

## THE EFFECT OF TAKEOVER DEFENSES ON LONG TERM AND SHORT TERM ANALYSTS' EARNINGS FORECASTS: THE CASE OF POISON PILLS

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### Abstract

This study examined the effect of poison pill adoption on long term and short earnings forecasts by security analysts. Our results provide no evidence of significant revisions in one-year or five-year earnings forecasts following the adoption of poison pills. We do find evidence, however, that firms adopt poison pills following a period of significant negative revisions in earnings forecasts. Our results suggest that poison pill adoptions may be a response to downward revisions in earnings forecasts.

**Keywords:** takeover defenses, earnings forecasts

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### The Effect of Takeover Defenses on Long Term and Short Term Analysts' Earnings Forecasts: The Case of Poison Pills

Poison pills are controversial shareholder rights that serve as an impediment to hostile takeovers. Poison pills assume a variety of forms but they generally give shareholders the right to buy stock in their firm at a substantial discount in the event of an attempted change of control. They may also allow shareholders to buy stock in a would-be acquirer at a similar discount<sup>1</sup>. As a result, these rights raise the cost of an acquisition not supported by the target firm's board of directors and may discourage takeover attempts.

Under today's corporate climate of intense scrutiny of board practices, many shareholders are demanding a termination or restructuring of poison pills (Mills, 2004), citing the potential abuse by corporate management. This pressure has resulted in 32 S&P500 firms rescinding their poison pills since 2002, with another 25 considering such a move. By the end of 2005, the number of S&P500 firms with poison pills had dropped to 235 from 301 in 2002 (Jaffe, 2005). Poison pills may be particularly important, however, in a heightened hostile merger

and acquisition environment such as that experienced recently as evidenced by Comcast's hostile bid for Disney and Oracle's bid for PeopleSoft. Consequently, this has caused many boards to reconsider their decision to rescind their poison pills and left shareholders wondering whether the protective benefits of a poison pill outweigh the risk of managerial misconduct.

As a result of this increased M&A activity, poison pills continue to be one of the most utilized defense mechanisms among Standard and Poor's 500 companies and their numbers are on the rise in small and mid-cap companies (Murti, 2005).

Several researchers have argued that poison pills reduce firm performance by insulating managers from the threat of takeover (Bizjak & Marquette, 1998; Davis, 1991; Jensen, 1984; Malatesta & Walkling, 1988; Mallette & Fowler, 1992; Ryngaert, 1988). Target firm shareholders earn gains averaging 40% or more if successfully acquired (Jensen & Ruback, 1983; Jarrell, Brickley & Netter, 1988, Turk, 1992) and preliminary evidence suggests that poison pills reduce the probability of successful acquisition. Ryngaert (1988), for example, found that, although nearly 70% of all firms with poison pills that received unsolicited tender offers prior to 1987 were successfully

acquired, the success rate for firms without poison pills was over 84%.

In addition to depriving shareholders of lucrative takeover premiums, critics of poison pills argue that the protection from takeovers they provide entrenches possibly incompetent managers and exacerbates agency problems. With less risk of takeover, managers are freer to retain free cash flows, over-diversify, or otherwise invest firm resources in a self-serving manner (Jensen, 1984).

The primary empirical support for the view that poison pills reduce firm performance by entrenching management is provided a study of the stock market reaction to poison pill adoptions by Malatesta and Walkling (1988). For a sample of 118 firms adopting poison pills through March 1986, they found that firm value declined .517% over the two days surrounding the poison pill adoption ( $Z = -3.166$ ). In addition, they found that firms adopting poison pills had lower accounting returns than their industry counterparts.

Researchers have also examined the governance structures of firms with poison pills. Several studies have found that CEOs of firms adopting poison pills own less equity in their firms than CEOs of firms without poison pills (Davis, 1991; Malatesta & Walkling, 1988; Mallette & Fowler, 1992), suggesting that they have less incentive to maximize firm value. Furthermore, the relatively diffuse share ownership that characterizes firms adopting poison pills (Davis, 1991) and the relative infrequency of dual leadership structures for their boards (Mallette & Fowler, 1992) suggests the possibility that CEOs of firms with poison pills may be subject to less internal monitoring than firms without poison pills.

Recent evidence, however, has raised doubts about the hypothesis that poison pills harm shareholders, on average. Ryngaert (1988) found evidence of significant declines in firm value for only selected subsets of his sample, whereas Brickley, Coles, and Terry (1994), Strong and Meyer (1990), Turk, Zardkoohi, Hoskisson, Harrison, and Johnson (1994), and Loh (1992) found no evidence of significant declines in firm value associated with poison pill adoption. Recent studies considering accounting measures of performance also found no relationship between poison pill adoption and performance (Brickley, Coles & Terry, 1992; Davis, 1991; Mallette & Fowler, 1992).

The argument that an active takeover stimulates efficiency has long been controversial. Critics of unfettered takeover markets charge that managers faced with the threat of takeover will be reluctant to take risks and focus on short term performance at the expense of long term strategic position (Drucker, 1984; Hill, Hitt, & Hoskisson 1988; Lipton, 1985; Pugh, Page & Jahera, 1992; Scherer, 1988; Stein, 1988). The consequence, they propose, is lower commitment to innovation and other long-term investments. Because poison pills offer management some protection from unsolicited takeovers,

managers of firms with poison pills should feel freer to make long-term investments. This line of reasoning suggests that poison pills may improve long-term performance.

Proponents of an active takeover market counter that efforts to forego long-term investments in order to bolster short-term operating results precipitate a decline in current stock price and make the firm even more vulnerable to acquisition (Jensen, 1986; Jarrell, Brickley & Netter, 1988). Evidence suggesting that capital markets respond favorably to long-term investments offers support for this assertion (McConnell & Muscarella, 1985; Woolridge & Snow, 1990). Indeed, if stock prices systematically undervalued long-term investments, a simple buy-hold equity investment strategy would yield above normal returns. Obviously so simple a trading opportunity would quickly be exploited, pushing up prices of firms that make long-term or high risk investments.

### Noise in Stock Prices and Takeover defenses

The presence of noise in market valuations, however, implies that the threat of takeover may increase managerial aversion to long-term investments *even if* the market does not systematically undervalue such investments. A firm may appear to be an attractive takeover target if either its current price undervalues the firm or potential acquirers overvalue its post-acquisition potential (Roll, 1986).

That is, negative estimation errors by the market or positive estimation errors by potential acquirers pose the threat of takeover to firms that are managed effectively.

This conclusion does not depend on any systematic bias in stock prices. Noise in stock prices increases the probability that a firm will be both significantly over-priced and significantly under-priced. Only significant under-pricing, however, increases the threat of takeover and raises the employment risk of the top executives.

If managers believe that long-term investments are more difficult for the market to value (that is, they believe that long-term investment strategies lead to noisier estimates of firm value), they will associate long-term investment strategies with an increase in the risk of takeover.

Agency theory suggests that in such circumstances, managers will have incentives to adopt a short-term planning horizon and make risk-reducing investment decisions that may reduce long-term firm performance. Such investment decisions may include excessive diversification (Amihud & Lev, 1981; Hoskisson & Turk, 1990) and excessive retention of free cash flows (Jensen, 1986).

Similarly, foregoing strategic investments that are difficult for capital markets to value (and are therefore likely to increase the probability of significant under- or over-pricing) may benefit the

CEO by reducing employment risk, even if they have a positive expected value. Such decisions may include under-investment in research and development (Stein, 1988). By offering managers insulation from the threat of hostile takeovers, poison pills reduce the risk to top management of high risk or long-term investments.

This, in turn, reduces the incentive to reduce employment risk through the investment strategies described above.

In this study, we attempt to extend previous research on the impact of poison pills on firm performance by examining the impact of poison pill adoption on security analysts' forecasts of short-term and long-term earnings.

If poison pills benefit shareholders by encouraging a longer term investment horizon, then analysts' forecasts of long-term earnings prospects should be revised upward following poison pill adoption.

If poison pills entrench managers and increase agency costs, analysts' forecasts of both long-term and short-term earnings should be revised downward following poison pill adoption.

## Methodology

To examine the impact of poison pill adoption on analysts' earnings forecasts we assembled a sample consisting of all firms adopting poison pills before January 1, 1987.

The firms were identified through the Corporate Control Alert, a legal newsletter that identifies all firms receiving poison pills and the date of their adoption. This is the source of poison pill information used in most previous studies (Brickley, Coles & Terry, 1992; Loh, 1992; Malatesta & Walkling, 1988; Ryngaert, 1988; Strong & Meyer, 1990; Turk, et al. 1994). We restricted consideration to this time period to maintain comparability with previous research on poison pills.

Of this sample, we identified all firms with complete IBES data on analysts' earnings forecasts for inclusion in this study. This resulted in a sample of 287 firms. IBES collects forecasts from analysts employed at over 100 brokerage firms who cover more than 4,000 firms listed on the American or New York Stock Exchanges. Between 7 and 53 analysts offer forecasts for each firm. This is the data source for previous research on analysts' earnings forecasts.

Previous research has shown that analysts' earnings forecast revisions exhibit a negative bias (Brous, 1992; Lys & Sohn, 1990).

Consequently, we estimate *abnormal forecast revisions* using the method described by Brous (1992) to estimate the impact of poison pills on analysts' earnings forecasts.

Brous's method estimates the abnormal forecasts revision for firm  $i$  in month  $t$  ( $AFR_{i,t}$ ) as:

$$AFR_{i,t} = FR_{i,t} - E(FR_{i,t-1}),$$

where  $FR_{i,t}$  = the mean earnings forecast revision for firm  $i$  in month  $t$ ; and  $E(FR_{i,t-1})$  = the expected earnings forecast revision for firm  $i$  in month  $t-1$ .

Consistent with Brous (1992), the expected earnings forecast revision is estimated as a fourth-order moving average process. Brous and Kini (1993) have shown that this approach effectively eliminates the bias in analysts' earnings forecast revisions drawn from the IBES database.

## Results

Table 1 presents the mean revisions of one-year earnings forecasts during months surrounding poison pill adoptions. Table 1 displays both the unadjusted forecast revisions and the abnormal forecast revisions estimated using Brous's method. To assess the announcement effect, we examined the two-month period including the announcement month and the following month. Uncertainty regarding the time period when analysts report earnings revisions that incorporate information regarding the poison pill adoption suggests that revisions reported during the month of the adoption may not fully capture the announcement effect.

Although we observed a marginally significant upward abnormal revision during the announcement month (7.3%,  $t=1.76$ ) and a significantly negative abnormal revision for the month following the revision (-10.5%,  $t=-2.53$ ), abnormal forecast revisions averaged a statistically insignificant -3.2% during the two-month announcement period. This implies that poison pill adoption had no significant impact on analysts' one-year earnings forecasts.

For month -2, abnormal revisions in one-year earnings forecasts averaged a statistically significant -8.9% ( $t=2.18$ ). Since studies of the effect of poison pill adoptions on stock prices provide no evidence of markets anticipating this event, this result suggests that poison pill adoption may be a response to downward revisions in earnings forecasts rather than a cause.

The results for the analysts' five-year earnings forecasts appear in Table 2. Again, both the unadjusted mean forecast revisions and the abnormal forecast revisions estimated using Brous's method are displayed. Consistent with the results in Table 1, we find no evidence of significant revisions of analysts' five-year earnings following the adoption of poison pills. As with the one-year forecast, there was a statistically significant downward abnormal revision of forecasted earnings for two months before the adoption (-7.4%,  $t=-2.01$ ).

**Table 1.** One-year Earnings Forecast Revisions Before and After the Adoption of Poison Pills

Month Relative to Poison Pill Adoption	Mean Forecast Revision	t-statistic	Abnormal Forecast Revision	t-statistic
-6	-.00196	-5.40**	-.00015	-0.39
-5	-.00184	-4.67**	-.00010	-0.26
-4	-.00181	-5.67**	.00003	0.09
-3	-.00163	-4.80**	.00016	0.50
-2	-.00264	-6.19**	-.00089	-2.18*
-1	-.00233	-5.54**	-.00044	-1.09
0	-.00125	-3.02**	.00073	1.76
1	-.00292	-6.93**	-.00105	-2.53**
2	-.00194	-4.79**	.00019	0.49
3	-.00197	-5.67**	.00003	0.08
4	-.00167	-4.14**	.00025	0.58
5	-.00182	-5.24**	.00019	0.61
6	-.00189	-6.43**	-.00011	-0.35

(n=287), \*p&lt;.05, \*\*p&lt;.01

**Table 2.** Five-year Earnings Forecast Revisions Before and After the Adoption of Poison Pills

Month Relative to Poison Pill Adoption	Mean Forecast Revision	t-statistic	Abnormal Forecast Revision	t-statistic
-6	-.00093	-2.00*	.00003	0.06
-5	-.00101	-1.85	.00021	0.42
-4	-.00124	-2.13*	-.00031	-0.81
-3	-.00055	-1.04	.00010	0.23
-2	-.00149	-3.40**	-.00074	-2.01*
-1	-.00127	-2.12*	-.00033	-0.74
0	-.00100	-1.62	-.00007	-0.11
1	-.00067	-1.41	-.00011	-0.27
2	-.00019	-0.38	.00059	1.20
3	-.00123	-1.66	-.00066	-1.26
4	-.00132	-2.03*	-.00041	-0.74
5	-.00064	-1.59	.00007	0.18
6	-.00032	-0.58	.00006	0.16

(n=287), \*p&lt;.05, \*\*p&lt;.01

These results provide no support for the hypothesis that analysts regard adoption of takeover defenses to result in a focus on long-term performance. Rather these results offer additional support for the hypothesis that firms adopt poison pills *in response* to abnormal negative forecast revisions.

## Conclusion

Our results provide no evidence of significant revisions in one-year or five-year earnings forecasts following the adoption of poison pills. We do find evidence, however, that firms adopting poison pills experienced significant negative revisions in earnings forecasts during the two months preceding the poison pill adoption. Our results suggest that poison pills adoption may be *a response* to downward revisions in earnings forecasts, not a cause of downward revisions in earnings forecasts.

Top executives and board members likely view downward revisions in earnings to be associated with an increase in employment risk. Declining

expectations for future earnings increases the chance that the firm will be “in play” and the target of unsolicited offers. Boards and executives may view poison pills as a way to reduce this risk. An important question this study does not address is what new information caused the downward revision in earnings forecasts. If analysts had simultaneously revised 5-year earnings forecasts revised upward, one might conclude that the downward revisions were prompted by information about new long-term investments announced by the firm. Given that analysts revised both 1-year and 5-year earnings forecasts, these forecast revisions predict worsening short term and long term prospects for the firm. Future research could examine announcements by the firms in this study two months prior to the poison pill adoption to determine possible reasons for the downward earnings forecast revisions.

The results of this study and those of recent studies examining the stock market reaction to poison pill adoptions suggest that poison pills do not generally harm shareholders by reducing future

earnings. These results also offer no support for the view that insulation from the threat of takeover generally benefits shareholders by improving long-term earnings prospects. Future research could examine the circumstances under which poison pills and other takeover defenses are particularly beneficial or hostile to shareholder interests. Poison pills for firms engaged in corporate restructuring programs or with strong internal governance structures, for example, may have significantly different implications for future earnings than for other poison pill adopters.

## Footnotes

1. See Malatesta & Walkling (1988) and Ryngaert (1988) for a detailed discussion of the various forms poison pills assume.

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