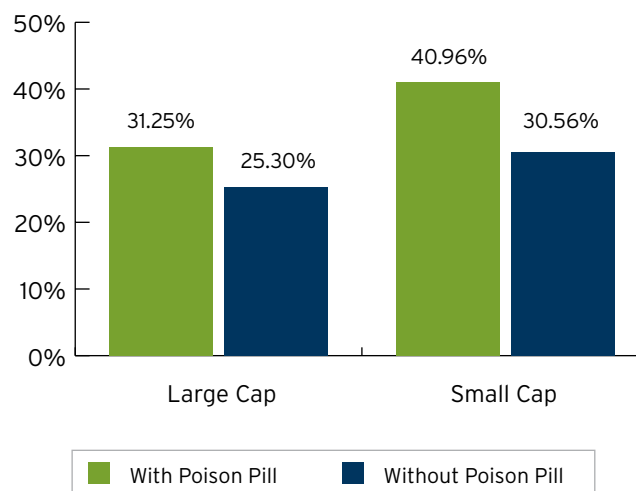


POISON PILLS AND SHAREHOLDER VALUE: 1992-1996

Georgeson's Research Group analyzed takeover data between 1992 and 1996 to determine whether shareholder rights plans (commonly known as "poison pills") had any measurable impact on shareholder value. Our findings are summarized as follows:

- Premiums paid to acquire target companies with poison pills were on average eight percentage points higher than premiums paid for target companies that did not have poison pills. This finding is consistent with earlier Georgeson studies and persisted after controlling for fundamental differences between pill and non-pill companies.
- We estimate that poison pills contributed an additional \$13 billion in shareholder value during the last five years, and that the shareholders of acquired companies without pills gave up \$14.5 billion in potential premiums.
- The presence of a poison pill at a target company did not increase the likelihood of the withdrawal of a friendly takeover bid nor the defeat of a hostile one.
- Poison pills did not reduce the likelihood of a company becoming a takeover target: companies with pills had a slightly higher takeover rate than companies without pills.

Takeover Premium and Poison Pills
By Target Market Cap
(Large Cap > = \$b., Small Cap < \$1b.)

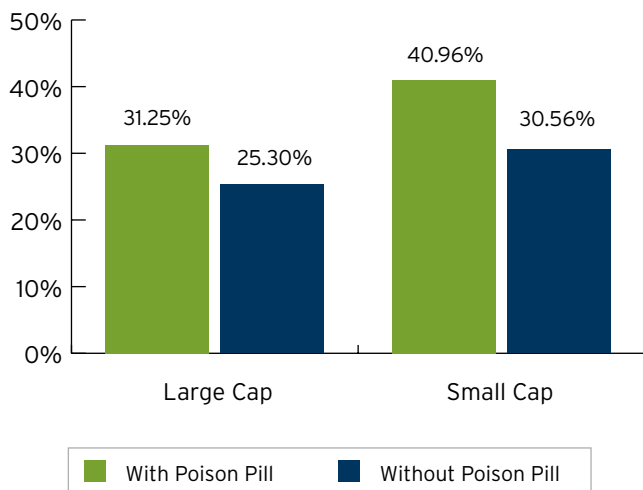


I - POISON PILLS AND TAKEOVER PREMIUMS

Shareholders of target companies with poison pills received significantly higher takeover premiums than did shareholders of target companies without poison pills in transactions completed between 1992 and 1996. We looked at 319 takeover transactions (mergers, acquisitions, tender offers, and acquisitions of majority interest) completed in the five-year period ending December 31, 1996, with deal size greater than \$250 million.¹ There were 105 acquired companies that had a poison pill six months prior to the first bid. These companies received a significantly higher takeover premium relative to companies that did not have a poison pill: Premiums paid for companies with poison pills averaged almost eight percentage points, or 26%, higher than premiums for non-pill companies. Takeover premium was measured as the price appreciation from one week prior to the announcement of the first bid until the transaction's completion date, net of the change in the S&P500 index over the same period (to account for market factors).

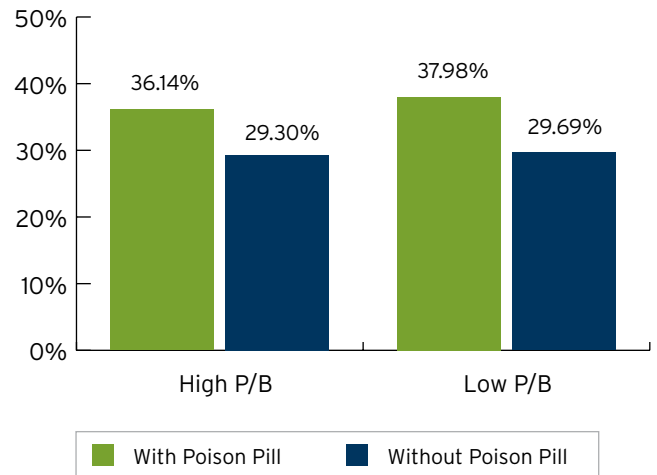
The higher premiums received by target companies with poison pills were not fully attributable to these companies' fundamental differences from non-pill companies. Target companies with poison pills typically had a larger market capitalization, a smaller price-to-book ratio, and a greater proportion of hostile bids. After controlling for these differences, pill companies still appeared to receive higher premiums. For instance, premiums for small cap companies (market capitalization less than \$1 billion) with pills averaged over 10 percentage points more than premiums for small caps without pills, whereas premiums for large caps with pills were about 6 percentage points higher than those for similar-sized non-pill companies:

Takeover Premium and Poison Pills
By Target Market Cap
(Large Cap > = \$b., Small Cap < \$1b.)



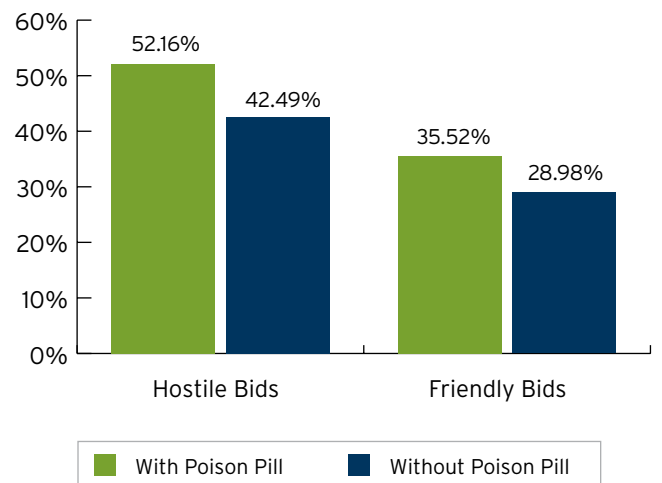
In addition to having larger average market caps, target companies with poison pills on average had lower price-to-book ratios. However, as the following graph shows, the lower price-to-book ratio does not seem to be a factor in explaining the higher premiums received by pill companies:

Takeover Premium and Poison Pills
By Price-to-Book Ratio
(High P/B > 2.0, Low P/B < 2.0)



Target companies with poison pills also had a larger proportion of hostile bids, which typically involve higher premiums. However, shareholders of companies with pills received higher premiums regardless of whether the takeover attitude was friendly or hostile:

Takeover Premium and Poison Pills
By Bid Attitude



	Number	Average Premium	Median Market Cap	Median P/B Ratio	Hostile Bids
Targets with Poison Pill	105	37.26%	\$677	1.82	11
Targets without Poison Pill	214	29.48%	\$440	2.21	8
All	319	32.04%	\$472	1.99	19

After simultaneously controlling for differences in market cap, price-to-book ratio, and bid attitude, we found that takeover premiums received by target companies were higher by an average of nine percentage points when the company had a poison pill. In order to determine whether the higher premiums received by target companies with pills are due to their fundamental differences from non-pill companies, we implemented regression analysis techniques that simultaneously controlled for those differences. Our analysis showed that takeover premiums exhibited a statistically significant correlation with market cap and bid attitude, with premiums being higher for a small-cap target or for a hostile bid. Premiums also seemed to increase with a higher price-to-book ratio, but the correlation was not statistically significant.² Nevertheless, after controlling for these factors, we still found that companies with pills received significantly higher premiums than those without.

From 1992 to 1996, poison pills appear to have added \$13 billion in shareholder value for target companies, a 32.3% increase in premiums. Since poison pills are associated with the creation of additional value for the shareholders of target companies, we can calculate the pills' possible contribution, in dollar terms, to shareholder wealth. Between 1992 and 1996, the 105 companies that had a poison pill and were the target of a successful takeover had an aggregate market value of \$180 billion one week prior to the announcement of the takeover bid. The aggregate value of these completed deals was \$233 billion, indicating that shareholders received \$53 billion in takeover premiums. Using the correlations established by our regression analysis, we estimate that premiums would have totaled only \$40 billion had these companies not had poison pills.

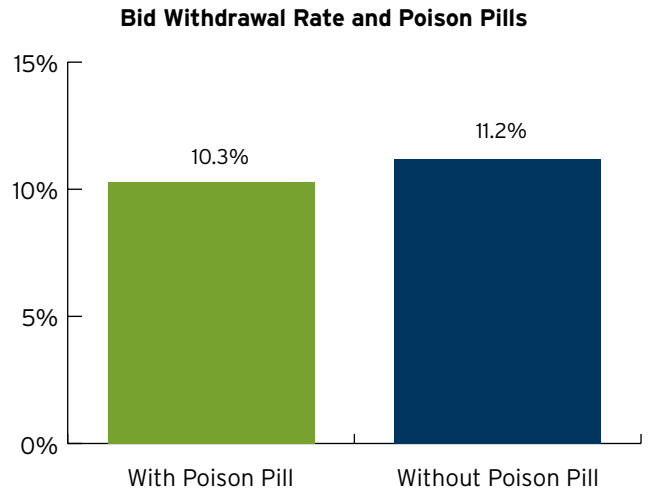
The shareholders of target companies that did not have poison pills gave up \$14.5 billion in possible additional premiums. Between 1992 and 1996, 214 companies without poison pills were acquired for a total of \$202 billion. Their shareholders received \$46.5 billion in takeover premiums. Had these companies received the average premiums paid to pill companies, shareholders would have earned \$61 billion in total premiums, a 30.9% increase.

II - POISON PILLS AND BID COMPLETION RATE

Clearly, poison pills are associated with a substantial positive impact on shareholder value in successful take over situations. Some critics argue, however, that pills damage shareholders by defeating some potentially successful takeover bids. We tested the validity of this argument by analyzing whether poison pills had any impact on the likelihood of the withdrawal of a takeover bid.

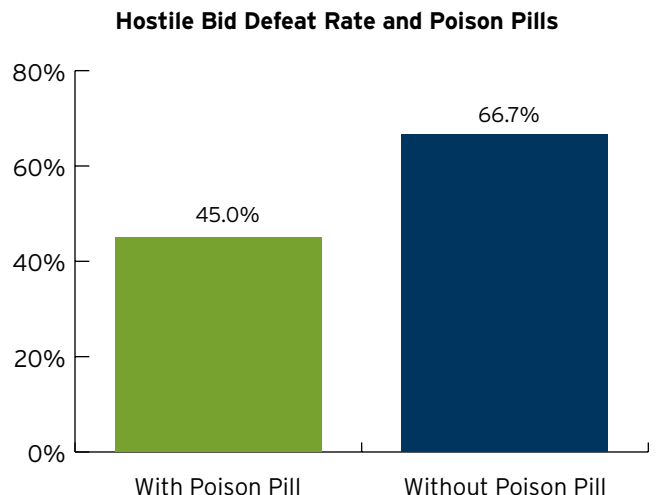
We found that announced takeover bids were not less likely to be completed when the target company had a poison pill. Deals were actually more likely to be completed when the target had a poison pill. Between 1992 and 1996, 39 takeover bids were withdrawn without the target company being ultimately acquired by another bidder. The target company had a poison pill in only 12 (31%) of those 39 cases, almost the same ratio as in completed deals (33% of acquired companies had pills). This meant that the bid withdrawal rate was lower when the target company had a poison pill. Only 12 (10.3%) of the

117 takeover bids for companies with poison pills were withdrawn, as opposed to 27 (11.2%) of the 241 bids for companies without pills:



Regression analysis confirmed that the presence of a poison pill did not increase the likelihood of the deal being withdrawn. In fact, we find that a poison pill actually made it more likely for the deal to go through. The analysis controlled for differences in premiums, market capitalization, price-to-book ratio, and bid attitude.

The presence of a pill did not increase the likelihood of defeating a hostile bid. These bids typically offer higher premiums. If pills were to make the success of hostile bids less likely, the economic damage to shareholders would be significant. Between 1992 and 1996, 19 hostile bids were successful and 25 were defeated (with the target remaining independent). Eleven (58%) of the 19 successful hostile takeovers had a poison pill, compared with only nine (36%) of the 25 hostile bids that were defeated. These figures indicate that target companies with poison pills had a lower hostile bid defeat rate (45% – nine defeats and 11 completions) than non-pill target companies (66.7% – 16 defeats and eight completions):



Based on these findings, it is unlikely that poison pills deterred hostile takeovers. A regression analysis that simultaneously controlled for offered premium, market cap, and price-to-book ratio confirmed that the likelihood of defeating a hostile takeover bid did not increase with the presence of a poison pill. The likelihood of defeating a hostile bid actually decreased when the target company had a poison pill, although the decrease was not statistically significant.

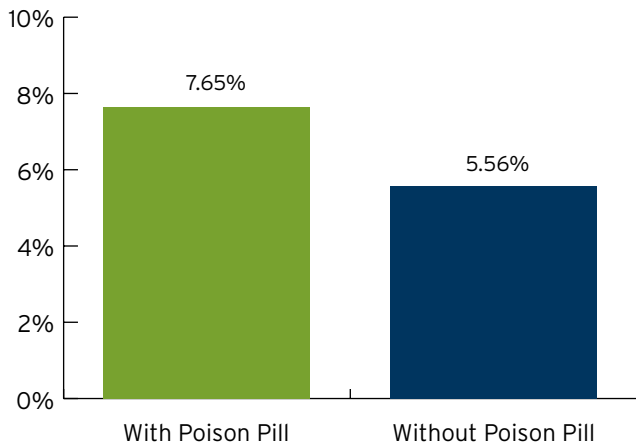
The explicit purpose of poison pills is to increase target companies' power to negotiate higher take over prices and thus maximize shareholder value. The effectiveness of pills in achieving this goal is supported by our findings that companies with poison pills have been able to obtain significantly larger takeover premiums (relative to non-pill companies), but were not more likely to defeat announced takeover bids.

III - POISON PILLS AND TAKEOVER FREQUENCY

Some critics argue that having a poison pill makes it less likely that a company will become a takeover target, implying that some potentially successful takeover bids may never be initiated because the intended target has a poison pill. In other words, even though poison pills may lead to higher premiums and do not reduce bid completion rates, they still might prevent some bids from occurring, thus acting against the economic interest of shareholders of the unrealized target companies.

The evidence indicates that having a poison pill does not make a company less likely to become a takeover target. If the presence of a poison pill were to reduce the likelihood of a take over, we would expect non-pill companies to exhibit a higher takeover rate than pill companies. We tested this possibility by looking at companies comprising the S&P500 and S&P400 (Mid-cap) indices in December 1993. Fifty-eight percent of these companies had poison pills (65% for S&P500 and 49% for S&P400), and 42% did not (35% for S&P500 and 51% for S&P400).³

Poison Pills and Takeover Rate
S&P500 and S&P400 Companies, 1994-96



Sixty-one of these S&P500 and S&P400 companies were acquired between January 1994 and December 1996. Companies without poison pills did not exhibit a higher takeover rate relative to companies that had pills. In fact, non-pill companies exhibited a lower takeover rate, although the difference was not statistically significant. Forty companies had poison pills and 21 companies did not, indicating a takeover rate of 7.7% for pill companies and 5.6% for non-pill companies:⁴

IV - CONCLUSION

Our analysis shows that poison pills provide shareholders with tangible economic benefits. Companies with pills appeared more likely to be targets of takeover bids than companies without pills. Once takeover bids were initiated, they were more likely to be completed when the target company had a poison pill. Finally, when take over bids were completed, the premiums paid were significantly larger for target companies with poison pills. In light of these findings, it is surprising that significant numbers of shares continue to be voted in support of the rescission of poison pills. While pills may raise some governance concerns because they deprive shareholders of voting rights, our findings support the notion that poison pills are a mechanism that contributes to the goal of maximizing shareholder value.

¹ We obtained our data from Securities Data Company, Inc. We started with all 416 takeover bids initiated and completed between January 1, 1992, and December 31, 1996. We excluded 42 transactions for lack of information about premium paid, 19 for lack of key financial data, three for unusually large premiums (greater than 150%), and four transactions for extreme P/B ratios. We also excluded all 29 transactions with premiums less than 5% (10 transactions had negative premiums). These transactions were excluded at this point because inspection of a few of these anomalous premiums revealed substantial errors. We note however that our results are not driven by any of these exclusions.

² Some critics of poison pills argue that premiums are higher for pill-companies because these companies are undervalued to begin with. While we question the economic basis of such an argument, we find that it is inconsistent with the evidence. The argument suggests that companies with low P/B ratios (one measure of undervaluation) would receive higher premiums. Our findings show that low P/B companies received lower, not higher, premiums (while controlling for other factors). Even when we exclude the poison pill variable from our regression, the correlation between premiums and P/B ratios remains positive and statistically insignificant.

³ These figures are based on Investor Responsibility Research Center (IRRC) data.

⁴ The conclusion is similar when we examine S&P500 and S&P400 companies separately.

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