

The Long-Term Effect of Antitakeover Legislation on Shareholder Wealth and Firm Performance: Further Evidence From Pennsylvania Senate Bill 1310

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In 1990 Pennsylvania enacted legislation (Senate Bill 1310) designed to make hostile takeover of Pennsylvania firms more difficult. An important provision of SB 1310 allowed firms to opt out of the law's provisions. To determine whether the performance of Pennsylvania firms that opted out is different from those that did not opt out, we examine the stock price and operating performance during the five years subsequent to enactment of SB 1310. In the year after passage of the law we find that the overall performance of firms opting out of protection is superior to those not opting out. Five years after passage, however, we find no significant difference in the stock price or operating performance of the two groups. Thus, we find some evidence that supports the managerial entrenchment hypothesis and no evidence that supports the hypothesis that takeover protection allows managers to increase their focus on long-term value creation.

Introduction

In 1990 Pennsylvania enacted Senate Bill 1310 (SB 1310), which to date is the strictest piece of legislation designed to restrict corporate hostile takeover activity.¹

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¹ See Metz (1991) for a detailed history and criticisms of the bill.

The bill contains five major provisions that insulate firms from the market for corporate control. The law, however, also provides an important provision that allowed the boards of Pennsylvania firms to opt out of some or all of the antitakeover provisions within 90 days of the bill's effective date (April 27, 1990). After those 90 days shareholders may opt out of some or all of the provisions by a majority vote.

While the short-term wealth effects of SB 1310 have been well documented, the long-term effect of the law on shareholder wealth and firm performance has been the subject of debate.² During the bill's adoption process Pennsylvania political leaders and labor unions favoring adoption of the bill argued that the takeover market forces managers to focus on short-term results to appease short-term investors.³ Proponents of the antitakeover legislation argued that the law would free managers to focus on long-term performance. They claimed that shareholders, employees, and the community would benefit in the long run from the law as a result of the efficient and prosperous long-term focus of corporate management. We refer to this as the *long-term focus hypothesis*. In contrast, institutional investors argued that the bill would lead to the entrenchment of inefficient management with a consequent adverse effect on the long-term capital-raising ability and performance of Pennsylvania firms. This *managerial entrenchment hypothesis* is discussed in DeAngelo and Rice (1983) and Jarrell and Poulsen (1987).

This study investigates the long-term effects of SB 1310 on shareholder wealth and firm performance in order to test the conflicting predictions of the long-term focus and managerial entrenchment hypotheses. We analyze firm performance during the five-year period after adoption of the law for a comprehensive sample of NYSE/AMEX/NASDAQ Pennsylvania firms whose management elected to opt out of all, some, or none of the SB 1310 provisions. Because recent studies show that the traditional cumulative abnormal returns (CAR) approach produces biased estimates of long-term stock performance, we use a methodology that assumes a realistic long-term buy-and-hold investment strategy relative to a size- and market-to-book-matched control firm.

We examine both stock price and operating performance over various holding periods. In the year immediately following implementation of SB 1310 the overall

² Marr (1992) provides a thorough review of several studies, including Szewczyk and Tsetsekos (1992), who examine the short-term price effects of enacting SB 1310. The results of the other studies reviewed by Marr are consistent with those reported by Szewczyk and Tsetsekos. The decision to opt out of takeover protection is studied by Pound (1992), Wahal, Wiles, and Zenner (1995), and Janjigian and Trahan (1996). Janjigian and Trahan also examine firm performance over the 20 months subsequent to the last opt-out date. To our knowledge, their paper is the only prior study to examine the performance of Pennsylvania firms subsequent to SB 1310.

³ This focus on achieving superior short-term performance is referred to in the literature as the *myopic markets hypothesis*. (For example, see Jensen, 1988.)

performance of firms opting out of protection is superior to that of firms that accepted protection. Five years after passage of the law, however, there is no significant difference in either the stock price or operating performance between the two groups of firms. Thus, the evidence does not support the hypothesis, offered at the time SB 1310 was enacted, that the takeover protection would allow managers to increase their focus on long-term value creation. The evidence seems somewhat consistent with the managerial entrenchment hypothesis.

Background

In response to the acquisition wave in the 1960s many states adopted first-generation takeover legislation that established disclosure requirements, minimum tender offers, and other restrictions on corporate takeovers. When the pace of mergers and acquisitions accelerated again in the early 1980s many states adopted second-generation takeover legislation that contained control share provisions and fair price laws that further restricted corporate takeovers. Karpoff and Malatesta (1989) report that 36 states passed one or more second-generation antitakeover laws by 1989. The most comprehensive second-generation antitakeover law to date was adopted by Pennsylvania in 1990 and is commonly referred to as Senate Bill 1310 (SB 1310).

SB 1310 was created in response to the Belzberg family's hostile takeover attempt of Armstrong World Industries, Inc., the largest employer in Lancaster County, Pennsylvania. Many of the state's most influential companies, as well as the labor unions, supported the antitakeover measure, arguing that the law would protect shareholders, employees, and communities from abusive takeover tactics. Institutional investors opposed the law, arguing that it would entrench inefficient management and adversely affect the capital-raising ability and long-term performance of Pennsylvania firms. Despite the view of institutional investors, SB 1310 was introduced in the Pennsylvania State Senate on October 20, 1989. It then passed in the Senate on December 13, 1989, passed in the State House on April 3, 1990, and was signed into law by Governor Robert Casey on April 27, 1990 as Act 36.

SB 1310 has five major provisions:

- (i) The fiduciary duty provision;
- (ii) The control shares provision;
- (iii) The disgorgement provision;
- (iv) The severance compensation provision; and
- (v) The labor contracts provision.

The fiduciary duty, control shares, and disgorgement provisions are designed to give management more power to thwart hostile takeovers. The fiduciary duty provision allows the board of directors to consider the interests of all stakeholders, not just the shareholders, when deciding a proposed corporate change.⁴ The control shares provision removes the voting rights of shareholders who acquire control of 20 percent or more of the target firm's outstanding shares. The voting rights can be restored, but only with the approval of a majority of disinterested shareholders. The disgorgement provision allows the target firm to take any profit realized by a control group from the sale of the target firm's equity if that sale occurs within 18 months after acquisition of the control shares.

While the first three provisions focus on control issues, the severance compensation and labor contracts provisions focus on the employees of target firms. The severance provision stipulates that a lump-sum payment be made to employees who are terminated, other than for willful misconduct, within two years after a change in control. The labor contracts provision states that existing labor contracts cannot be changed or terminated within five years after a change in control.

At the request of Westinghouse, Pennsylvania's largest publicly traded company, the law also permitted Pennsylvania firms to opt out of all five provisions of SB 1310, the control shares or the disgorgement provision alone, or both the control shares and the disgorgement provisions. Opting out of the control shares provision also exempts the firm from the provisions involving severance pay and labor contracts. In order to exempt itself from any of the provisions, the firm's board of directors was required to adopt a bylaw to the articles of incorporation within 90 days of SB 1310's enactment (April 27, 1990).⁵ Since that time, approval by a majority of shareholders is required to amend the firm's bylaws to opt out.

Literature Review

Several papers have studied various aspects of the impact of SB 1310 on Pennsylvania firms. For example, Szewczyk and Tsetsekos (1992) examine the short-term wealth effects of SB 1310. They report that 56 NYSE/AMEX

⁴ This provision is considered the most controversial of the SB 1310 provisions because it considerably alters the relationship between the board of directors and shareholders. It does not require management to put the interests of the shareholders above the interests of employees, customers, suppliers, and the community, for example, when making corporate decisions. It is this provision that enabled the directors of Philadelphia-based Conrail Corporation to accept the two-tiered \$9.3 billion takeover offer from CSX, rather than Norfolk Southern's cash offer of \$10.5 billion, in December 1996.

⁵ Marr (1992) reports that eight Pennsylvania firms with market capitalization greater than \$500 million chose to opt out of all provisions. These eight firms were Crown Cork & Seal, H.J. Heinz, P.H. Glatfelter, PNC Financial, Penn Central, VF Corporation, Weis Markets, and Westinghouse.

Pennsylvania firms suffered a statistically significant abnormal return of -9.09 percent during the period beginning October 20, 1989 (introduction of SB 1310) through April 27, 1990 (enactment of SB 1310). Firms that opted out of one or more of the provisions in this time period, however, recovered part of this wealth loss when they announced their opt-out decision.

Pound (1992), Wahal, Wiles, and Zenner (1995), and Janjigian and Trahan (1996) examine the SB 1310 opt-out decision of Pennsylvania firms. Pound (1992) compares the financial, economic, governance, and ownership characteristics of 98 NYSE/AMEX/NASDAQ Pennsylvania firms that opted out of some or all of the provisions versus otherwise. Using industry-adjusted variables, Pound finds that firms opting out were less likely to have a poison pill in place and had higher inside stock ownership and price/earnings ratios. He also determines that firms opting out had lower payout ratios and lower stock returns in the year preceding enactment of the law. He finds no significant differences in operating performance prior to adoption of the law. Therefore, he concludes that his findings are consistent with the managerial entrenchment hypothesis.

Wahal, Wiles, and Zenner (1995) also examine the decision to opt out using a comprehensive sample of 111 NYSE/AMEX/NASDAQ Pennsylvania stocks. They report that firms accepting protection under SB 1310 were more likely to be smaller NASDAQ firms, while firms opting out were generally larger and were traded on the NYSE/AMEX exchanges. In addition, they report that firms that opted out had lower inside control of voting rights and were less likely to have a poison pill in place prior to enactment of the law. They conclude that managers who are already insulated from the market for corporate control are more likely to choose additional takeover protection.

Janjigian and Trahan (1996) limit their study of the opt-out decision to 39 NYSE/AMEX Pennsylvania firms. They report that over the 20 months before the introduction of SB 1310 firms opting out of SB 1310 protection significantly underperformed those accepting protection. In the 20 months following enactment of the law they find no significant difference in the stock price performance of firms opting out and those accepting protection; however, they do find some evidence of improved operating performance by firms that opted out.

This paper examines the effects of SB 1310 on stock returns and firm performance to further test the long-term focus hypothesis versus the managerial entrenchment hypothesis. We extend the prior literature in several important ways. First, we analyze the stock price and operating performance over a longer time horizon than used in Janjigian and Trahan (1996). We examine various holding periods beginning one year prior to introduction of SB 1310 and extending five years after adoption of the law. Second, unlike Janjigian and Trahan, we include NASDAQ firms in our sample. Finally, instead of using the traditional cumulative abnormal return (CAR) approach, which recent studies have shown results in biased

long-run stock performance estimates, we use a methodology that assumes a realistic long-term buy-and-hold trading strategy and controls for size and market-to-book effects.

Data

We form our sample from the same 111 NYSE/AMEX/NASDAQ Pennsylvania firms used by Wahal, Wiles, and Zenner (1995).⁶ Stock return data for both sample firms and control firms are obtained from the Center for Research in Security Prices (CRSP) daily database beginning one year before introduction of SB 1310 and ending five years after the bill's 90-day opt-out decision period. Book values for the sample firms and the control firms are obtained from the Compustat annual and research databases.

Data used to measure operating performance of the sample firms are obtained from the Compustat databases over the same period as described above. We examine liquidity ($[\text{cash plus marketable securities}]/\text{total assets}$), leverage ($\text{debt}/\text{total assets}$), return on assets ($\text{EBIDT}/\text{total assets}$ and $\text{net income}/\text{total assets}$), turnover ($\text{sales}/\text{total assets}$), profit margin ($\text{EBIDT}/\text{sales}$ and $\text{net income}/\text{sales}$), Tobin's q ($[\text{market value of equity plus book value of debt plus preferred stock}]/\text{total assets}$), and sales growth (averaged over four years).

We eliminate eight firms that were not trading subsequent to adoption of SB 1310 or that were not included in the Compustat databases. Of the final sample of 103 firms, 22 firms opted out of all antitakeover provisions of SB 1310, 25 firms opted out of the disgorgement provision and/or the control shares provision, and 56 did not opt out of any of the provisions.

Descriptive statistics for several characteristics of the final sample of Pennsylvania firms (as well as subsamples of firms that opted out of none, all, or some of the SB 1310 provisions) are presented in Table 1. Panel A of Table 1 focuses on valuation measures of the sample firms, as of the year prior to the adoption of SB 1310 (i.e., year-end 1989). Panel B focuses on firm-level takeover protection in place prior to SB 1310. The data in Panel A show that firms not opting out of the law's provisions tend to be significantly smaller than firms opting out of all or some of the provisions.⁷ For example, the 56 firms not opting out have median total assets and market capitalization of \$53 million and \$54 million, respectively, versus \$226 million and \$129 million for the 22 firms opting out of all provisions. No significant differences are found, however, in the market-to-book ratios between the three subsamples of firms.

⁶ Details of the sample are provided in their paper. We thank Marc Zenner for providing us with this list of sample firms, as well as information on firm-level takeover-related variables, such as poison pills, golden parachutes, and prior takeover attempts.

⁷ These findings are consistent with those reported by Wahal, Wiles, and Zenner (1995).

Table 1—Descriptive Statistics on Size and Pre-Existing Firm-Level Antitakeover Provisions for 103 Pennsylvania Firms During the Year Prior to Adoption of Pennsylvania Senate Bill 1310 (year-end 1989)

Panel A: Size Measures									
	Control Sample (n = 103)	Full Sample (n = 103)	Did Not Opt Out (n = 56)	Opted Out of All (n = 22)	Opted Out of Some (n = 25)	Not vs. All p-value ^a	Not vs. Some p-value ^a	All vs. Some p-value ^a	
Total Assets (\$ Millions)	Mean 1611.79	1698.83	679.69	3612.63	2325.28	0.04	0.09	0.63	
	Median 120.01	112.55	52.89	226.09	283.15	0.00	0.00	0.90	
Market Capitalization (\$ Millions)	Mean 719.67	727.18	536.98	1354.06	565.17	0.07	0.95	0.18	
	Median 64.87	72.62	53.97	129.18	127.88	0.03	0.03	0.75	
Market/Book Value (of Equity)	Mean 2.11	1.71	1.65	1.98	1.60	0.30	0.87	0.24	
	Median 1.70	1.61	1.62	1.80	1.46	0.34	0.35	0.16	
Panel B: Firm-Level Antitakeover Provisions									
	Control Sample (n = 103)	Full Sample (n = 103)	Did Not Opt Out (n = 56)	Opted Out of All (n = 22)	Opted Out of Some (n = 25)	Not vs. All p-value ^b	Not vs. Some p-value ^b	All vs. Some p-value ^b	
Poison Pill		18	12	2	4	0.15	0.56	0.48	
Super-Majority Provisions		5	1	2	2	0.14	0.14	0.89	
Other Antitakeover Amendments		16	7	5	4	0.34	0.70	0.57	
Golden Parachute		27	11	5	11	0.77	0.04	0.13	
Combined Antitakeover Measures		30	14	7	9	-0.58	-0.96	-0.30	
Prior Takeover Attempt		8	5	222	1	0.98	0.38	0.49	

^ap-values from parametric difference in means t-test and from non-parametric difference in medians test

^bp-value from parametric difference in means t-test

Panel B of Table 1 reports the number of firms with pre-existing firm-level takeover protection, such as poison pills, super-majority provisions, and golden parachutes. It also reports the number of firms that experienced a prior hostile takeover attempt. The only significant difference among these variables is that the relative frequency of golden parachutes in place for firms that opted out of some provisions (44 percent) is significantly higher than for firms that did not opt out of any provisions (20 percent). In general, though, the numbers reported in Panel B indicate no significant differences in firm-level takeover protection among the subsamples of firms.⁸

Methodology

CARs traditionally have been used to examine stock price performance. Recent studies, however, question the appropriateness of the CAR approach when examining long-run abnormal stock price performance. For instance, Chopra, Lakonishok, and Ritter (1992), Conrad and Kaul (1993), Ikenberry, Lakonishok, and Vermaelen (1995), and Michaely, Thaler, and Womack (1995) find that using CARs to calculate long-run abnormal returns results in biased performance estimates that are sensitive to the procedures and benchmarks used. Further, Barber and Lyon (1997) show that test statistics are misspecified when CARs are calculated over long time horizons. When long-run abnormal returns are measured as the difference between the compounded buy-and-hold investment in a sample firm and the compounded buy-and-hold investment in a control firm matched to the sample firm based on market capitalization (size) and market-to-book ratio, however, they show that conventional test statistics are unbiased.⁹

Given these problems with the CAR approach in long-term studies, we use the buy-and-hold approach of Barber and Lyon (1997). The compounded buy-and-hold abnormal return (BHAR) is calculated as:

$$BHAR_{i,b,e} = \left[\prod_{t=b}^{t=e} (1 + R_{it}) \right] \left[\prod_{t=b}^{t=e} (1 + R_{Ct}) \right]$$

where:

R_{it} = The return for firm i in month t ;

R_{Ct} = The return for a size- and market-to-book-matched control firm C in month t ; and

$BHAR_{i,b,e}$ = The buy-and-hold abnormal return for firm i during the holding period beginning in month b and ending in month e .

⁸ Similarly, Wahal, Wiles, and Zenner (1995) do not find significant differences in the use of firm-level defenses.

⁹ Size and market-to-book effects are documented as important determinants of stock returns (Fama and French, 1992, 1993; Lakonishok, Shleifer, and Vishny, 1994).

To calculate the buy-and-hold returns for the Pennsylvania firms prior to introduction of SB 1310, we compound the monthly returns of each firm over the one-year period beginning in October 1988 and ending in September 1989.¹⁰ Following enactment of the law, we compound the monthly returns over one-year, three-year, and five-year periods beginning in August 1990, which follows the 90-day opt-out period included in the law.

To assess the abnormal performance of the sample firms during the pre- and post-event periods of interest we compare their buy-and-hold returns to the contemporaneous buy-and-hold returns of a size- and market-to-book-matched control firm.¹¹ To select the control firm we sort all NYSE/AMEX/NASDAQ firms common to CRSP and Compustat by market capitalization (size) as of the year-end prior to the beginning of the holding period. For a given sample firm we follow Barber and Lyon (1997) and select those firms within 70 percent to 130 percent of the sample firm's market capitalization. We then select as the control firm the firm with the market-to-book ratio closest to that of the sample firm as of the year-end prior to the beginning of the holding period.¹²

Empirical Results

Long-Term Wealth Effects

The long-term abnormal stock performance of Pennsylvania firms is reported in Tables 2 and 3. Table 2 reports the average buy-and-hold abnormal returns (BHARs) for various holding periods around the passage of SB 1310. The three panels of Table 2 separate the firms according to their opt-out decision (did not opt out, opted out of all, and opted out of some). Table 3 compares the average BHARs between these subsamples within each of the holding periods.

Table 2 shows that all three subsamples significantly outperform their size- and market-to-book-matched control firms prior to introduction of SB 1310. Further, Table 3 indicates no significant differences in the average BHARs during the year before SB 1310 for firms that opted out of protection versus those that accepted

¹⁰ We note that the pre-event period includes the market crash of October 1987. It is likely that this event affected the sample firm and its control firm similarly, however, so any impact would be offsetting.

¹¹ Barber and Lyon (1997) show that calculating buy-and-hold abnormal returns using a size- and market-to-book-matched control firm, rather than a control portfolio, yields well-specified conventional test statistics. As a robustness check, we calculate buy-and-hold abnormal returns using a size- and market-to-book-matched control portfolio. We find no significant differences in the magnitudes of the abnormal returns using this alternative benchmark.

¹² If a control firm discontinues trading prior to the end of the holding period, we select a new control firm using the size and market-to-book ratio of the Pennsylvania firm at the time the new matching is done.

Table 2—Average Buy-and-Hold Returns (%) for 103 Pennsylvania Firms During Various Holding Periods Before and After Adoption of Pennsylvania Senate Bill 1310

Holding Period	n	Sample Firm	Control Firm	Buy-and-Hold Abnormal Return	t-statistic ^a
Panel A: Did Not Opt Out of Any Provisions					
Year -1	56	20.786	7.591	13.195	2.974***
Year +1	56	8.537	2.701	5.836	1.181
Year +1 to Year +3	46	33.089	14.801	18.288	1.340
Year +1 to Year +5	42	54.529	29.242	25.287	2.091*
Panel B: Opted Out of All Provisions					
Year -1	22	21.432	4.646	16.786	2.406***
Year +1	22	18.464	1.988	16.476	2.725***
Year +1 to Year +3	21	40.671	18.909	21.762	1.398
Year +1 to Year +5	20	68.461	36.567	31.894	1.813*
Panel C: Opted Out of Some Provisions					
Year -1	25	24.056	10.322	13.733	2.202**
Year +1	25	3.212	3.583	-0.371	-0.056
Year +1 to Year +3	23	31.713	15.461	16.252	1.136
Year +1 to Year +5	22	66.165	34.566	31.599	2.323***

^aTest statistic from standard t-test that the average compounded buy-and-hold abnormal return is equal to zero

*** Significant at the 1 percent level

** Significant at the 5 percent level

* Significant at the 10 percent level

complete or partial protection under the law.¹³ This is consistent with prior studies.¹⁴ During the first year following implementation of SB 1310 Table 2 shows firms that opted out of all provisions of the law significantly outperformed their size- and market-to-book-matched control firms, on average, by 16.476 percent. For the firms that did not opt out or opted out of only some provisions, the year +1 average

¹³ Although not reported here, we find similar results when we examine the BHARs over three-year and five-year holding periods prior to SB 1310.

¹⁴ Pound (1992) finds that, during the year prior to SB 1310, all Pennsylvania firms have average stock returns in the top 50 percent of the industry universe, and that firms not opting out have significantly higher returns than do other firms. When the horizon is extended to the preceding four years, Pound still finds that all Pennsylvania firms have average stock returns in the top 50 percent of the industry; however, he does not find any significant differences in the performance of firms that did not opt out versus otherwise. Janjigian and Trahan (1996) find that, during the 20-month period prior to SB 1310, firms that did not opt out have significantly positive CARs of 19.72 percent while firms that opted out of at least one provision have significantly negative CARs of -12.79 percent. Further, they find that firms that did not opt out significantly outperform those firms that opted out of at least one provision. We estimate CARs for our sample firms over the same time period and find qualitatively similar results, but the magnitudes are sensitive to the benchmark used.

Table 3—Tests for Difference in Average Buy-and-Hold Abnormal Returns (%) During Various Holding Periods Before and After Adoption of Pennsylvania Senate Bill 1310 Between Subsamples of Firms that Opted Out of None, All, or Some of the Law's Antitakeover Provisions (56, 22, and 25 firms, respectively).

Buy-and-Hold Abnormal Returns						
Holding Period	n	Did Not Opt Out	n	Opted Out of All	Difference	t-statistic ^a
Panel A: Did Not Opt Out vs. Opted Out of All						
Year -1	56	13.195	22	16.786	-3.591	-0.435
Year +1	56	5.836	22	16.476	-10.640	-1.737*
Year +1 to Year +3	46	18.288	21	21.762	-3.474	-0.167
Year +1 to Year +5	42	25.287	20	31.894	-6.607	-0.309
Buy-and-Hold Abnormal Returns						
Holding Period	n	Did Not Opt Out	n	Opted Out of Some	Difference	t-statistic ^a
Panel B: Did Not Opt Out vs. Opted Out of Some						
Year -1	56	13.195	25	13.733	-0.538	-0.070
Year +1	56	5.836	25	-0.371	6.207	0.753
Year +1 to Year +3	46	18.288	23	16.252	2.036	0.103
Year +1 to Year +5	40	25.287	22	31.599	-6.31	-0.278
Buy-and-Hold Abnormal Returns						
Holding Period	n	Opted Out of All	n	Opted Out of Some	Difference	t-statistic ^a
Panel C: Opted Out of All vs. Opted Out of Some						
Year -1	22	16.786	25	13.733	3.053	0.326
Year +1	22	16.476	25	-0.371	16.847	1.882*
Year +1 to Year +3	21	21.762	23	16.252	5.51	0.160
Year +1 to Year +5	20	31.894	22	31.599	0.295	0.110

^aTest statistic from standard t-test that the difference in the average compounded buy-and-hold abnormal returns between the subsamples is equal to zero

*** Significant at the 1 percent level

** Significant at the 5 percent level

* Significant at the 10 percent level

BHARs of 5.836 percent and -0.371 percent, respectively, are not statistically significant. As shown in Table 3, these BHARs are significantly lower than the corresponding BHAR for the firms that opted out of all provisions. These findings contrast with Janjigian and Trahan (1996), who find that none of their subsamples of Pennsylvania firms significantly outperform during the 20 months following implementation of the law and that the performance of the subsamples is not statistically different.¹⁵

¹⁵ Janjigian and Trahan (1996) use the CAR approach to examine the effect of SB 1310 on a sample of 39 NYSE/AMEX firms. During the 20 months subsequent to SB 1310, they find CARs of 4.39 percent for firms that did not opt out of any provisions and -10.18 percent for

While Table 2 shows that all subsamples exhibit positive average BHARs during the three-year and five-year holding periods subsequent to SB 1310, these returns are statistically significant only over the five-year period. Further, Table 3 indicates that the average buy-and-hold abnormal returns of the three subsamples are not statistically different over the three-year and five-year time horizons. Although not reported, these BHAR results are robust to the presence of pre-existing firm-level takeover protection.¹⁶ The results are also robust when using control firms matched on size, market-to-book, and momentum in stock price returns during the year prior to SB 1310 and when using control firms matched by industry.¹⁷

To test whether the year +1 difference in stock performance between firms that opted out and did not opt out is meaningful, we execute a randomization procedure to form two random portfolios from the sample of 103 Pennsylvania firms. These random portfolios contain the same number of firms as the actual subsamples of firms that did not opt out and those that opted out of all provisions (56 and 22 firms, respectively). We use a standard t-test to examine year +1 average BHARs for (i) the 22 firms that actually opted out of all provisions versus the random portfolio of 22 firms, and (ii) the random portfolio of 22 firms versus the random portfolio of 56 firms. In 5000 replications the average BHAR for the random portfolio of 22 firms exceeds the average BHAR for the firms that actually opted out of all provisions in 7.5 percent of the cases, but the difference between the average BHARs is never statistically significant. Approximately 50 percent of the time the difference in the average BHARs is positive and 50 percent of the time it is negative in the two random portfolios. Further, the difference between the average BHARs is insignificant in 91 percent of the cases. Thus, it appears that the superior buy-and-hold stock performance of firms that opted out of all provisions of SB 1310, relative to those that accepted partial or full protection, is significant during the first year following implementation of the law and is not merely a random occurrence.

firms that opted out of some or all provisions. These abnormal returns and the differences between subsamples are not found to be statistically significant.

¹⁶ We perform two sensitivity analyses to control for the effect of pre-existing firm-level takeover protection. First, we exclude from the sample of Pennsylvania firms those firms that had poison pills or antitakeover charter amendments in place prior to the introduction of SB 1310. Second, we match each Pennsylvania firm with (without) firm-level takeover protection to a size- and market-to-book-matched control firm with (without) firm-level takeover protection.

¹⁷ To control for momentum, we match each sample firm to a portfolio of control firms based on size and market-to-book as of the year-end prior to the beginning of the holding period. We then calculate stock returns during the preceding twelve months for this portfolio of control firms, and select the control firm that has a one-year return closest to that of the sample firm. To control for industry effects, we match the sample firms to their rivals based on SIC codes (the sample firms have 82 different four-digit SIC codes). The results are robust to using four-, three-, and two-digit SIC codes.

Table 4—Mean and Median Values of Financial Characteristics of 103 Pennsylvania Firms During the Year Before and the Five Years After Adoption of Pennsylvania Senate Bill 1310. Subsamples Include Firms That Opted Out of None, All, or Some of the Law's Antitakeover Provisions

Variable		Year -1	Year 1	Year 2	Year 3	Year 4	Year 5
Panel A: Did Not Opt Out of Any Provisions (n = 56)							
Cash/Total Assets	Mean	0.141	0.139	0.156	0.144	0.157	0.147
	Median	0.103	0.105	0.133	0.104	0.117	0.102
Total Debt/Total Assets	Mean	0.484	0.487	0.481	0.475	0.494	0.495
	Median	0.464	0.472	0.416	0.416	0.435	0.466
EBIDT/Total Assets	Mean	0.114	0.112	0.089	0.084	0.088	0.085
	Median	0.132	0.116	0.098	0.093	0.092	0.096
Net Income/Total Assets	Mean	0.023	0.015	0.012	-0.001	0.001	0.005
	Median	0.068	0.031	0.026	0.026	0.025	0.041
Sales/Total Assets	Mean	1.387	1.312	1.322	1.342	1.322	1.309
	Median	1.368	1.303	1.360	1.357	1.308	1.276
EBIDT/Sales	Mean	0.080	0.074	0.061	0.056	0.064	0.066
	Median	0.091	0.093	0.082	0.091	0.090	0.096
Net Income/Sales	Mean	-0.002	0.006	-0.010	-0.017	-0.010	0.007
	Median	0.045	0.029	0.019	0.018	0.018	0.028
Tobin's q	Mean	1.470	1.406	1.494	1.594	1.516	1.505
	Median	1.263	1.158	1.169	1.222	1.236	1.252
Sales Growth	Mean	0.222	0.129	0.160	0.292	0.104	0.105
	Median	0.120	0.076	-0.006	0.045	0.021	0.019
Panel B: Opted Out of All Provisions (n = 22)							
Cash/Total Assets	Mean	0.103	0.122	0.124	0.128	0.120	0.129
	Median	0.024	0.048	0.061	0.042	0.052	0.033
Total Debt/Total Assets	Mean	0.454	0.465	0.441	0.438	0.436	0.387
	Median	0.443	0.435	0.468	0.494	0.433	0.360
EBIDT/Total Assets	Mean	0.127	0.127	0.121	0.122	0.108	0.130
	Median	0.132	0.186	0.116	0.129	0.126	0.145
Net Income/Total Assets	Mean	0.041	0.032	0.044	0.043	0.038	0.038
	Median	0.051	0.047	0.042	0.039	0.036	0.060
Sales/Total Assets	Mean	1.515	1.497	1.492	1.490	1.448	1.560
	Median	1.356	1.410	1.505	1.629	1.522	1.461
EBIDT/Sales	Mean	0.080	0.095	0.106	0.087	0.084	0.115
	Median	0.090	0.082	0.092	0.085	0.091	0.113
Net Income/Sales	Mean	0.001	0.010	0.041	0.017	0.031	0.029
	Median	0.040	0.025	0.037	0.037	0.042	0.041
Tobin's q	Mean	1.379	1.243	1.314	1.313	1.364	1.329
	Median	1.275	1.186	1.234	1.250	1.287	1.241
Sales Growth	Mean	0.253	0.178	0.009	0.019	0.017	0.019
	Median	0.049	0.044	0.018	0.011	0.018	0.018

Table 4 (cont.)—Mean and Median Values of Financial Characteristics of 103 Pennsylvania Firms During the Year Before and the Five Years After Adoption of Pennsylvania Senate Bill 1310. Subsamples Include Firms That Opted Out of None, All, or Some of the Law's Antitakeover Provisions

Variable		Year -1	Year 1	Year 2	Year 3	Year 4	Year 5
Panel C: Opted Out of Some Provisions (n = 25)							
Cash/Total Assets	Mean	0.084	0.087	0.086	0.107	0.075	0.071
	Median	0.042	0.022	0.024	0.039	0.035	0.048
Total Debt/Total Assets	Mean	0.470	0.477	0.471	0.416	0.433	0.377
	Median	0.439	0.445	0.446	0.435	0.432	0.431
EBIDT/Total Assets	Mean	0.107	0.097	0.102	0.082	0.087	0.095
	Median	0.121	0.116	0.108	0.096	0.092	0.097
Net Income/Total Assets	Mean	0.030	0.009	0.010	0.011	0.005	0.023
	Median	0.045	0.025	0.029	0.030	0.033	0.033
Sales/Total Assets	Mean	1.043	1.117	1.133	1.078	1.004	1.105
	Median	1.079	1.152	1.129	1.121	1.036	1.070
EBIDT/Sales	Mean	0.104	0.088	0.105	0.088	0.092	0.118
	Median	0.111	0.116	0.099	0.087	0.113	0.115
Net Income/Sales	Mean	0.015	-0.008	0.004	-0.018	-0.002	0.039
	Median	0.043	0.010	0.018	0.024	0.037	0.042
Tobin's q	Mean	1.327	1.245	1.309	1.325	1.461	1.350
	Median	1.044	0.940	1.054	1.087	1.092	1.010
Sales Growth	Mean	0.086	0.231	0.078	0.046	0.098	0.098
	Median	0.089	0.065	-0.001	0.027	0.032	0.031

Long-Term Operating Performance

Next we examine the long-term operating performance of Pennsylvania firms surrounding the passage of SB 1310. Palepu (1986) uses several measures of operating performance to predict takeover targets. Comment and Schwert (1995) examine these variables in their study of the long-term effects of antitakeover provisions. Janjigian and Trahan (1996) also examine several measures of operating performance subsequent to the passage of SB 1310. Based on these studies we use the following measures as proxies for operating performance: liquidity ([cash plus marketable securities]/total assets), leverage (debt/total assets), return on assets (EBIDT/total assets and net income/total assets), turnover (sales/total assets), profit margin (EBIDT/sales and net income/sales), Tobin's q ([market value of equity plus book value of debt plus preferred stock]/total assets), and sales growth (averaged over four years).¹⁸

¹⁸ As in Palepu (1986), Comment and Schwert (1995), and Janjigian and Trahan (1996), we measure these variables on a raw, unadjusted basis.

Table 5—Tests for Difference in Median Values of Financial Characteristics During the One Year Before and the Five Years After Adoption of Pennsylvania Senate Bill 1310 Between Subsamples of Firms that Opted Out of None, All, or Some of the Law's Antitakeover Provisions*

Variable	Year -1 Test Statistic	Year 1 Test Statistic	Year 2 Test Statistic	Year 3 Test Statistic	Year 4 Test Statistic	Year 5 Test Statistic
Panel A: Did Not Opt Out vs. Opted Out of All (n = 56)						
Cash/Total Assets	2.271**	2.227**	3.249***	2.304**	1.784*	1.331
Total Debt/Total Assets	0.553	0.383	-0.344	-0.144	0.644	1.029
EBIDT/Total Assets	-0.125	-0.153	-0.950	-1.307	-0.793	-1.058
Net Income/Total Assets	0.261	-0.121	-1.103	-1.176	-1.111	-0.309
Sales/Total Assets	0.734	-0.997	-0.861	-0.767	-0.724	-0.122
EBIDT/Sales	0.205	0.513	-0.796	0.821	-0.452	-1.015
Net Income/Sales	0.177	0.207	-1.439	-1.342	-1.197	-0.453
Tobin's q	-0.472	-0.593	-0.102	-0.152	-0.180	0.873
Sales Growth	1.527	0.112	-0.277	0.857	0.439	0.562
Panel B: Did Not Opt Out vs. Opted Out of Some (n = 22)						
Cash/Total Assets	1.796*	1.808*	2.287**	1.338	2.665***	2.081**
Total Debt/Total Assets	0.257	0.183	-0.505	-0.280	0.315	1.334
EBIDT/Total Assets	0.863	0.862	-0.395	0.424	0.130	-0.284
Net Income/Total Assets	0.831	0.672	-0.384	-0.529	0.241	0.398
Sales/Total Assets	2.476**	1.330	1.246	1.960*	2.254**	2.031**
EBIDT/Sales	-0.615	-0.283	-1.063	-0.529	-0.948	-1.182
Net Income/Sales	0.091	0.057	-0.075	-0.365	1.297	-1.018
Tobin's q	1.796*	1.475	1.120	1.323	0.682	1.022
Sales Growth	1.041	0.606	-0.200	0.820	-0.522	-0.601
Panel C: Opted Out of All vs. Opted Out of Some (n = 25)						
Cash/Total Assets	-0.352	1.011	0.881	0.170	0.489	0.095
Total Debt/Total Assets	0.131	-0.052	0.117	0.560	0.091	-0.627
EBIDT/Total Assets	1.045	1.056	0.563	1.907	1.194	1.943
Net Income/Total Assets	0.442	0.669	1.316	1.579	0.659	0.829
Sales/Total Assets	2.397**	2.115**	2.091**	1.739*	2.367**	1.753*
EBIDT/Sales	-1.080	-0.845	-0.035	-0.352	-0.534	-0.122
Net Income/Sales	-0.117	0.304	1.217	0.881	0.295	-0.611
Tobin's q	0.895	2.536**	1.196	1.187	1.104	1.926*
Sales Growth	-0.563	-0.540	0.298	-0.085	-0.813	-1.012

*Test statistic from non-parametric Wilcoxon signed-rank test

*** Significant at the 1 percent level

** Significant at the 5 percent level

* Significant at the 10 percent level

Table 4 presents the mean and median values for these operating performance measures from one year before introduction of the law to five years after

implementation of the law.¹⁹ The three panels of Table 4 separate the firms according to their opt-out decision (did not opt out, opted out of all, and opted out of some). Because several of the performance measures are non-symmetric, we focus on the median rather than the mean values. Table 5 compares the median performance measures between the subsamples within each of the six years.

We find that before and after SB 1310 liquidity is consistently and significantly higher for firms that did not opt out of any provisions than for firms that opted out of all or some provisions of the law. While we do not find consistently significant differences in the other operating performance measures between the subsamples, we do find several patterns in the data that are worth noting. For instance, in the years after SB 1310, firms that did not opt out of any provisions generally have lower median return on assets, asset turnover, profit margin, and Tobin's *q*, relative to firms that opted out of all provisions. In contrast, these measures of operating performance, with the exception of Tobin's *q*, are generally higher in the year prior to introduction of SB 1310. Further, while the operating performance of all firms generally declines during the first three years following adoption of the law, a modest improvement in most measures occurs during the next two years.²⁰

To test whether this pattern in operating performance is statistically significant, we compare the median values of the various measures for each subsample in the year before the law to the fifth year after the law. The results of these non-parametric tests are reported in Table 6. We do not find any of the operating performance measures to be significantly different between year -1 and year +5 for any of the firms, regardless of their opt-out decision.

Overall, the operating performance during the five years subsequent to adoption of SB 1310 provides evidence that is mildly consistent with the entrenchment hypothesis. For example, in each of the five years following the law firms that did not opt out of the takeover protection have uniformly higher median liquidity and lower median profitability and Tobin's *q*, relative to firms that opted out. Moreover, while not reported in Table 6, we find that the decline in operating performance during the first three years following SB 1310 is significant for firms that did not opt out. These results are consistent with the notion that firms subject to takeover pressure are more likely to select takeover protection.

¹⁹ We also examine operating performance during years -5 through -2. We find results similar to those in year -1. Therefore, the results for the earlier years are not reported here.

²⁰ Janjigian and Trahan (1996) report on the operating performance of Pennsylvania firms in 1989 (our year -1) and 1992 (our year +2). Their results are similar to ours. For instance, they find that in 1989 firms that opted out of at least one provision have lower return on assets and profit margins than firms that did not opt out. Moreover, they find that in 1992, firms that opted out have significantly higher return on assets and profit margins than firms that did not opt out. Finally, they report an overall decline in operating performance of these two groups of firms from 1989 to 1992.

Table 6—Tests for Difference in Median Values of Financial Characteristics Between the Year Before and the Fifth Year After Adoption of Pennsylvania Senate Bill 1310 for Subsamples of Firms that Opted Out of None, All, or Some of the Law's Antitakeover Provisions^a

Variable	Year -1 vs. Year +5		
	Did Not Opt Out Test Statistic (n = 56)	Opted Out of All Test Statistic (n = 22)	Opted Out of Some Test Statistic (n = 25)
Cash/Total Assets	-0.088	0.380	0.170
Total Debt/Total Assets	0.499	-0.744	-0.138
EBIDT/Total Assets	-1.566	0.211	-1.033
Net Income/Total Assets	-1.174	0.448	-0.942
Sales/Total Assets	-0.391	0.521	0.306
EBIDT/Sales	0.766	1.112	0.215
Net Income/Sales	-1.027	0.267	0.147
Tobin's q	-0.786	-0.505	-0.677
Sales Growth	-0.902	-0.126	-0.445

^aTest statistic from non-parametric Wilcoxon signed-ranked test

*Significant at the 10 percent level

Conclusion

This study examines the long-run stock price and operating performance of Pennsylvania firms over various holding periods during the year before introduction and the five years after implementation of Pennsylvania Senate Bill 1310 (SB 1310). During the bill's adoption process proponents of the antitakeover legislation argued that the law would free managers to focus on long-term performance. They claimed that, in the long run, shareholders, employees, and the community would benefit from the law as a result of the efficient and prosperous long-term focus of corporate management. In contrast, opponents of the law argued that SB 1310 would lead to the entrenchment of inefficient management with a consequent adverse effect on the long-term performance of Pennsylvania firms. To test these conflicting predictions this study compares the long-run performance of Pennsylvania firms that did not opt out of any SB 1310 antitakeover provisions, that opted out of all provisions, and that opted out of only some provisions.

Contrary to the prediction of proponents of SB 1310, we find no evidence that the antitakeover protection offered by the law led to improved firm performance due to the long-term focus of managers. During the first year after implementation of SB 1310 the stock returns of firms that accepted total or partial takeover protection were significantly lower than those of firms that opted out of all provisions. During the three-year and five-year holding periods after adoption of the law there are no significant differences in the stock price performance of these groups of firms. Thus, we find no evidence that the long-run stock price performance of firms protected under SB 1310 is superior to that of firms that did not accept takeover protection. We also find that firms that did not opt out of any provisions were characterized by

higher liquidity, lower profitability, and lower Tobin's q than firms that opted out of all provisions.

We find some evidence in support of the managerial entrenchment hypothesis and find no support for the long-term focus hypothesis. In the short run firms that accepted partial or complete takeover protection under SB 1310 marginally underperformed firms that did not accept protection. In the long run, however, firms that accepted partial or complete takeover protection under SB 1310 did not perform differently than firms that did not accept any protection. Overall, we do not find that antitakeover measures, such as SB 1310, improve the long-term performance of firms that are protected from the market for corporate control, as proponents suggest. These results should be considered when policy makers are presented with arguments supporting antitakeover measures.

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