Diversification to Mitigate expropriation in the Tobacco Industry

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Abstract

While it is well established that diversifying acquisitions by large, cash-rich firms destroy shareholder wealth, we document positive abnormal returns to such acquisitions in the tobacco industry. We show that these abnormal returns are associated with proxies for lower expected expropriation costs. Specifically, we show that wealth creation increases in the degree of domestic geographic expansion afforded by the acquisition (increasing tobacco firms’ influence in more political districts) and in the liquidity of tobacco firms’ assets (converting cash to harder-to-expropriate operating assets). We also show that the threat of expropriation constrains payments to shareholders before expropriation becomes certain in 1998.

Key words: Tobacco; Acquisitions, Diversification; Expropriation costs

JEL classifications: G31; G32; G34; M40

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1. Introduction

In this paper, we show that diversifying acquisitions by tobacco firms are positive net present value investments. Our finding contrasts with prior work, which has established that diversifying acquisitions by large, cash-rich firms are associated with the destruction of bidder shareholder wealth (e.g., Jensen, 1986; Shleifer and Vishny, 1988; Morck et al., 1990; Moeller et al., 2004). We provide evidence of a previously unexamined source of economic gains to diversifying acquisitions: the protection of shareholder wealth against expropriation by politicians and private litigants.¹

We propose two mechanisms by which tobacco firms’ diversification reduces expected expropriation costs. The principal mechanism is increased political influence. Drawing on research into the exercise of political influence and the economics of regulation (e.g., Stigler, 1971; Siegfried, 1972; Caves, 1976; Pittman, 1976; Pincus, 1977; Esty and Caves, 1983; Hall and Wayman, 1990), we argue that domestic geographic expansion is a critical strategic aspect of tobacco diversification: an expanded geographic presence enables tobacco firms to influence politicians in a greater number of political districts and makes the firms’ political contributions more effective. The secondary mechanism is that diversification transforms excess financial assets into physical and intangible assets of non-tobacco operations, creating shallower pockets that attract less attention. This is preferred to returning excess cash directly to shareholders because the

¹ We define expropriation as the reduction in tobacco-shareholder wealth due to the following: regulatory restrictions on the sale, consumption, and advertising of tobacco products; state and federal excise taxes levied on tobacco products; and legal action for cost recovery and/or punitive damages by governments, consumers of tobacco products, and other affected parties. We recognize several motivations for expropriation, including: protection of the public, holding a firm responsible for the health-related costs of its products, and self-interested behavior by trial lawyers and politicians. Politicians have incentives to impose both implicit and explicit taxes on tobacco firms to increase the likelihood of reelection and/or to increase the financial resources under their control (e.g., Holthausen and Leftwich, 1983; Watts and Zimmerman, 1986). Our analysis and results are independent of the motivation for expropriation.
perception that the firm is diluting its asset base to avoid paying future claimants can lead to injunctive action and precipitate expropriation (O’Connell, 2005a, 2005b; Warner, 2006).

We study tobacco firms and their diversifying acquisitions during 1952-2002, a period in which the threat to the legitimacy of the tobacco business steadily intensified. We find that tobacco firms began planning (and subsequently implemented) active diversification strategies shortly after the 1953 publication of data revealing a link between cigarette smoking and lung cancer (Dupuis, 1956; R. J. Reynolds Tobacco Company, 1956; Heiman, 1965; Miles, 1982). The strategy considerably increased the geographic presence of tobacco firms. In 1952, tobacco firms had operations in only six states (and no non-tobacco operations anywhere). By the mid-1980s, tobacco firms had operations, either tobacco or non-tobacco, in all but five states.

We analyze the wealth effect of 88 acquisition announcements of public and private domestic targets by tobacco bidders. We estimate that tobacco firms’ shareholders earn significantly positive mean abnormal returns of 0.91% in the three days surrounding the announcement of a diversifying acquisition. This finding is inconsistent with the expectation, based on the evidence from prior research, that acquisitions by large tobacco firms are likely to destroy shareholder value.\(^2\) We use two measures of wealth creation to corroborate our finding. First, we compare tobacco bidder abnormal returns to the abnormal returns for acquiring firm shareholders predicted by the model in Moeller et al. (2004, pp. 215-216). We find that tobacco firms’ abnormal returns exceed the predicted abnormal returns by 2.30% on average and are significantly different from zero. Second, we compare the tobacco bidder abnormal returns to those of a matched sample of non-tobacco

\(^2\) First, tobacco firms are cash-rich (Jensen, 1986), and cash-rich acquirers tend to experience negative returns at the announcement of acquisitions (Lang et al., 1991; Harford, 1999; Oler, 2007). Second, tobacco producers are large, and Moeller et al. (2004) document a negative association between bidder size and bidder abnormal returns as well as negative aggregate wealth effects to acquisitions involving large bidders. Finally, Morck et al. (1990) and Moeller et al. (2004) provide evidence that announcement returns to diversifying acquisitions are negative.
bidders making similar acquisitions. We find that tobacco firms’ abnormal returns exceed those of the matched non-tobacco bidders by 2.44% on average and are again significantly different from zero.

We further demonstrate that these positive abnormal returns are not simply manifestations of acquisitions via tender offers, acquisitions of private firms, or acquisitions paid for in cash. Prior research has shown associations between abnormal returns and whether the target is a private firm (Fuller et al., 2002; Moeller et al., 2004); whether the bidder makes a tender offer (Jensen and Ruback, 1983); and whether the bidder pays with cash only (Travlos, 1987; Fuller et al., 2002; Moeller et al., 2004). Our results, however, obtain for public as well as private targets, for mergers as well as for tender offers, and for all forms of payment. Finally, we assess aggregate value creation and synergy gains using the method in Bradley et al. (1988). We document aggregate value creation to tobacco acquisitions: the mean value-weighted abnormal return for the bidder and the target combined is 2.98%, significantly greater than zero.

We next conduct cross-sectional analyses to identify the determinants of value creation by diversification. Tobacco bidders’ abnormal returns are higher when they acquire targets that have physical operations in states that, prior to the acquisition, did not have tobacco firm or subsidiary operations. This result is consistent with tobacco firms increasing their political influence, and consequently their ability to stave off expropriation, by entering new domestic geographic locations. Tobacco bidders’ abnormal returns are positively associated with the relative size of the acquisition, consistent with larger wealth gains for diversification transactions that create more political influence. Tobacco bidders’ abnormal returns are lower the more diversified the tobacco firm, consistent with diminishing returns to increasing levels of diversification. Finally, tobacco bidders’ abnormal returns are positively associated with the proportion of the tobacco firm’s assets
that are liquid, consistent with larger wealth gains for transactions that convert more liquid tobacco-related-assets to operating assets in less controversial industries. These results are robust to defining our dependent variable as excess tobacco bidder abnormal returns and to including controls for the form of payment (Travlos, 1987; Fuller et al., 2002; Moeller et al., 2004), firm profitability (Watts and Zimmerman, 1986), and gains that could result from either economies of scale or distributional synergies.

As a corollary to our primary analysis, we compare the propensity of tobacco firms to repurchase shares and pay dividends before and after the Master Settlement Agreement (MSA) of 1998. We expect that returning cash directly to shareholders becomes preferable since third-party incentives to challenge dividends and repurchases as “bailing out” are lower after the MSA. We find that the average amount of cash returned to shareholders per year via share repurchases and dividends is significantly larger in the latter period. We interpret this evidence as consistent with tobacco firms limiting direct payouts when expropriation is uncertain, since such payouts might actually trigger expropriation, and with tobacco firms returning excess cash to shareholders once expropriation has become certain.

Our evidence that diversifying acquisitions are a source of economic gains for acquiring firms due to lower expected costs of expropriation contributes to a literature that has found it difficult to identify such gains (Andrade et al., 2001). Our findings indicate that intense pressure from politicians and litigators leads to shareholder wealth effects of diversification and free cash flow disposition that are opposite to those documented in prior research. The reversal is consistent with Stulz’s (2005, p. 1613) prediction that negative net present value investments can be transformed into wealth-creating projects in countries with a high risk of state expropriation.
The evidence that the threat of expropriation provides an incentive to diversify is also of interest to financial economists studying the investment decisions and the market pricing of firms in sin industries or in the oil industry during periods of heightened political scrutiny (e.g., Hong and Kacperczyk, 2007; Kim and Venkatachalam, 2006). That is, if investors impound their expectations of expropriation costs into tobacco firms’ stock prices, our evidence suggests that investors act as if diversification reduces expected expropriation costs. This is consistent with an expropriation-risk explanation for tobacco firms’ pricing. It is more difficult to reconcile with a social-norms argument, however, because when a tobacco firm diversifies it continues to operate in a sin industry. We conduct an exploratory analysis using other sin-industry firms and find that diversifying acquisitions are also value-creating in this broader sample (see Section 5.2).

We organize the rest of the paper into four sections. Section 2 describes the threats of expropriation in the tobacco industry and the industry’s responses to these threats. In Section 3, we develop our theory of how tobacco firms’ diversification activity created wealth for shareholders by delaying and/or reducing expropriation. In Section 4, we describe our acquisitions sample and present the empirical results. We discuss our results and conclude in Section 5.

2. The U.S. tobacco industry: Expropriation threats and tobacco firms’ responses

Studies of the tobacco industry identify the early 1950s as the beginning of the threat to the legitimacy of the tobacco business (Miles, 1982; Rabin, 1992; McGowan, 1995; Kluger, 1996). The industry itself marks 1953 as the beginning of the “health scare.” In March of 1953, a leading thoracic surgeon suggested that heavy smoking causes lung cancer, urging smokers to quit or at the very least to obtain a chest X-ray every six months. In November of the same year, lung cancer was the principal theme of the American Cancer Society Annual Meeting. Finally, on December 9, 1953, researchers at the Sloan-Kettering Institute reported the results of a meta-analysis of 13
studies of the health effects of cigarette smoking: smoking causes lung cancer. Tobacco manufacturers’ stock prices dropped by approximately five percent in response to the Sloan-Kettering report (New York Times, 1953a). The first lawsuit against a tobacco firm was filed in 1954, and in 1953-1955 the industry registered its first decline in per-capita cigarette demand.

The tobacco industry responded immediately and in concert to these threats. Within 24 hours of the Sloan-Kettering report, tobacco firm officials discounted the findings and asserted that the allegations of causality were not valid (New York Times, 1953b). A month later, in January 1954, tobacco producers formed the Tobacco Industry Research Committee (later known as the Tobacco Research Council) to conduct their own research on the effects of tobacco use (New York Times, 1954; Plumb, 1954). Fig. 1 shows the per-capita demand for cigarettes from 1952-2004. While the health scare led to a decline in demand over the period 1952-1954, the efforts of the tobacco firms quickly overcame this setback; by 1959, demand had increased beyond 1952 levels.

Tobacco firms continued their organized resistance to threats by forming the Tobacco Institute in 1958 to manage public relations and lobby politicians on behalf of the industry. The Tobacco Institute was viewed as a very effective organization throughout its existence (Miles, 1982; Jensen, 1978; Leichtman, 1988; MSA, 1998). The firms (and their lawyers) also developed common legal strategies for defending against lawsuits and essentially committed (collectively) to fight (independently) all suits and not to settle (Rabin, 1992). The small number of tobacco firms, their financial resources, and the potentially disastrous effect of a legal loss made free-riding behavior too costly (Peltzman, 1976; Rabin, 1992), and the industry maintained a united front against expropriation threats for over four decades.

The response most relevant to our paper was that tobacco firms began planning (and subsequently implemented) an active diversification strategy shortly after the publication of the
Sloan-Kettering report (Dupuis, 1956; R. J. Reynolds Tobacco Company, 1956; Heiman, 1965; Miles, 1982). As early as 1956, both Philip Morris and R. J. Reynolds created a management position with the responsibility of identifying and evaluating acquisition targets, and a supervising committee to oversee the implementation of diversification and report to the board of directors (Dupuis, 1956; R. J. Reynolds Tobacco Company, 1956). The stated goals of diversification suggest that tobacco firms intended to deal with potential declines in demand for tobacco as well as shelter firm value from potential expropriation costs.3

Fig. 1 also summarizes the major regulatory and legal events that affected the industry from 1952-1998.4 Three types of tobacco shareholder wealth expropriation occur during this period: regulatory, legal, and tax-based. While the intensity of each type has varied over time (Rabin, 1992, 2001; McGowan, 1995), Fig. 1 shows that a steady decline in the demand for cigarettes began in approximately 1964, when the United States Surgeon General’s report causally linked smoking to cancer. The Appendix provides additional details on each of these threats over our time period.

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3 In an internal document dated May 17, 1956, and entitled “Diversification,” R.N. Dupuis, Vice President of Research at Philip Morris, describes the principal reasons for diversification as “To make better use of company capitalization in order to permit greater growth and increased profits” and “To broaden the basis of activities in order to minimize variations in cigarette sales due to such reasons as the health scare” (Depuis, 1956: p. 1). Miles (1982, p. 139) reports that, as early as 1956, R.J. Reynolds Tobacco Company management regarded diversification “as a form of insurance and profit protection.” Miles (1982, p. 163) also reports the following statement from a senior tobacco firm manager: “There was overdependence on tobacco as the primary source of earnings which had become more risky as a result of the smoking-and-health controversy.” In an interview on February 18, 1965, commenting on Lorillard’s stated goal of 40 to 50% diversification, Lorillard CEO Aikman pointed out “that Lorillard’s diversifying was not solely motivated by the health threat” (Heiman, 1965, p. 3). While these stated reasons are seemingly innocuous and focused on the supposed economic benefits of product diversification to smooth profits, they can also be interpreted as indicative of tobacco firms’ intent to protect their cigarette profits through the political process.

4 To construct Fig. 1, we rely on accounts of the history and intensity of regulation and litigation (Miles, 1982; Rabin, 1992; McGowan, 1995; Kluger, 1996; Rabin, 2001; Viscusi, 2002; Dahiya and Yermack, 2003). We obtain additional information from news media articles and tobacco firms’ internal documents publicly available at http://legacy.library.ucsf.edu/.
3. Theoretical development and empirical expectations

In this section, we develop the expected expropriation cost reduction hypothesis, our theory about an unexamined source of value from diversifying acquisitions. We assume that as evidence on the harmful effects of smoking accumulates, investors impound their expectations of expropriation costs into tobacco firms’ stock prices. We also assume that expropriation costs vary across states of nature and can be represented as a proportion of firm market value that varies between zero (no expropriation) and one (full expropriation). Under these assumptions, actions that reduce the probability of states with high expropriation rates create value for tobacco firm shareholders. Without the value derived from a reduction in expected expropriation costs, extant theory and evidence supports a prediction that tobacco firms’ diversifying acquisitions would destroy shareholder wealth.

3.1. The value of diversifying acquisitions to large corporate acquirers

Prior research consistently reports negative or zero abnormal returns for large firms announcing diversifying acquisitions (Jensen and Ruback, 1983; Roll, 1986; Shleifer and Vishny, 1989; Lang et al., 1991; Harford, 1999; Bruner, 2002; Moeller et al., 2004). Roll’s (1986) hubris hypothesis assumes that managers overestimate their ability to reap economic gains from diversifying acquisitions and consequently overpay for their targets; Moeller et al. (2004) provide evidence consistent with hubris among large bidders. Jensen’s (1986) free-cash-flow hypothesis suggests that diversification occurs for the benefit of managers (i.e., as a means for managers to protect their equity-contingent wealth and human capital and to increase their private benefits) and that diversifying acquisitions therefore impose agency costs on acquiring-firm shareholders.
Shleifer and Vishny (1989), Lang et al. (1991), Harford (1999), and Oler (2007) provide evidence consistent with this hypothesis.\(^5\)

Diversification can theoretically create value through improved financial efficiency due to greater access to internal funds or increased debt capacity (Williamson, 1970; Lewellen, 1971; Shleifer and Vishny, 1992) and/or through greater operating efficiencies due to economies of scope or economies of scale (Teece, 1980; Ravenscraft and Scherer, 1987). Researchers have found it difficult, however, both to provide evidence of economic gains to acquiring firms and to identify the source(s) of such gains, even in smaller samples and in clinical studies (Andrade et al., 2001; McGuckin and Nguyen, 1995; Kaplan, 2000; Schoar, 2002).\(^6\) In large-sample studies of diversifying acquisitions by large acquirers, the costs from hubris and agency concerns apparently outweigh any benefits from improved financial or operating efficiency.

Tobacco firms generate large amounts of free cash flow and face declining demand in most of our sample period. Jensen (1986, p. 328) consequently identifies the tobacco industry as one where agency conflicts between managers and shareholders over the payout of free cash flows are particularly severe. Moeller et al. (2004) document a size effect on bidder abnormal returns: acquiring firms with market capitalization above the 25\(^{th}\) percentile for NYSE firms have negative abnormal returns. The tobacco firms we study all have market capitalizations above this threshold.

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\(^5\) In addition to event studies on acquisition announcements, recent research also concludes that diversification destroys value by showing that diversified firms trade at a discount, and that firms reversing prior diversifying activity achieve higher valuations (Lang and Stulz, 1994; Berger and Ofek, 1995; Comment and Jarrell, 1995; Servaes, 1996; Maquiera et al., 1998; Lamont and Polk, 2002).

\(^6\) Researchers have proposed several information-related confounds that might make detection of real economic benefits to diversification difficult. First, some argue that acquisitions paid for with equity signal that the equity of the acquirer is overvalued (Travlos, 1987). Fuller et al. (2002) and Moeller et al. (2004) present evidence consistent with this overvaluation hypothesis. Second, McCaldle and Viswanathan (1994) propose that acquisitions signal reduced internal growth opportunities; their empirical evidence is consistent with this hypothesis. Third, Mitchell et al. (2004) suggest that price pressure on acquiring-firm stock leads managers to attempt to bolster share price through the growth that an acquisition brings and present empirical evidence consistent with this hypothesis. We control for these effects in our analysis.
The extant theory and evidence, therefore, support a prediction that diversification destroys tobacco-firm shareholder value.

In contrast to the literature, however, we argue that diversification creates value for tobacco-firm shareholders because it reduces expected expropriation costs. First, diversification increases tobacco firms’ ability to influence politicians to either supply favorable regulation or limit the supply of onerous regulation. Second, diversification changes the composition of tobacco firms’ assets away from cash to harder-to-expropriate physical and intangible assets. We thus predict that abnormal returns to diversifying acquisitions in the tobacco industry are positive.

Our treatment of expropriation costs is similar to that of Stulz (2005), who examines investment behavior in the presence of an expropriation threat from the sovereign ruler of the country in which the firm’s assets are located. Stulz suggests that, in regimes with high expropriation risk, firms might choose to invest in projects that would have negative net present value absent expropriation risk. Analogously, we predict that diversifying acquisitions that would be negative net present value investments in an industry without the threat of expropriation are positive net present value investments in an industry that faces significant expected expropriation costs.

Our argument is also related to prior work that has documented that firms have incentives to make income-decreasing accounting choices to reduce the likelihood of wealth transfers by politicians (Watts and Zimmerman, 1978; Wong, 1988) or to obtain favorable outcomes in import relief investigations (Jones, 1991). Both arguments involve the firm’s incentives to avoid the attention of politicians and both arguments suggest that diversifying acquisitions can create value even if they reduce overall profitability. We discuss these issues in detail in the next section, where we develop testable implications about how abnormal returns vary in the cross-section.
3.2. The expected expropriation cost reduction hypothesis

We propose that diversification creates value for tobacco firm shareholders in two ways. The primary source of benefits is increased political capital that enables tobacco firms to reduce the likelihood and/or amount of adverse wealth transfers by politicians. A secondary source of benefits is that transforming excess financial assets into physical assets of non-tobacco operations turns “deep pockets” into “shallow” ones that attract less attention from politicians and private litigants.

The argument that diversification increases political influence follows from prior economics research suggesting that regulations are typically pro-producer, and that firms must be willing to commit resources to influence the political process that supplies regulations (Stigler, 1971; Peltzman, 1976). Research on the economics of political influence has studied whether factors such as the level of campaign contributions, the cost of organizing a unified response, and the overall size and profitability of the interested parties affect the likelihood of obtaining favorable regulatory outcomes (e.g., Siegfried, 1972; Caves, 1976; Pittman, 1976; Pincus, 1977; Esty and Caves, 1983; Hall and Wayman, 1990). We build on this body of research to present our expectations of how diversification interacts with geographic dispersion, size, and profitability to create shareholder value by building political capital.

Domestic geographic expansion is an important strategic aspect of tobacco diversification because it enables tobacco firms to influence politicians in a greater number of political districts. This follows prior research that documents a relation between firms’ political influence and the geographic location of their facilities. Pincus (1977), for example, shows that industries that have facilities in more states benefit from higher tariffs imposed on competing imports. Esty and Caves (1983) find that corporate political activity is more successful when firms’ employment is spread across many geographic locations (states) rather than concentrated in a few locations. Hall and
Wayman (1990) examine the effects of monetary contributions on federal politicians’ behavior during committee development of three major pieces of legislation, and find that political contributions are more likely to align politicians’ and contributors’ interests when the latter have a physical presence in the politicians’ legislative district.

There is also anecdotal evidence specific to the tobacco industry that supports a link between diversification and political influence. First, Blum (1985, p. 328) asserts that, after a tobacco-firm acquisition of a non-tobacco firm, “Executives of these seemingly disinterested and unrelated companies then take the lead in the local business community in opposing legislative restrictions on public smoking… or tobacco advertising.” Second, a report from the University of Wisconsin Comprehensive Cancer Center (2002, pp. 21-22) suggests that Philip Morris—the largest private employer in the state of Wisconsin due to its Oscar Meyer and Miller Brewing subsidiaries—used its political and economic importance to influence policies at the state and local level. Third, additional reports from Connecticut (Common Cause, 2003a) and Florida (Common Cause, 2003b) provide further evidence of the tobacco industry’s leveraging of non-tobacco operations to further tobacco interests.

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7 The University of Wisconsin report quotes a Philip Morris executive as claiming that “The tobacco industry forced the withdrawal of an early attempt to pass a ‘Clean Indoor Air’ bill with ‘the fine help we received from Miller Brewing’ ” (p. 23). This bill was so watered down in committee that its sponsors withdrew it from further consideration. Perhaps most telling, the University of Wisconsin report discloses that Philip Morris used its non-tobacco presence in the state to influence the state’s tax policy on tobacco products: “Philip Morris issued a warning to the state and legislature that any ‘double-digit’ hike in the [cigarette] tax would be considered ‘punitive’ and ‘anti-business’ and that they would have to ‘re-evaluate’ future investment in their major holdings of Oscar Meyer and Miller Brewing” (p. 33).

8 There is also specific evidence that tobacco firms’ monetary contributions to politicians at the state and federal level influence political outcomes in the industry’s favor. Glantz and Begay (1994, p. 1178), for example, interview “[i]ndividuals from six health and medical organizations and key individuals who have worked with the legislature on tobacco control issues” to obtain a “tobacco policy score” that measures each California state politician’s propensity to favor or oppose anti-tobacco policy. They find this measure to be significantly associated with the monetary contributions from tobacco firms. Monardi and Glantz (1998) use similar qualitative measures to find comparable results for Colorado, New Jersey, Ohio, Pennsylvania, and Washington. These studies, as well as Wisconsin (2002) and Common Cause (2003a; 2003b) further indicate that tobacco firms’ influence acts primarily to prevent restrictive legislation from ever coming to a vote.
The preceding discussion suggests that diversification transactions that expand a firm’s geographic presence are associated with more value creation via a greater reduction in expected expropriation costs. We thus predict that tobacco firms’ abnormal returns are positively associated with the degree of domestic geographic expansion due to the acquisition. We also argue that once a firm has access to a certain number of legislators, access to additional legislators becomes less valuable. We thus expect that there are diminishing marginal returns to geographic expansion via diversification and predict that tobacco firms’ abnormal returns are negatively associated with the firm’s current geographic presence.

We include two other variables that capture additional dimensions of our political-capital argument. First, prior research suggests that political influence varies positively with the economic importance of the industry (e.g., Siegfried, 1972; Pincus, 1977). We assume that the larger the size of the target relative to the acquiring tobacco firm, the greater the increase in economic importance and political influence. We therefore predict that tobacco firms’ abnormal returns are positively associated with the relative size of the target firm.

Second, prior research shows that lower profits reduce the likelihood of adverse wealth transfers by politicians (Watts and Zimmerman, 1978; Wong, 1988) and increase the likelihood of obtaining favorable regulatory outcomes (Siegfried, 1972; Pittman, 1977; Jones, 1991). More-profitable firms, therefore, should benefit from protection from expropriation if they acquire less-profitable firms. Because diversification systematically lowers profitability for our sample, we predict that tobacco firms’ abnormal returns are positively associated with current profitability.9

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9 The profitability of tobacco is well established, suggesting that most diversification would reduce tobacco firms’ profit margins and return on assets. Lelyveld (1963) suggests that initial diversification efforts failed to contribute much to the profits of tobacco firms. Using available segment disclosures in annual reports, we find that diversification does lower profit margins and return on assets. For example, between 1977 and 1996, the mean profit margin (operating income/operating revenues) and returns on assets (operating income/identifiable assets) for Philip Morris’s tobacco
A second mechanism by which diversification can create value is through changes in the liquidity of the acquirer’s assets. Diversification can make firms less likely to attract attention from politicians and private litigants by decreasing the proportion of the firm’s financial assets. Investing excess cash in financial assets results in “deep pockets” and leads to higher expected expropriation costs by attracting more attention from politicians and litigants (Sunstein et al., 2003; *State Farm Mutual Automobile Insurance Co. v. Campbell*, 2003; Guardino and Daynard, 2005). If diversification creates value by making tobacco firms’ assets less liquid, we expect firms with greater liquidity to benefit more from diversifying acquisitions. We predict, therefore, that tobacco firms’ abnormal returns are positively related to the firm’s liquidity. We also predict that tobacco firms’ abnormal returns will be larger when the acquisition is an all-cash transaction, since a (relatively) larger amount of liquid assets are transformed into hard assets than if equity is involved in the exchange. (We discuss other reasons to expect a positive relation between the announcement abnormal returns and all-cash transactions in Section 4.2.)

3.3. *Shareholder payments*

Throughout our sample period, tobacco firms generate substantial cash flow but have fewer and fewer value-creating investment opportunities in the tobacco business (see Fig. 1). These conditions create high agency costs (Jensen, 1986) that share-repurchase programs and dividend increases can alleviate by reducing the likelihood that managers undertake negative net present value projects (Lang and Litzenberger, 1989; Nohel and Tarhan, 1998).

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Segment were 22% and 49%, respectively. These percentage are significantly larger than the corresponding measures for Philip Morris as a whole (15% and 18%, respectively, \( p \)-values = 0.001). Similarly, Loews Corp’s cigarette segment over the same period generated profit margins averaging 26% whereas the firm as a whole had an average profit margin of only 8%. Between 1979 and 1987, R.J. Reynolds’s tobacco segment profit margin of 21% was also larger than the firm’s 14% profit margin.
For tobacco firms facing third-party expropriation threats, however, keeping the cash or making large cash distributions might not be in shareholders’ interests. First, as noted earlier, investing in financial assets can attract the attention of litigators and politicians to the “deep pockets” of the firms. Additionally, returning excess cash directly to shareholders increases expected costs of expropriation because the perception that the firm is diluting its asset base to avoid paying future claims can lead to injunctive action and precipitate expropriation (O’Connell, 2005a, 2005b; Warner, 2006). The remaining alternative, investing excess cash in hard assets, provides the benefits we detail in the previous section: increasing tobacco companies’ political capital through geographic expansion while reducing the liquidity of their assets.

The Master Settlement Agreement (MSA) of 1998, in which the tobacco firms agreed to make annual payments to state governments due to smoking-related Medicare costs, created a precedent for expropriation. Given this precedent, the potential costs of returning cash directly to shareholders decrease since the tobacco firms could not further increase the risk of expropriation by doing so. As a corollary to the expected expropriation cost reduction hypothesis, therefore, we predict that tobacco firms increase cash payments to shareholders after 1998.

4. Empirical analysis

We present our empirical analyses in four parts. In Section 4.1, we discuss our sample. In Section 4.2, we document that diversifying acquisitions created value for tobacco companies. In Section 4.3, we present cross-sectional analyses that support the proposition that this wealth creation is the result of a reduction in expected expropriation costs. In Section 4.4, we show that tobacco firms return more cash to shareholders after signing the Master Settlement Agreement in 1998.
4.1. Sample

We use the *Wall Street Journal* index to identify the announcement dates of tobacco firms’ diversifying acquisitions for the period 1957-2002. We include only domestic acquisitions because our hypotheses regarding political influence and expropriation cost reduction rely on domestic phenomena that are not applicable to acquisitions of foreign firms. We find 107 acquisition announcements and eliminate 19 because the announcement is contemporaneous with an earnings announcement. The sample we analyze thus consists of 88 diversifying acquisitions of domestic targets by tobacco manufacturers with an aggregate deal value of $84.7 billion (in 2001 dollars).

In Table 1, we present information on the sample of 88 acquisitions. The first column describes the entire sample. Of the 88 acquisitions, 54 (62%) involve public targets and 77 (87.5%) are completed. Twenty-one transactions (24%) involve targets in the food industry, and tobacco firms make tender offers in 20 (23%) of the transactions. In Columns 2 and 3 of Table 1, we partition the sample into two periods: 1957-1984 and 1985-2002. The first period begins in 1957, when Philip Morris makes the first diversifying acquisition in the tobacco industry, and ends in 1984. This period contains 72 of the 88 acquisitions. In aggregate, tobacco firms make acquisitions worth over 13 times their market value at the end of the year preceding each acquisition, and by 1984 all tobacco firms have achieved some degree of diversification from tobacco operations. In the second period, 1985-2002, there are fewer transactions (16) and the deal values are larger ($50.2 billion in total) but they represent only 3.6 times the market values of the acquirers.

4.2. Announcement abnormal returns

Table 2, Panel A, reports the results of our primary analysis of tobacco firms’ abnormal returns. We compute cumulative abnormal returns over days –1 to +1 in three ways: as prediction errors from a market model with parameters estimated over days –300 to –46 relative to the day of
the announcement; as market-adjusted returns; and as size-adjusted returns. For three acquisitions announced before 1962, we compute daily returns using prices reported in daily issues of the *Wall Street Journal*, and we compute daily abnormal returns as the difference between the firm’s return and the return on the S&P 500. Because the results are not sensitive to the method we use, we report abnormal returns estimated using the market model.

We estimate that tobacco firms earn significantly positive abnormal returns: both the mean (0.91%) and the median (0.60%) abnormal returns are statistically different from zero, with *p*-values of 0.005 and 0.007, respectively. The overall results are driven by the acquisitions in the 1957-1984 period: mean and median abnormal returns for these 72 acquisitions, respectively, are 1.36% and 1.05% (both *p*-values < 0.001), while the corresponding values for the 16 post-1984 acquisitions (–1.10% and –0.70%) are not distinguishable from zero. Tests comparing means and medians across periods suggest that bidder abnormal returns are significantly lower in the post-1984 period.

To investigate this result further, we assess the effect of tobacco acquisition announcements on the *combined* value of tobacco acquirers and their targets. We use the method of Bradley et al. (1988) to estimate the synergy gains (the combined abnormal and dollar returns to bidders and targets) for each acquisition that involves a publicly traded target. As we report in Panels B and C of Table 2, we find that the average synergy gains to tobacco firms’ acquisition announcements are significantly positive and do not differ across time periods, either in percentage terms (2.91% in 1957-1984 compared with 3.25% in 1985-2002; *p*-value = 0.838) or dollar terms (the mean of $140 million in 1957-1984 is numerically less than the mean of $782 million in 1985-2002, but the

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10 The mean overall abnormal returns, by firm, are 0.90% for American Tobacco, 0.92% for Brown & Williamson, 1.24% for Liggett & Myers, 2.06% for Lorillard, 1.14% for Philip Morris, and –0.86% for R.J. Reynolds. These data suggest that our primary result is not driven by the acquisition announcements of any particular tobacco firm. The negative abnormal return for R.J. Reynolds is driven by the acquisition of Borden in 1994.
values are not statistically different; \( p\text{-value} = 0.127 \). Thus, with similar total wealth creation in both periods, the lower post-1984 abnormal returns are consistent with targets and/or arbitrageurs extracting higher premia because tobacco firms faced a higher likelihood of expropriation post-1984 and had less negotiating power. Moreover, the percentage and dollar synergy results contrast with findings in Moeller et al. (2004, p. 224), who report average percentage synergy gains of 0.70% and average dollar synergy losses of $55.5 million for the large firms in their sample.

Because our results are in stark contrast to prior research, we conduct two sets of tests. First, we document that three known determinants of bidder abnormal returns do not drive our findings. First, Fuller et al. (2002) and Moeller et al. (2004) find that acquisitions of private targets are associate with significantly positive and higher abnormal returns than acquisitions of public targets. Second, Jensen and Ruback (1983) document that tender offers are associated with positive abnormal returns whereas mergers are associated with zero or negative abnormal returns. Third, Travlos (1987), Fuller et al. (2002), and Moeller et al. (2004) present evidence that cash-only transactions are associated with more-positive abnormal returns than transactions that involve equity. We report the results of our tests in Panels A, B, and C of Table 3. Panel A documents that our result is driven by acquisitions of public, not private, targets. Panel B shows that our results do not differ based on whether the bidder makes a tender offer or a merger announcement. Finally, Panel C shows that even acquisitions in our sample in which the bidder pays in part or in full with equity have positive abnormal returns pre-1984. These results support our conclusion that diversifying acquisitions create wealth for tobacco firm shareholders, and that known determinants of wealth creation do not explain our results.

Second, we investigate alternative measures of wealth creation that compare tobacco firms’ abnormal returns to two different benchmarks. For our first benchmark, we rely on Moeller et al.
(2004), who present a model to explain variation in bidder abnormal returns as a function of the characteristics of the transaction, the acquirer, and the target. We use parameter estimates from Moeller et al. (2004, pp. 215-216) to compute the expected bidder abnormal return given the characteristics of the firms and the transaction (see Table 4 for details). We then compute the tobacco firms’ “excess” abnormal return as the difference between the actual abnormal return and the abnormal return predicted by the model from Moeller et al. (2004) for the 73 observations for which data on the model’s variables are available. Table 4, Panel A, reports that the mean excess abnormal return for tobacco firm acquisitions is 2.30% ($p$-value = 0.001). The mean raw abnormal return equals 1.04% and the mean predicted abnormal return equals –1.26%. This confirms that, ignoring the benefits of a reduction in expected expropriation costs, prior research would predict that diversifying acquisitions by tobacco companies result in wealth destruction. We find, in contrast, that diversifying acquisitions in the tobacco industry create wealth.

Because Moeller et al. (2004) use data from 1980 through 2001, their parameter estimates may not be appropriate for use in calculating expected returns for the observations from the years 1957-1979 in our sample. We therefore also calculate tobacco firms’ excess abnormal returns relative to the abnormal returns of matched non-tobacco bidders. To obtain matches for tobacco firm announcements from 1957-1979, we begin with all firms with delisting codes in the Center for Research in Security Prices (CRSP) database in the 200-299 range during this period. From this population, we identify matched acquisitions using bidder size, the target’s two-digit SIC code, and time period (within one year). To obtain matches for tobacco firm announcements post-1979, we use the Securities Data Corporation (SDC) database to identify non-tobacco bidders. We match on bidder size, whether the target is public or private, and, when possible, the mode of payment and the target’s industry. Our analysis is restricted to 63 observations, largely because we cannot
identify matches for private targets before 1980. Table 4, Panel B, reports that the mean excess
abnormal return for tobacco firms over matched firms is 2.44% (p-value = 0.001). The results in
Table 4 thus corroborate our findings in Table 3. They suggest that diversifying acquisitions by
tobacco firms create value, and that there is a benefit to diversification in the tobacco industry that
does not exist (to the same extent or at all) in other industries.

4.3. Cross-sectional analysis of announcement abnormal returns

In this section, we use the following cross-sectional model to test the predictions of the
expected expropriation cost reduction hypothesis:

\[
\text{CAR}(-1,+1) = \alpha_0 + \alpha_1 \times \text{GeoExp} + \alpha_2 \times \text{Existing Diversification} + \alpha_3 \times \text{Relative Size} + \\
\alpha_4 \times \text{ROA} + \alpha_5 \times \text{Liquid Assets} + \alpha_6 \times \text{All Cash} + \alpha_7 \times \text{Food} + \alpha_8 \times \Delta ATO + \epsilon
\]  

(1)

\(\text{GeoExp}, \text{Existing Diversification, Relative Size, ROA, Liquid Assets, and All Cash}\) are our test
variables; \(\text{Food}\) and \(\Delta ATO\) are control variables.

1. \(\text{GeoExp}\) measures the geographic expansion associated with the acquisition. We
operationalize \(\text{GeoExp}\) in three ways. \(\text{New State}\) is a dummy variable that equals one when
the target is located in a state (or several states) where the tobacco firm does not yet have
operations. \(\%\text{New Senate Seats}\) and \(\%\text{New House Seats}\) measure the percentage of U.S.
Senate or U.S. House of Representatives seats from the states where the tobacco firm
would gain a physical presence as a result of the acquisition. We consult Moody’s
Industrial Manual for the year before and after each acquisition to identify the new states
associated with each acquisition. We include \(\text{GeoExp}\) to test our prediction that the value of
diversifying acquisitions increases with the degree of domestic geographic expansion due
to the accompanying increase in political influence. We expect a positive coefficient on
\(\text{GeoExp}\).

2. \(\text{Existing Diversification}\) measures the domestic geographic presence of the tobacco firm
prior to the acquisition. We operationalize \(\text{Existing Diversification}\) in three ways as well.
To correspond to \(\text{New State}\), we define \(\text{Existing Diversification}\) as the percent of states in
which the tobacco firm has a physical presence prior to the acquisition. To correspond with
\(\%\text{New Senate Seats}\) (\(\%\text{New House Seats}\)), we define \(\text{Existing Diversification}\) as the
percentage of U.S. Senate (U.S. House) seats in the states in which the tobacco firm already
has operations. We include \(\text{Existing Diversification}\) to test our prediction that there are
diminishing marginal returns to geographic expansion. We expect a negative coefficient on
\(\text{Existing Diversification}\).

3. \(\text{Relative Size}\) is the transaction value of the acquisition relative to the market value of equity
of the acquirer at the end of the fiscal year prior to the acquisition announcement. We
include Relative Size to test our prediction that larger acquisitions are associated with larger increases in political influence because they give tobacco companies a greater economic presence, involve more non-tobacco jobs, and increase tobacco firms’ geographic presence to a larger extent. We expect a positive coefficient on Relative Size.

4. ROA is the tobacco firm’s return on assets for the year preceding the acquisition, measured as the sum of net income and interest expense divided by average total assets. We include ROA to test our prediction that the value of diversification is increasing in the tobacco firm’s current profitability because of increased political scrutiny when the firm is more profitable. We expect a positive coefficient on ROA.

5. Liquid Assets is the proportion of liquid to total assets at the end of the fiscal year preceding the acquisition, measured as one minus the percentage of the tobacco firms’ assets invested in property, plant, and equipment, and intangibles. We include Liquid Assets to test our prediction that the value of diversification is increasing in the tobacco firm’s proportion of liquid (and more easily expropriated) assets. We expect a positive coefficient on Liquid Assets.

6. All Cash is a dummy variable equal to one when 100% of the consideration in the acquisition is cash. We include this variable to test our prediction that the value of diversification is increasing in the magnitude of the conversion of financial assets into (non-tobacco) operating assets (i.e., the conversion of more easily expropriated assets into less easily expropriated assets). We expect a positive coefficient on All Cash.11

7. Food is a dummy variable equal to one when the target’s SIC is in the 2000-2099 range. We include Food as a control variable because there are potential economic synergies for tobacco and food companies due to common distribution channels.

8. ∆ATO, the change in the asset turnover ratio from the year preceding the acquisition to the year following the acquisition, is measured as the change in revenues per dollar of assets. We include ∆ATO to control for the theoretical value of diversification due to increased financial and operating efficiency.

Table 5 presents descriptive statistics (Panel A) and a correlation matrix (Panel B) for the variables in the model. The mean of New State is 0.659: 65.9% of the acquisition announcements in our sample involve expansion into a new state. The means of %New Senate Seats and %New House Seats indicate that the announced acquisitions involve new states associated with 4.2 U.S. Senate seats (0.042 times 100 Senate seats) and 27.4 U.S. House seats (0.063 times 435 House seats). The mean of Liquid Assets, 0.622, suggests that the majority of tobacco firms’ assets fall

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11 We recognize that All Cash could also act as a control for the positive association between bidder returns and all-cash transactions (Travlos, 1987; Fuller et al., 2002; Moeller et al., 2004). We disentangle the two effects when we present our results.
into the easy-to-expropriate category. Finally, the mean of $\Delta ATO$ is –0.012; the asset turnover ratio of tobacco firms decreases, on average, after a diversifying acquisition.

The correlations in Panel B are largely consistent with our expectations. There is a positive and significant correlation between abnormal returns and each measure of GeoExp. The correlation between CAR(–1,+1) and New State, for example, is 0.347 ($p$-value < 0.01). The correlations between CAR(–1,+1) and Relative Size ($\rho = 0.315$, $p$-value < 0.01) and Liquid Assets ($\rho = 0.348$, $p$-value < 0.01) are also positive and significant, while there is a negative and significant correlation between abnormal returns and Existing Diversification ($\rho = –0.362$, $p$-value < 0.01). The lack of a significant correlation between abnormal returns and Food and $\Delta ATO$ indicates that the theoretical benefits of diversification due to economic and financial synergies are not present in our sample.

Furthermore, we find a significant and negative correlation between $\Delta ATO$ and Existing Diversification ($\rho = –0.278$, $p$-value < 0.10). This suggests that as tobacco firms add more non-tobacco operations they in fact became less efficient.

Table 6 presents the estimation results from our cross-sectional model. We estimate six versions of this model. Models (1), (2), and (3) include only those variables for which we have complete data for all 88 observations. Each model includes a different measure of GeoExp (New State, %New Senate Seats, or %New House Seats) and the corresponding measures of Existing Diversification. In models (4), (5), and (6), we use only the 73 observations for which we have complete data for all of our test variables. The results are generally consistent across all six models and largely support our predictions. For parsimony, we focus our discussion on Model 4.

Model 4 explains 31.4% of the variation in tobacco firms’ abnormal returns. The coefficient on New State, the variable measuring the effect of geographic expansion, is 0.0153 ($p$-value = 0.011), indicating that the existence of target firm operations in at least one new state increases abnormal
returns by 1.53%, *ceteris paribus*. This result supports the primary prediction of the expected expropriation cost reduction hypothesis and suggests that the market values the increased political influence that the tobacco firm gains when it acquires operations in new locations.

The coefficient on *Existing Diversification* is –0.0421 (*p*-value = 0.015), supporting our prediction that there are diminishing returns to the effects of geographic expansion on political influence. It seems logical that once the tobacco firm has enough influence to shift political outcomes in its favor (through either supporting pro-tobacco policies/regulations or opposing and delaying anti-tobacco policies/regulations), there is little value to further increases in political influence.

The coefficient on *Relative Size* is 0.0421 (*p*-value = 0.001), consistent with our prediction that relatively larger targets are associated with relatively larger increases in political influence. The Moeller et al. (2004) results suggest that we would find a negative coefficient on *Relative Size* for our large bidders. We thus interpret the significantly positive coefficient on *Relative Size* in Table 6 as evidence of a reduction in expected expropriation costs, because it suggests that larger acquisitions build more political influence—and hence add more value—than smaller ones. The coefficient on *ROA* is not significant, however, indicating that the value to tobacco firms’ diversifying acquisitions does not derive from a reduction in scrutiny by politicians due to a reduction in profitability following an acquisition.

The coefficient on *Liquid Assets* is 0.0298 (*p*-value = 0.100) and the coefficient on *All Cash* is 0.0094 (*p*-value = 0.047). The *Liquid Assets* result is consistent with tobacco firms having more shareholder wealth at risk of expropriation when their assets are more liquid (and consequently having more to gain from reducing the expropriation threat), while the *All Cash* result is consistent
with tobacco firms making themselves less attractive targets for expropriation by reducing the size of their “pockets.”

We conduct several robustness checks on our cross-sectional analysis. First, we re-estimate our models using tobacco bidders’ “excess” abnormal returns (relative to the two benchmarks we use in Section 4.2) as the dependent variable. When the predicted abnormal returns of Moeller et al. (2004) are the benchmark, the coefficients on the GeoExp variables, Relative Size, and Liquidity remain positive and significant, while the coefficients on Existing Diversification and All Cash become insignificant. We obtain similar results when we use matched acquirers’ abnormal returns as the benchmark, although the \( p \)-values of the coefficients on the GeoExp variables range from 0.11 to 0.16. We attribute this result to a loss in power; there are only 63 observations available for this final robustness check.

We also include separate variables for All Cash depending on whether long-term debt increases or not following the acquisition. If the acquiring firm pays with borrowed funds, the value of the acquisition to tobacco shareholders could stem from a reduction in agency costs because the additional borrowing increases monitoring (Jensen, 1986). We find, however, that the coefficient estimate on All Cash is positive regardless of whether long-term debt increases or decreases. Our results therefore continue to support an expropriation cost reduction explanation for the effect of All Cash on abnormal returns. Finally, we find qualitatively similar results to those in Table 6 when we estimate the regressions after eliminating acquisition announcements with studentized residuals greater than two in absolute value.

4.4. Payments to shareholders

As a final test of the expected expropriation cost reduction hypothesis, we examine how tobacco firms’ diversification and shareholder payout behavior changes when the MSA
significantly revises expropriation expectations. Fig. 2 presents the aggregate share repurchases, net share repurchases, acquisition deal values, and the value of dividend payments for tobacco firms from 1963 to 2003. We use the CRSP daily files to determine net share repurchases as the annual change in shares outstanding that is not the result of stock splits, stock dividends, exchanges, and reorganizations (including mergers). Fig. 2 reveals that tobacco firms are net issuers until 1988, repurchase shares at an increasing rate after 1984, increase dividends throughout the period (suggesting that repurchases are not substituting for dividends) and change in the late 1980s from diversification-dominant to cash-return dominant. Between 1963 and 1988 share repurchases amount to $10.3 billion and tobacco firms invest $82.8 billion in diversifying acquisitions. Between 1989 and 2003, however, share repurchases amount to $36.5 billion and tobacco firms invest only $1.9 billion in diversifying acquisitions.

Table 7 investigates tobacco firms’ payments to shareholders from 1985-2003. Our tests focus on comparisons of the periods 1985-1997 vs. 1998-2003. Both periods occur after the passage of SEC rule 10b-18 in 1983 (after which all firms were more likely to make share repurchases) and the comparison should thus be unaffected by the regulatory change. Panel A shows that the average amount of cash returned to shareholders per year via share repurchases increases significantly from $1.84 billion in 1985-1997 to $4.11 billion in 1998-2003 ($p$-value = 0.065). The mean annual net repurchases also increase significantly across the time periods (from $0.67 billion to $2.92 billion, $p$-value = 0.039), indicating that tobacco firms distribute more cash than they take in from issuing new shares. Panel A also shows that the average amount of cash returned to shareholders per year via dividends increases significantly from $4.23 billion in 1985-1997 to $6.3 billion in 1998-2003 ($p$-value = 0.001). We also document that the
dividend payout ratio (cash dividends divided by operating income) increases significantly, from 26.5% in 1985-1997 to 40.9% in 1998-2003 (p-value = 0.005).

In Panel B of Table 7, we test for changes in dividend payout behavior using the model of Grullon and Michaely (2002). We report results using both the original model and a modified model that includes Tobin’s q, which researchers have identified as an important determinant of dividend payments (Lang and Litzenberger, 1989; Yoon and Starks, 1995; Lie, 2000). Relying on median results, we find that the unexpected dividend payout post-MSA (1998-2003) is significantly greater than pre-MSA. We interpret the evidence in Table 7 as consistent with the expected expropriation cost reduction hypothesis: after the Master Settlement Agreement of 1998 creates a precedent for expropriation, tobacco firms increase shareholder payouts because these are no longer likely to result in increased litigation or increased political scrutiny.

We also compare abnormal returns to share repurchase announcement by tobacco and non-tobacco firms in the period 1985-2003. We find no difference in abnormal returns to repurchase announcements by tobacco firms either across periods or relative to non-tobacco firms. Assuming that “excessive” repurchases by tobacco firms would attract more political attention prior to the MSA, we would expect lower abnormal returns for tobacco repurchases both pre-MSA and relative to non-tobacco repurchases. The lack of a difference over time and between tobacco and non-tobacco firms’ repurchase announcements suggests these repurchases were not excessive. It is difficult, however, to determine what constitutes an “excessive” amount, and the results are also interpretable as the signaling or price pressure effects documented in prior research.
5. Discussion and conclusion

In this section, we discuss the economic significance of our evidence that diversifying acquisitions create wealth for tobacco company shareholders by reducing expected expropriation costs.

5.1. An estimate of the wealth protected through acquisitions

We use two benchmarks to estimate the magnitude of the reduction in expected expropriation costs that tobacco firms’ diversification activities likely achieved. To the extent that the excess value creation represents a reduction in expropriation costs, multiplying the tobacco firms’ market value by the excess abnormal return provides an estimate of the shareholder wealth protected. Using the Moeller et al. (2004) benchmark, we estimate that diversification by tobacco firms reduced expropriation costs by $5.7 billion, or approximately 8% of the costs imposed by the settlement agreement. Using our matched-firm benchmark, we estimate that diversification by tobacco firms reduced expropriation costs by $15.3 billion, or approximately 22% of the costs imposed by the settlement agreement. Our estimates of the present value of reduced expropriation costs are conservative to the extent that the market anticipated the acquisitions and had already incorporated some of the effects into firm stock prices.\textsuperscript{12} We view these numbers, both in relative and absolute terms, as economically significant.

5.2. Evidence from other ‘sin’ industries

We conduct an exploratory analysis of the benefit of diversification in non-tobacco industries that are subject to a credible threat of third-party expropriation. We focus on the non-tobacco sin industries identified in Hong and Kacperczyk (2007): alcoholic beverages and gaming. Using the SDC database, we identify 119 acquisition announcements in non-tobacco sin industries and

\textsuperscript{12} We are grateful to the anonymous reviewer for this observation.
22,289 announcements in non-sin industries and compare the abnormal returns in Table 8. We find that the mean abnormal returns to announcements of sin-firm acquisitions are significantly larger than those for non-sin-firms; this result obtains whether we measure abnormal returns using the market model or as deviations from the value predicted by the model in Moeller et al. (2004). These results suggest that firms in the alcohol and gaming industries, which face some degree of public and political scrutiny due to the nature of their products, also obtain benefits from diversification.

5.3. Conclusion

We find that diversifying acquisitions in the tobacco industry created wealth and that the magnitude of wealth created varies positively with proxies for tobacco firms’ increased ability to influence politicians and (consequently) lowered the expected costs of expropriation. In the tobacco industry, these lower costs likely result from delaying and limiting politicians’ supply of costly regulation. To the extent that diversification increases political influence, however, it could also create value by inducing politicians to supply pro-producer regulation such as more favorable tax treatments, import relief or other subsidies, or public assistance packages (Pincus, 1977; Esty and Caves, 1983). As in Stulz (2005), seemingly negative net present value acquisition investments are in the best interests of shareholders when the magnitude of expected expropriation costs is large enough. In other words, the presence of a significant threat of expropriation aligns managers’ and shareholders’ interests against a third-party expropriator and makes diversification a value-creating proposition.

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13 We note that the 22,289 observations in the non-sin-firm sample include acquisitions by all bidders of all targets. Our expectation that, absent value due to expropriation cost reduction, tobacco firm acquisitions destroy value is based on evidence from acquisitions of public companies by large bidders (e.g., Moeller et al., 2004).
Our evidence that acquiring firms benefit from diversification via lower expected costs of expropriation contributes to a literature that has found it difficult to identify sources of economic gains to acquisitions. Our findings indicate that intense pressure from politicians and litigators leads to shareholder wealth effects of diversification and free cash flow disposition that are opposite to those documented in prior research. An exploratory analysis suggests that these diversifying acquisitions also benefit shareholders in the alcohol and gaming industries. We speculate that these economic gains arise from reducing the significant threat of expropriation due to the social stigma associated with sin firms. We conjecture that there are other industries subject to intense political scrutiny where diversification might also create value. For example, Big Oil (a frequent target of political posturing over windfall profits), firearms manufacturers (whose products are legal but are associated with high social and health-care costs), and paint producers (who are at risk for the lead content of their older products) might all find diversification to be a positive net present value investment.
Appendix: Political and Legal Threats of Expropriation in the Tobacco Industry, 1952-2005

The U.S. tobacco industry from 1952-2003 includes six cigarette producers: American Tobacco Company, Brown & Williamson, Liggett & Myers, Lorillard, Philip Morris, and R.J. Reynolds. Table A1 provides information about these firms. The first column indicates the initial (changed) name of each cigarette firm in our sample, and the years [in brackets] during 1952-2002 when the cigarette firm was a publicly traded corporation. The second column documents the major events in each cigarette producer’s history as a corporate entity.

In this Appendix, we discuss the threats of expropriation in the tobacco industry from 1952-2003. We structure our discussion using the five time periods indicated in Fig. 1. The time period boundaries are not precise, of course. While we make clear distinctions in Fig. 1 and in the text, we acknowledge that the boundaries may be two or even three years wide. The boundary between the first and second time periods, for example, is probably 1964-1965, not either single year. For each time period, we describe the political and legal efforts to expropriate tobacco shareholder wealth.

We discuss regulatory restrictions on the tobacco industry in the context of accumulating evidence on the health effects of smoking and changes in per-capita tobacco consumption over time. Changes in consumption patterns are likely associated with regulatory activity. On one hand, the goal of regulatory restrictions and health warnings is to discourage smoking. On the other hand, politicians seeking to increase the likelihood of re-election would find it easier to enact regulatory restrictions as consumption decreases because they would be transferring utility from an unpopular group whose size is declining (smokers) to a popular group whose size is increasing (the non-smoking population). We rely on several accounts of the history and intensity of regulation and litigation (Miles, 1982; Rabin, 1992; McGowan, 1995; Kluger, 1996; Rabin, 2001; Viscusi, 2002; Dahiya and Yermack, 2003). We supplement these accounts with information from news media articles and tobacco firms’ internal documents made publicly available as part of the 1998 Master Settlement Agreement. We discuss federal and state excise taxes as a threat of expropriation in the last section of the Appendix.

A.1. 1952-1964: The health scare and the first wave of litigation

Prior work identifies 1953, when the initial studies claiming cigarette smoking was unhealthy were published, as the beginning of the health-related threat to the legitimacy of the cigarette business (Miles, 1982; Rabin, 1992; McGowan, 1995; Kluger, 1996). Although a few medical studies published since 1947 had identified cigarettes as a major contributor to lung cancer, influential medical announcements that cigarette smoking causes lung cancer, including the Sloan-Kettering report, were made in 1953. In March 1953, a leading thoracic surgeon suggested that heavy smoking causes lung cancer, urging smokers to quit or at the very least to obtain a chest X-ray every six months. Lung cancer was the principal theme of the American Cancer Society Annual Meeting in November 1953. On December 9, 1953, tobacco manufacturers’ stock prices dropped by approximately five percent in response to an address by the director of the Sloan-Kettering Institute at a medical convention in New York City summarizing the results of a meta-analysis of thirteen independent studies that linked smoking and lung cancer (New York Times, 1953a). Cigarette consumption per capita declined by 10% from 3,900 in 1953 to 3,510 in 1955 (see Fig. 1). The tobacco industry refers to 1953-1955 as the “health scare” because its effect on tobacco consumption was only temporary. By 1958, cigarette consumption per capita had returned to 1952 levels (3,750), and by 1959 it was higher (3,990); it would gradually increase to its highest level in 1964 (4,400).
Rabin (1992, 2001) identifies 1954-1965 as the first of three waves of litigation against the tobacco industry. The first wave began on March 10, 1954, when the first lawsuit was filed (Lowe v. R. J. Reynolds, 1954) and comprises over 100 personal injury claims. The tobacco firms defended themselves aggressively against these lawsuits and most were dropped without resolution (as Lowe was) since the tobacco firms’ resources were much greater than those of any of the plaintiffs. One setback for the industry came on June 6, 1963, when the Florida Supreme Court ruled that tobacco companies could be held liable for deaths due to smoking (Green v. American Tobacco Company, 1963). On November 29, 1964, however, in a ruling that essentially ended the first wave, a jury verdict in the Green appeal concluded that cigarettes are “reasonably fit for human consumption” (New York Times, November 29, 1964, pp. 1, 43). This case had a far-reaching implication: to win a claim required showing that the tobacco product was in some way defective or contaminated, not simply inherently dangerous.

A.2. 1964-1984: Increasing regulation but quiet litigation

The first regulatory restrictions on smoking occurred in 1965 following reports from the American Cancer Society and the Surgeon General of the United States that causally linked smoking and lung cancer and called for immediate action to address the rising lung cancer death rate. McGowan (1995) describes 1964-1984 as a period of increasing regulation. Fig. 1 lists the major regulatory actions that follow these reports, including required warning labels on product packaging, restrictions on advertising, and restrictions on when and where smoking could occur. Consistent with McGowan’s description, per-capita consumption begins a steady decline in 1965.

Rabin (1991, 2002) characterizes 1964-1983 as a quiet period in terms of litigation against the tobacco industry. The verdicts that resolved the first-wave lawsuits in 1964 required future lawsuits to prove that tobacco products were defective; this hurdle deterred new litigation for two decades.


McGowan (1995) describes 1985-1994 as a period of accelerating regulation. Consistent with McGowan’s description, the rate of decline of per-capita consumption accelerates in 1984 (see Fig. 1). Politicians continue to regulate where and when smoking can occur, including banning smoking on all domestic airline flights. The Surgeon General releases data showing a causal relation between exposure to cigarette smoke and lung cancer in non-smokers.

Rabin (1992, 2001) identifies 1983-1992 as the second of three waves of litigation against the tobacco industry. Claimants filed an estimated 200 product liability suits between 1983 and 1991. The lawsuits sought damages on the basis that tobacco firms knew about the adverse health effects and that they misrepresented their product to consumers. The courts allowed this legal strategy, based on claims of misinformation and not on claims of “defective” products, to proceed. These lawsuits were typically filed under state statutes (instead of federal statutes) that permitted liability claims from product misrepresentation.

The most celebrated case, filed in 1984, was Cipollone v. Liggett Group (1984). The suit, filed under New Jersey statutes, sought to obtain damages on the basis that tobacco firms knew about the adverse health effects and that they misrepresented their product to consumers. The initial rulings in Cipollone were unfavorable to the industry: a judge refused to accept the argument that the required warning labels were adequate consumer protection. In April 1986, however, the Third Circuit Court of Appeals reversed this ruling; the Cipollone defense became based on the tobacco firms’ claim that, since there was a clear warning label on cigarette packages, anyone choosing to smoke had knowingly assumed the risks involved and the firms were not liable. Kluger (1996) estimates that tobacco firms spent over $50 million in experts’ and attorneys’ fees in their defense
in the *Cipollone* case. This ruling became the precedent for all other suits in the second wave; for example, on August 24 and 26, 1987, two cases were dismissed based on this argument. *Cipollone* was resolved in favor of the tobacco companies in 1988; plaintiff’s appeals reached the Supreme Court in 1991. The Supreme Court upheld the Third Circuit Court’s ruling on the label-warning defense and the second wave of litigation effectively came to an end (Rabin, 1992).

The lawsuits in this wave were all resolved in favor of the tobacco industry. The unified secrecy maintained by the tobacco industry weakened plaintiff’s arguments, and the warning labels—required by the FTC since 1965 following the Surgeon General’s report—served as the industry’s primary defense. Since the industry had clearly warned consumers of the dangers of smoking, those who chose to smoke assumed responsibility for any adverse consequences.

### A.4. 1994-1998: The third wave of litigation

Rabin (1992, 2001) identifies 1994 as the beginning of the third wave of litigation against the tobacco industry. The third wave began during a legal climate that had become more favorable to plaintiffs. Litigation strategy in the third wave took two new approaches. First, personal-injury lawyers combined their efforts into class-action suits, the most prominent of which was *Castano v. American Tobacco Company* (1995). Second, state attorneys general, beginning with Mississippi on May 24, 1994, sued to recover the medical costs for smoking-related illnesses (Rabin 2001).

The political and legal pressure on cigarette producers was at its most intense in the mid-1990s. In 1994, an anonymous whistleblower disclosed private-industry documents that implied cigarette producers had known for years that nicotine had addictive properties. In 1996, The Brooke Group, parent company of Ligget, was in such poor financial condition that it agreed to settle all claims and cooperate with litigators against other cigarette producers in exchange for limited financial liability. In response to the new public information and the lost industry unity, the remaining cigarette producers negotiated an intricate deal with state governments in which the firms would make payments of $368.5 billion over 25 years but would receive immunity from all future litigation (including private litigation). For political reasons, this agreement went before Congress for “ratification,” since the immunity provisions required the enactment of new law. Most of the immunity provisions were stripped during the legislative process, however, and the industry withdrew from the agreement before it received a vote (Bulow and Klemperer, 1998; Viscusi, 2002).

The second negotiated agreement, which involved 46 states, six territories, and the other five major cigarette producers, was implemented in November 1998 and is known as the Master Settlement Agreement (MSA). The MSA, which is the first instance of direct expropriation from the tobacco industry, requires the six domestic tobacco producers to pay state governments $206 billion dollars over a period of 25 years. This settlement represents, in present value terms, approximately $70 billion (2001 dollars), or 40% of the aggregate market value of equity of the six cigarette producers. As Bulow and Klemperer (1998, p. 377) note, however, the “companies receive relief only from the state cases and not from private litigation.” The MSA by no means ended the threat of expropriation in the tobacco industry.

The MSA clearly resulted in a transfer of tangible wealth from tobacco shareholders to other parties. The companies also accepted significant restrictions on marketing (no cartoon characters, minimum pack size of 20 cigarettes, restricted free samples) and lobbying (the Tobacco Institute and the Center for Tobacco Research, trade organizations funded by the major producers, were decommissioned). In return, shareholders received protection from additional expropriation by
states, but they did not receive protection from individual plaintiffs or from the federal government.14

A.5. After the Master Settlement Agreement

The MSA resolved all uncertainty regarding state governments’ claims: the payments are known and certain as of the MSA. The MSA establishes the precedent that tobacco companies will make cash payments to claimants, suggesting that the likelihood of expropriation due to litigation by other claimants may have increased following the MSA (in 1998, Philip Morris reported it was the target of over 600 new lawsuits). Many analysts expected the precedent of the Master Settlement Agreement to precipitate additional cash payments by the cigarette producers. The federal government launched its own health-care-cost-recovery suit in 1998 and the number of personal-injury lawsuits filed after the MSA was substantial (Rabin, 2001). The industry successfully closed ranks following the Liggett defection, however, and continues to maintain its overwhelming success against private litigants.

The industry has made actual cash payments related to only three lawsuits. In Broin v. Philip Morris Companies, Inc. (1994), flight attendants sued as a class for second-hand-smoke-related health issues. The industry settled in 1998 without paying individual flight attendants directly; all payments (other than lawyers’ fees) went to a research foundation (Rabin, 2001). In Carter v. Brown & Williamson (1996), an appeals court in 2000 upheld the jury award of compensatory damages. A similar case tried by the same lawyer also led to a direct payment. Other cases, however, also tried by the same lawyer, have failed to elicit payments, and in most high-profile cases (e.g., the $145 billion award in R.J. Reynolds Tobacco Co. v. Engle) the appeals process has overruled the jury awards (Rabin, 2001).

The federal government also undertook legal action against the industry in 1998, seeking to recover $280 billion dollars in smoking-related health-care costs. In September 2000, the courts ruled that the federal government could not sue for recovery of smoking-related health-care costs but could pursue a civil racketeering case against the tobacco industry predicated on allegedly fraudulent industry disclosures. On February 4, 2005, however, the courts ruled that the federal government could not seek disgorgement of tobacco firms’ profits but could continue to seek other (unspecified) remedies (O’Connell, 2005a). Although the courts technically left room for the federal government to continue its assault on the tobacco industry, commentators agreed that the government’s action was essentially dead (O’Connell, 2005a, 2005b).

These outcomes are consistent with an ongoing decrease in the likelihood of expropriation since 1998. Furthermore, the industry has unwound much of the diversification it undertook. R.J. Reynolds Tobacco Holdings divested its non-tobacco assets (Nabisco) in 2000 and acquired the U.S. tobacco operations of BAT Industries (i.e., Brown & Williamson) in 2003. Philip Morris divested its Miller division (alcoholic beverages) in July 2000 and absorbed Nabisco through its Kraft division in December 2000. The resolution of the federal government lawsuits in 2005, plus the successful appeals of most jury verdicts since the MSA, led Philip Morris to finally spin off Kraft, its remaining non-tobacco operations, on May 30, 2007 (O’Connell, 2005b; Warner, 2006).

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14 The tobacco firms also settled, in separate agreements, with the remaining four states. Theses four states received their own financial settlements and also benefited from the non-financial provisions of the MSA (e.g., the restrictions on marketing practices and the elimination of the Tobacco Institute).
A.6. **Excise taxes on tobacco**

Excise taxes on tobacco products constitute an expropriation of shareholder wealth to the extent that demand falls when tobacco firms pass tax increases on to customers by raising prices. Both the federal government and state governments impose excise taxes on cigarettes. Although part of the motivation for these taxes is certainly to generate revenue for governments, a broader policy motivation is to deter or reduce smoking by making it more expensive. Fig. A1 depicts the median excise tax (in cents per pack) over time. There is a slow increase in median excise tax until 1982 and a pattern of steeper increases subsequently. The first notable jump occurs between 1982 and 1983 and corresponds to the doubling of the federal excise tax. This raises the median tax from 21.4 to 31.0 cents per pack. After 1983, the median tax increases each year, reaching 61 cents per pack in 1997 and 131 cents per pack in 2004.

Estimates of the price elasticity of cigarette demand suggest that the demand for cigarettes is relatively unresponsive to changes in cigarette prices: Tennant (1950) provides estimates of \(-0.4\) to \(-0.5\), similar to Leu (1984). Becker et al. (1994) and Tauros and Chaloupka (2001) independently estimate the price elasticity of demand to be between \(-0.76\) and \(-0.79\). The Congressional Budget Office examined the consumption of cigarettes following the doubling of the federal excise tax in 1983 (CBO 1987), and found no permanent effect on consumption levels. These outcomes suggest excise taxes have little power to expropriate wealth from tobacco-firm shareholders.

More recent studies, however, suggest excise tax increases affect consumption. McGowan (1995) shows that small and medium tax hikes affect neither consumption nor tobacco firm pricing (i.e., tobacco firms not only pass along the tax increases to consumers, they also raise prices simultaneously), but that large state excise tax increases do reduce consumption and seem to pre-empt regular price increases post-1985. Chaloupka et al. (2001, p. 66), reviewing recent studies on taxation and tobacco consumption, conclude that there is “growing evidence that higher cigarette and other tobacco taxes lead to significant reductions in tobacco use.” It is likely, therefore, that after 1984 excise tax increases coupled with greater awareness of the negative health effects of smoking contributed to the decline in tobacco consumption. This pattern is similar to that observed for the increase in regulation.
Fig. A1. Total state and federal excise tax per pack of cigarettes. We obtain the median total state and federal amount for 1962-2005 from Orzechowski and Walker (2005). We assume that the median total excise tax rate in 1952-1953 is equal to the 1954 rate as Orzechowski and Walker (2005) report only that the federal excise tax rate in 1952 and 1953 was the same as that in 1954.
Table A1
U.S. cigarette manufacturers, 1952-2002

<table>
<thead>
<tr>
<th>Firm</th>
<th>Ownership History</th>
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</table>
1986 Becomes American Tobacco Company, a subsidiary of holding company American Brands  
1994 Sells all tobacco-related assets to Brown & Williamson |
| Brown & Williamson (BAT Industries) [1952 – 2002] | 1906 Founded as Brown & Williamson Tobacco Company  
1927 Acquired by British American Tobacco Company and renamed Brown & Williamson Tobacco Corporation  
1976 British American Tobacco becomes BAT Industries |
1873 Reincorporated as The Liggett & Myers Tobacco Co.  
1980 Acquired by Grand Metropolitan and becomes a private subsidiary  
1986 Acquired by Bennett LeBow and becomes The Liggett Group  
1987 Begins trading again as The Liggett Group  
2000 Changes trading name to The Vector Group |
| Lorillard (Loews Corp.) [1952 – 2002] | 1760 Founded as Lorillard, Inc.  
1968 Merges with Loews Corporation in a transaction with properties of an acquisition by Lorillard |
1987 Restructures into The Philip Morris Companies, a holding company  
2000 Sells assets of Miller subsidiary and acquires Nabisco |
1913 Begins selling cigarettes in the United States  
1988 Becomes private following a leveraged buy-out by KKR  
1991 Begins trading as RJR Nabisco Holdings  
1999 Reorganizes into two entities: R.J. Reynolds Tobacco Holdings and Nabisco Group Holdings  
2000 Sells Nabisco Group Holdings to Philip Morris’s Kraft Foods subsidiary |
References


Fig. 1. U.S. cigarette consumption per capita and major political and legal events in the tobacco industry, 1952-2004. Data are from Tobacco Outlook and Situation Reports of the U.S. Department of Agriculture. Time partitions are based on the accounts in Miles (1982), Rabin (1992), McGowan (1995), and Rabin (2001).
Fig. 2. Cumulative share repurchases, net share repurchases, dividends paid, and diversification deal values over the period 1963-2003 by firms in the tobacco industry (American Tobacco Company, Brown & Williamson, Lorillard, Liggett & Myers, Philip Morris, and R.J. Reynolds). All figures are inflation-adjusted to 2001 dollars. We obtain share repurchase and dividend data from Compustat and use the CRSP daily files to determine net repurchases. We obtain transaction values from news media articles, from the bidder’s annual report at the time of the acquisition, or from SDC.
Table 1
Diversifying acquisitions by U.S. cigarette producers, 1957-2002

The sample contains 88 announcements of mergers or acquisitions by U.S. tobacco producers reported in the Wall Street Journal indices during 1957-2002 where the tobacco bidder acquires a publicly traded or private U.S. firm that does not operate in the tobacco industry. The sample excludes 19 transactions that are announced contemporaneously with earnings. We classify acquisitions where the target SIC is in the 2000-2099 range as being in the food industry. We obtain transaction values from news media articles, from the bidder’s annual report at the time of the acquisition, or from SDC. Transaction value and mode of payment are not available for 15 of the 34 observations that involve the acquisitions of a private firm; the last three rows are therefore based on 73 observations. MVE is the market value of equity on day –2 relative to the day the Wall Street Journal reports the acquisition announcement. We classify an acquisition as All Cash when only cash is used to pay for the acquisition. All dollar values are inflation-adjusted to 2001 dollars.

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<tr>
<td>Total Acquisitions</td>
<td>88</td>
<td>72</td>
<td>16</td>
</tr>
<tr>
<td>Public Targets</td>
<td>54 (61%)</td>
<td>43 (60%)</td>
<td>11 (69%)</td>
</tr>
<tr>
<td>Private Targets</td>
<td>34 (39%)</td>
<td>29 (40%)</td>
<td>5 (31%)</td>
</tr>
<tr>
<td>Completed Acquisitions</td>
<td>77 (88%)</td>
<td>62 (86%)</td>
<td>15 (94%)</td>
</tr>
<tr>
<td>Uncompleted Acquisitions</td>
<td>11 (12%)</td>
<td>10 (14%)</td>
<td>1 (6%)</td>
</tr>
<tr>
<td>Tender Offer Transactions</td>
<td>20 (23%)</td>
<td>12 (17%)</td>
<td>8 (50%)</td>
</tr>
<tr>
<td>Merger Transactions</td>
<td>68 (77%)</td>
<td>60 (83%)</td>
<td>8 (50%)</td>
</tr>
<tr>
<td>Food Industry Targets</td>
<td>21 (24%)</td>
<td>15 (21%)</td>
<td>6 (38%)</td>
</tr>
<tr>
<td>Total Acquisitions With Transaction Data</td>
<td>73</td>
<td>59</td>
<td>14</td>
</tr>
<tr>
<td>Aggregate Transaction Value (ATV) ($ millions)</td>
<td>84,700</td>
<td>34,452</td>
<td>50,248</td>
</tr>
<tr>
<td>ATV/MVE</td>
<td>13.16</td>
<td>9.54</td>
<td>3.62</td>
</tr>
<tr>
<td>All-Cash Transactions</td>
<td>47 (64%)</td>
<td>35 (59%)</td>
<td>12 (86%)</td>
</tr>
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</table>
Table 2
Merger/acquisition announcement abnormal returns for tobacco bidders
Panel A reports the cumulative abnormal returns (CAR (–1,+1)) for 88 announcements of mergers or acquisitions by U.S. tobacco producers (American Tobacco Company, Brown & Williamson, Lorillard, Liggett & Myers, Philip Morris, and R.J. Reynolds) reported in the Wall Street Journal indices during 1957-2002 where the tobacco bidder acquires a publicly traded or private U.S. firm that does not operate in the tobacco industry. We measure CAR (–1,+1) using the market model. In Panels B and C, we report the synergy gains (combined abnormal and dollar returns to bidders and targets) for the subsample of 54 acquisitions that involves publicly traded target firms. We use the method in Bradley et al. (1988) to estimate synergy gains. In Panel B, CARC is the cumulative abnormal return over the three-day announcement window (–1,+1) for a value-weighted portfolio of the target and bidder, where the weights are based on the market value of equity of the bidder on day –2 and the market value of the target is adjusted (when applicable) for the percentage of target’s outstanding shares that the tobacco bidder owns prior to the acquisition announcement. In Panel C, CARCD, the dollar synergy gain, is equal to CARC multiplied by the sum of the market value of equity for the bidder on day –2 and the percent of the target’s market value on day –2 that the bidder does not already hold. Dollar values (000s) are inflation-adjusted to 2001 dollars.

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<tr>
<td><strong>Panel A: Three-day abnormal returns for bidder</strong></td>
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<tr>
<td>n</td>
<td>88</td>
<td>72</td>
<td>16</td>
<td></td>
</tr>
<tr>
<td>Mean</td>
<td>0.91</td>
<td>1.36</td>
<td>–1.10</td>
<td>2.46</td>
</tr>
<tr>
<td>Median</td>
<td>0.60</td>
<td>1.05</td>
<td>–0.70</td>
<td>1.75</td>
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<td><strong>Panel B: Three-day value-weighted abnormal return for bidder-target combination (CARC)</strong></td>
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<tr>
<td>n</td>
<td>54</td>
<td>43</td>
<td>11</td>
<td></td>
</tr>
<tr>
<td>Mean</td>
<td>2.98</td>
<td>2.91</td>
<td>3.25</td>
<td>0.34</td>
</tr>
<tr>
<td>Median</td>
<td>2.83</td>
<td>2.79</td>
<td>2.96</td>
<td>0.13</td>
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<tr>
<td><strong>Panel C: Three-day wealth creation for bidder-target combination (CARCD)</strong></td>
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<tr>
<td>n</td>
<td>54</td>
<td>43</td>
<td>11</td>
<td></td>
</tr>
<tr>
<td>Mean</td>
<td>270.36</td>
<td>139.60</td>
<td>781.50</td>
<td>641.9</td>
</tr>
<tr>
<td>Median</td>
<td>118.49</td>
<td>117.77</td>
<td>257.66</td>
<td>139.89</td>
</tr>
</tbody>
</table>

\(^a\) Statistical significance at the 1% level.
\(^b\) Statistical significance at the 5% level.
\(^c\) Statistical significance at the 10% level.
Table 3
Merger/acquisition announcement abnormal returns for tobacco bidders
The sample contains 88 announcements of diversifying acquisitions by the six U.S. cigarette producers. The table contains the mean and median three-day cumulative abnormal return (%). Columns sort the data by time period. Panels sort the data by characteristics of the transactions: whether the target is public or private (Panel A), whether the transaction is a merger or tender offer (Panel B), and whether the payment is all cash or includes at least some equity (Panel C). Difference tests are based on t-tests for equality of means and median tests for equality of medians.

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<td><strong>Panel A: Sorted by organizational form of target firm</strong></td>
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<tr>
<td>Public</td>
<td></td>
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<tr>
<td>Public</td>
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<tr>
<td>Mean</td>
<td>1.22&lt;sup&gt;a&lt;/sup&gt;</td>
<td>1.92&lt;sup&gt;a&lt;/sup&gt;</td>
<td>-1.49</td>
<td>3.41&lt;sup&gt;a&lt;/sup&gt;</td>
</tr>
<tr>
<td>Median</td>
<td>0.97&lt;sup&gt;a&lt;/sup&gt;</td>
<td>1.54&lt;sup&gt;a&lt;/sup&gt;</td>
<td>-1.31</td>
<td>2.85&lt;sup&gt;b&lt;/sup&gt;</td>
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<tr>
<td>Private</td>
<td></td>
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<tr>
<td>Mean</td>
<td>0.43</td>
<td>0.54</td>
<td>-0.25</td>
<td>0.79</td>
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<tr>
<td>Median</td>
<td>0.12</td>
<td>0.24</td>
<td>0.05</td>
<td>0.19</td>
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<tr>
<td>Difference Tests</td>
<td>Mean</td>
<td>0.79</td>
<td>1.38&lt;sup&gt;b&lt;/sup&gt;</td>
<td>-1.24</td>
</tr>
<tr>
<td></td>
<td>Median</td>
<td>0.85&lt;sup&gt;c&lt;/sup&gt;</td>
<td>1.30&lt;sup&gt;c&lt;/sup&gt;</td>
<td>-1.36</td>
</tr>
<tr>
<td><strong>Panel B: Sorted by transaction type</strong></td>
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<tr>
<td>Tenders</td>
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<tr>
<td>Mean</td>
<td>0.81</td>
<td>1.91&lt;sup&gt;c&lt;/sup&gt;</td>
<td>-1.35</td>
<td>3.26&lt;sup&gt;a&lt;/sup&gt;</td>
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<tr>
<td>Median</td>
<td>0.41</td>
<td>2.06&lt;sup&gt;c&lt;/sup&gt;</td>
<td>-0.70</td>
<td>2.76&lt;sup&gt;b&lt;/sup&gt;</td>
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<tr>
<td>Mean</td>
<td>0.95&lt;sup&gt;a&lt;/sup&gt;</td>
<td>1.25&lt;sup&gt;a&lt;/sup&gt;</td>
<td>-0.85</td>
<td>2.10&lt;sup&gt;c&lt;/sup&gt;</td>
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<tr>
<td>Median</td>
<td>0.72&lt;sup&gt;a&lt;/sup&gt;</td>
<td>0.97&lt;sup&gt;a&lt;/sup&gt;</td>
<td>-1.31</td>
<td>2.28&lt;sup&gt;c&lt;/sup&gt;</td>
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<td>Difference Tests</td>
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<td>1.09</td>
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<td><strong>Panel C: Sorted by form of payment</strong></td>
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<tr>
<td>All Cash</td>
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<td>Mean</td>
<td>1.34&lt;sup&gt;a&lt;/sup&gt;</td>
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<td>-0.43</td>
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<tr>
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<td>-0.48</td>
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<tr>
<td>Other</td>
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<tr>
<td>Mean</td>
<td>0.43</td>
<td>0.81&lt;sup&gt;c&lt;/sup&gt;</td>
<td>-3.12</td>
<td>3.93&lt;sup&gt;a&lt;/sup&gt;</td>
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<td>0.50</td>
<td>-3.81</td>
<td>4.31</td>
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<tr>
<td>Difference Tests</td>
<td>Mean</td>
<td>0.91</td>
<td>1.13&lt;sup&gt;c&lt;/sup&gt;</td>
<td>2.69</td>
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<tr>
<td></td>
<td>Median</td>
<td>0.70</td>
<td>1.15</td>
<td>3.33</td>
</tr>
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<sup>a</sup> Statistical significance at the 1% level.
<sup>b</sup> Statistical significance at the 5% level.
<sup>c</sup> Statistical significance at the 10% level.
Table 4
Benchmarked merger/acquisition announcement abnormal returns to the tobacco bidder
In Panel A, we report excess abnormal returns over the abnormal returns predicted by the Moeller et al. (2004) model. In Panel B we report excess abnormal returns calculated as the difference between tobacco bidder abnormal returns and matched bidder abnormal returns. In Panel A, the excess abnormal return is computed as CAR (–1,+1) less the predicted abnormal return (in percent) measured using the model following model in Moeller et al. (2004, pp. 215-216):

\[
\text{Predicted CAR}(\text{-1,}+1) = 0.015 - 0.0037*\text{Private} - 0.032*\text{Public} + 0.0159*\text{Small} - 0.0036*\text{Conglomerate} + 0.0153*\text{Tender offer} - 0.0116*\text{Hostile} - 0.0067*\text{Competed} - 0.0029*\text{All equity} - 0.0039*\text{All cash} + 0.0119*\text{Relative size} - 0.0007*\text{Tobin's q} + 0.0007*\text{Debt/Assets} - 0.0089*\text{Liquidity index} + 0.0006*\text{OCF/Assets}.
\]

Private, public, small, conglomerate, tender offer, hostile, competed, all equity, and all cash are dummy variables that take the value one for acquisitions of private firms, of public firms, by firms whose capitalization is below the 25th percentile of NYSE firms that year, of firms in another two-digit SIC code than the acquirer, if the acquisition is a tender offer, if it is hostile according to SDC, if there is more than one bidder, if only equity is used to pay for the acquisition, and if only cash is used, respectively. The transaction value ($ millions) is the total value of consideration paid by the acquirer, excluding fees and expenses. Relative size is the transaction value divided by the equity market capitalization of the acquirer at the end of the fiscal year prior to the acquisition announcement. The liquidity index for the target is calculated as the value of all corporate control transactions for $1 million or more reported by SDC for each year and two-digit SIC code divided by the total book value of assets of all COMPSTAT firms in the same two-digit SIC code and year. Tobin’s q is the target firm market value divided by the book value of assets. Operating cash flow (OCF) is sales minus the cost of goods sold, sales and general administration, and working capital change. In Panel B, we consider an alternative computation of excess returns where we compare returns to tobacco bidders with returns to matched non-tobacco bidders. In the period 1962 to 1979, we identify large non-tobacco bidders that acquire firms with CRSP delisting codes in the 200-299 and that are in the same two-digit industry and time period (within one year) as the sample tobacco targets. Post-1979, we use SDC to identify non-tobacco bidders. We match on bidder size, whether the target is public or private, and, when possible, the mode of payment, and the target’s industry. Largely because we cannot identify matches for private targets before 1980, we are able to compute excess three-day returns over the median matched firm for 63 observations. \(p\)-values are in italics.

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<tr>
<td><strong>Panel A: Three-day excess abnormal return over that predicted by the Moeller et al. (2004) model</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(n)</td>
<td>73</td>
<td>59</td>
<td>14</td>
<td></td>
</tr>
<tr>
<td>Mean</td>
<td>2.30(^a)</td>
<td>2.87(^a)</td>
<td>-0.09</td>
<td>-2.96(^a)</td>
</tr>
<tr>
<td>Median</td>
<td>2.24(^a)</td>
<td>2.94(^a)</td>
<td>-0.59</td>
<td>-3.53(^a)</td>
</tr>
<tr>
<td><strong>Panel B: Three-day excess abnormal return over matched non-tobacco bidders</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(n)</td>
<td>63</td>
<td>52</td>
<td>11</td>
<td></td>
</tr>
<tr>
<td>Mean</td>
<td>2.44(^a)</td>
<td>3.41(^a)</td>
<td>-2.13(^b)</td>
<td>-5.54(^a)</td>
</tr>
<tr>
<td>Median</td>
<td>2.79(^a)</td>
<td>3.36(^a)</td>
<td>-1.91(^b)</td>
<td>-5.27(^a)</td>
</tr>
</tbody>
</table>

\(^a\) Statistical significance at the 1% level.

\(^b\) Statistical significance at the 5% level.

\(^c\) Statistical significance at the 10% level.
Table 5
Descriptive statistics and correlation matrix for variables used in the cross-sectional analysis of tobacco bidders’ announcement abnormal returns

CAR (–1,+1) denotes the three-day cumulative abnormal return measured using the market model. New State is a dummy variable equal to one when the target is located in a state where the tobacco firm does not yet have operations. We consult Moody’s Industrial Manual for the year before and after each acquisition to identify the new states associated with each acquisition. %New Senate (House) Seats is the percentage of Senate (House) seats, relative to the total seats in the U.S. Senate (House), corresponding to the states where the target is located but where the tobacco firm does not yet have operations. Existing Diversification is the percentage of states where the tobacco firm has operations prior to the acquisition. (In the current table, for parsimony, we consider only this operationalization of Existing Diversification. The correlation between the three operationalizations of Existing Diversification exceeds 90%, and the results are nearly identical). Relative Size is the transaction value divided by the equity market capitalization of the acquirer at the end of the fiscal year prior to the acquisition announcement. We obtain transaction values from news media articles, from the bidder’s annual report at the time of the acquisition, or from SDC. Transaction value and mode of payment are not available for 15 of the 34 private acquisitions observations, and reported data in the last three columns are based on 73 observations. ROA is the tobacco firms’ return on assets for the fiscal year preceding the acquisition. Liquid Assets is the percentage of the tobacco firms’ assets other than those in property, plant and equipment and intangibles, measured at the end of the fiscal year preceding the acquisition. All Cash is a dummy variable equal to 1 when 100% of the consideration in the acquisition is cash. Food is a dummy variable equal to 1 when the target’s SIC is in the 2000-2099 range. ∆ATO is the change in asset turnover from the fiscal year before the acquisition to the year after the acquisition.

Panel A: Descriptive statistics

<table>
<thead>
<tr>
<th></th>
<th>n</th>
<th>Mean</th>
<th>Std. Dev</th>
<th>Median</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAR (–1,+1)</td>
<td>88</td>
<td>0.009</td>
<td>0.029</td>
<td>0.006</td>
</tr>
<tr>
<td>New State</td>
<td>88</td>
<td>0.659</td>
<td>0.477</td>
<td>1.000</td>
</tr>
<tr>
<td>%New Senate Seats</td>
<td>88</td>
<td>0.042</td>
<td>0.063</td>
<td>0.020</td>
</tr>
<tr>
<td>%New House Seats</td>
<td>88</td>
<td>0.063</td>
<td>0.103</td>
<td>0.024</td>
</tr>
<tr>
<td>Existing Diversification</td>
<td>88</td>
<td>0.294</td>
<td>0.179</td>
<td>0.260</td>
</tr>
<tr>
<td>Relative Size</td>
<td>73</td>
<td>0.181</td>
<td>0.235</td>
<td>0.111</td>
</tr>
<tr>
<td>ROA</td>
<td>88</td>
<td>0.092</td>
<td>0.032</td>
<td>0.094</td>
</tr>
<tr>
<td>Liquid Assets</td>
<td>88</td>
<td>0.622</td>
<td>0.187</td>
<td>0.626</td>
</tr>
<tr>
<td>All Cash</td>
<td>73</td>
<td>0.644</td>
<td>0.482</td>
<td>1.000</td>
</tr>
<tr>
<td>Food</td>
<td>88</td>
<td>0.239</td>
<td>0.429</td>
<td>0.000</td>
</tr>
<tr>
<td>∆ATO</td>
<td>88</td>
<td>–0.012</td>
<td>0.130</td>
<td>0.008</td>
</tr>
</tbody>
</table>

Panel B: Correlation matrix (Pearson product-moment correlations below diagonal and Spearman rank correlations above)

<table>
<thead>
<tr>
<th></th>
<th>CAR (–1,+1)</th>
<th>New State</th>
<th>%New Senate Seats</th>
<th>%New House Seats</th>
<th>Existing Diversification</th>
<th>Relative Size</th>
<th>ROA</th>
<th>Liquid Assets</th>
<th>All Cash</th>
<th>Food</th>
<th>∆ATO</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAR (–1,+1)</td>
<td>1.000</td>
<td>0.421</td>
<td>0.401</td>
<td>0.478</td>
<td>–0.320</td>
<td>0.170</td>
<td>–0.062</td>
<td>0.348</td>
<td>0.384</td>
<td></td>
<td>0.099</td>
</tr>
<tr>
<td>New State</td>
<td>0.347</td>
<td>1.000</td>
<td>0.852</td>
<td>0.838</td>
<td>–0.441</td>
<td>0.146</td>
<td>0.190</td>
<td>0.235</td>
<td>0.234</td>
<td></td>
<td></td>
</tr>
<tr>
<td>%New Senate Seats</td>
<td>0.311</td>
<td>0.476</td>
<td>1.000</td>
<td>0.899</td>
<td>–0.350</td>
<td>0.215</td>
<td>0.325</td>
<td>0.368</td>
<td>0.302</td>
<td></td>
<td></td>
</tr>
<tr>
<td>%New House Seats</td>
<td>0.373</td>
<td>0.441</td>
<td>0.920</td>
<td>1.000</td>
<td>–0.534</td>
<td>0.165</td>
<td>0.325</td>
<td>0.368</td>
<td>0.302</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Existing Diversification</td>
<td>–0.362</td>
<td>–0.405</td>
<td>–0.241</td>
<td>–0.389</td>
<td>1.000</td>
<td>–0.125</td>
<td>0.048</td>
<td>–0.346</td>
<td>–0.014</td>
<td>–0.127</td>
<td>–0.366</td>
</tr>
<tr>
<td>Relative Size</td>
<td>0.315</td>
<td>0.217</td>
<td>0.194</td>
<td>0.139</td>
<td>–0.107</td>
<td>1.000</td>
<td>0.101</td>
<td>0.163</td>
<td>0.043</td>
<td></td>
<td>–0.062</td>
</tr>
<tr>
<td>ROA</td>
<td>–0.062</td>
<td>0.227</td>
<td>0.161</td>
<td>0.114</td>
<td>–0.139</td>
<td>1.000</td>
<td>0.100</td>
<td>0.139</td>
<td>0.043</td>
<td></td>
<td>–0.057</td>
</tr>
<tr>
<td>Liquid Assets</td>
<td>0.348</td>
<td>0.141</td>
<td>0.046</td>
<td>0.148</td>
<td>–0.246</td>
<td>–0.056</td>
<td>0.287</td>
<td>0.100</td>
<td>0.043</td>
<td></td>
<td>–0.057</td>
</tr>
<tr>
<td>All Cash</td>
<td>0.136</td>
<td>–0.075</td>
<td>–0.021</td>
<td>–0.007</td>
<td>–0.034</td>
<td>–0.114</td>
<td>–0.169</td>
<td>–0.021</td>
<td>0.100</td>
<td></td>
<td>–0.120</td>
</tr>
<tr>
<td>Food</td>
<td>–0.060</td>
<td>0.234</td>
<td>0.367</td>
<td>0.341</td>
<td>–0.032</td>
<td>0.195</td>
<td>0.076</td>
<td>–0.142</td>
<td>–0.120</td>
<td>1.000</td>
<td>0.037</td>
</tr>
<tr>
<td>∆ATO</td>
<td>0.099</td>
<td>0.073</td>
<td>–0.038</td>
<td>0.012</td>
<td>–0.278</td>
<td>–0.150</td>
<td>–0.296</td>
<td>0.093</td>
<td>–0.019</td>
<td>0.033</td>
<td>1.000</td>
</tr>
</tbody>
</table>

Statistical significance:

- Statistical significance at the 1% level.
- Statistical significance at the 5% level.
- Statistical significance at the 10% level.
Table 6
Cross-sectional regressions of announcement abnormal returns
This table reports estimation results from regressions of bidder abnormal returns surrounding acquisition announcements on the following variables. New State is a dummy variable equal to one when the target is located in a state where the tobacco firm does not yet have operations. %New Senate (House) Seats is the percentage of Senate (House) seats, relative to the total seats in the U.S. Senate (House), from the states where the target is located but where the tobacco firm does not yet have operations. Existing Diversification is the percentage of states (models 1 and 4), Senate seats (models 2 and 5), or House seats (models 3 and 6) where the tobacco firm has operations prior to the acquisition. Relative Size is the transaction value divided by the equity market capitalization of the acquirer at the end of the fiscal year prior to the acquisition announcement. We obtain transaction values from news media articles, from the bidder’s annual report at the time of the acquisition, or from SDC. Transaction value and mode of payment are not available for 15 of the 34 private acquisitions observations, so models (2) and (3) use only on 73 observations. ROA is the tobacco firms’ return on assets for the fiscal year preceding the acquisition. Liquid Assets is the percentage of the tobacco firms’ assets other than those in property, plant and equipment and intangibles, measured at the end of the fiscal year preceding the acquisition. All Cash is a dummy variable equal to one when 100% of the consideration in the acquisition is cash. Food is a dummy variable equal to 1 when the target’s SIC is in the 2000-2099 range. ∆ATO is the change in asset turnover from the fiscal year before the acquisition to the year after the acquisition. We report p-values (in italics) using White-adjusted standard errors below each coefficient: those for coefficients for which we have a sign prediction are one-tailed; all others are two-tailed. In the final column, we report (for model (4)) the estimated effect of each variable for a “mean” firm on the abnormal return (in percentage terms) and on shareholder wealth (in millions of 2001 dollars, based on a mean tobacco firm market value of equity on day (–2) of $5.84 billion).

<table>
<thead>
<tr>
<th>Expected Sign</th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
<th>(5)</th>
<th>(6)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>−0.0057</td>
<td>−0.0038</td>
<td>−0.0114</td>
<td>−0.0042</td>
<td>−0.0020</td>
<td>0.0042</td>
</tr>
<tr>
<td></td>
<td>0.815</td>
<td>0.871</td>
<td>0.663</td>
<td>0.886</td>
<td>0.942</td>
<td>0.899</td>
</tr>
<tr>
<td>New State</td>
<td>+ 0.0159 &lt;sup&gt;a&lt;/sup&gt;</td>
<td></td>
<td></td>
<td></td>
<td>0.0153 &lt;sup&gt;b&lt;/sup&gt;</td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.008</td>
<td></td>
<td></td>
<td></td>
<td>0.011</td>
<td></td>
</tr>
<tr>
<td>%New Senate Seats</td>
<td>+ 0.1368 &lt;sup&gt;a&lt;/sup&gt;</td>
<td>0.007</td>
<td></td>
<td></td>
<td>0.1139 &lt;sup&gt;b&lt;/sup&gt;</td>
<td>0.020</td>
</tr>
<tr>
<td>%New House Seats</td>
<td>+ 0.0929 &lt;sup&gt;a&lt;/sup&gt;</td>
<td>0.004</td>
<td></td>
<td></td>
<td>0.0657 &lt;sup&gt;b&lt;/sup&gt;</td>
<td>0.041</td>
</tr>
<tr>
<td>Existing Diversification</td>
<td>−0.0349 &lt;sup&gt;b&lt;/sup&gt;</td>
<td>−0.0375 &lt;sup&gt;a&lt;/sup&gt;</td>
<td>−0.0135</td>
<td>−0.0421</td>
<td>−0.0422 &lt;sup&gt;a&lt;/sup&gt;</td>
<td>−0.0304 &lt;sup&gt;b&lt;/sup&gt;</td>
</tr>
<tr>
<td></td>
<td>0.020</td>
<td>0.010</td>
<td>0.164</td>
<td>0.015</td>
<td>0.010</td>
<td>0.040</td>
</tr>
<tr>
<td>Relative Size</td>
<td>+ 0.0421 &lt;sup&gt;a&lt;/sup&gt;</td>
<td></td>
<td></td>
<td></td>
<td>0.0432 &lt;sup&gt;a&lt;/sup&gt;</td>
<td>0.0469 &lt;sup&gt;a&lt;/sup&gt;</td>
</tr>
<tr>
<td></td>
<td>0.001</td>
<td></td>
<td></td>
<td></td>
<td>0.001</td>
<td></td>
</tr>
<tr>
<td>ROA</td>
<td>+ −0.0559</td>
<td>−0.0276</td>
<td>0.0145</td>
<td>−0.1151</td>
<td>−0.0896</td>
<td>−0.0723</td>
</tr>
<tr>
<td></td>
<td>0.853</td>
<td>0.917</td>
<td>0.957</td>
<td>0.731</td>
<td>0.760</td>
<td>0.811</td>
</tr>
<tr>
<td>Liquid Assets</td>
<td>+ 0.0339 &lt;sup&gt;c&lt;/sup&gt;</td>
<td>0.0372 &lt;sup&gt;b&lt;/sup&gt;</td>
<td>0.0360 &lt;sup&gt;b&lt;/sup&gt;</td>
<td>0.0298 &lt;sup&gt;c&lt;/sup&gt;</td>
<td>0.0311 &lt;sup&gt;c&lt;/sup&gt;</td>
<td>0.0222</td>
</tr>
<tr>
<td></td>
<td>0.051</td>
<td>0.016</td>
<td>0.030</td>
<td>0.100</td>
<td>0.067</td>
<td>0.175</td>
</tr>
<tr>
<td>All Cash</td>
<td>+ 0.0094 &lt;sup&gt;b&lt;/sup&gt;</td>
<td></td>
<td></td>
<td></td>
<td>0.0087 &lt;sup&gt;c&lt;/sup&gt;</td>
<td>0.0093 &lt;sup&gt;c&lt;/sup&gt;</td>
</tr>
<tr>
<td></td>
<td>0.047</td>
<td></td>
<td></td>
<td></td>
<td>0.062</td>
<td></td>
</tr>
<tr>
<td>Food</td>
<td>−0.0062</td>
<td>−0.0095</td>
<td>−0.0104</td>
<td>−0.0128</td>
<td>−0.0143 &lt;sup&gt;b&lt;/sup&gt;</td>
<td>−0.0156 &lt;sup&gt;b&lt;/sup&gt;</td>
</tr>
<tr>
<td></td>
<td>0.352</td>
<td>0.234</td>
<td>0.209</td>
<td>0.032</td>
<td>0.050</td>
<td>0.031</td>
</tr>
<tr>
<td>∆ATO</td>
<td>−0.0038</td>
<td>0.0040</td>
<td>0.0105</td>
<td>0.0152</td>
<td>0.0248</td>
<td>0.0257</td>
</tr>
<tr>
<td></td>
<td>0.834</td>
<td>0.837</td>
<td>0.592</td>
<td>0.308</td>
<td>0.117</td>
<td>0.110</td>
</tr>
<tr>
<td>n</td>
<td>88 88 88 88 73 73 73 73 73</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adjusted-R²</td>
<td>0.200</td>
<td>0.221</td>
<td>0.205</td>
<td>0.314</td>
<td>0.323</td>
<td>0.326</td>
</tr>
</tbody>
</table>

<sup>a</sup> Statistical significance at the 1% level.
<sup>b</sup> Statistical significance at the 5% level.
<sup>c</sup> Statistical significance at the 10% level.
Table 7
Tobacco firms’ payments to shareholders, 1985-2003
In Panel A, we present mean annual amounts and totals for share repurchases, net share repurchases, and cash dividends paid. We also present the mean annual dividend payout ratio, which we calculate as cash dividends paid divided by operating income. We collect cash dividend (item 127), share repurchase (item 115 less item 56 (change in value of preferred stock)), and operating income (item 13) data from COMPUSTAT. We use the CRSP daily files to determine net share repurchases as the annual change in shares outstanding that is not the result of stock splits, stock dividends, exchanges, and reorganizations (including mergers). We partition the sample into two time periods based on Rabin (2001) and others: 1985-1997, when the threat of expropriation was increasing but remained uncertain, and 1998-2003, when the MSA was in effect and expropriation was certain. In Panel B, we present means and medians for unexpected dividends for the pre-MSA and post-MSA periods. We use the method in Grullon and Michaely (2002) to calculate unexpected dividends. We also modify the Grullon and Michaely (2002) model by adding Tobin’s q, which research indicates is an important determinant of dividend payments (Lang and Litzenberger, 1989; Yoon and Starks, 1995; Lie, 2000) and which Grullon and Michaely (2002) do not include. The models are:

\[
\begin{align*}
UnExpDiv^{original}_{i,t} & = \left[ \frac{DivChange_{i,t} - (\alpha + (\hat{\beta}_1 \cdot EARN_{i,t}) + (\hat{\beta}_2 \cdot Div_{i,t-1}))}{MV_{i,t}} \right] \\
UnExpDiv^{Tobins \_ q}_{i,t} & = \left[ \frac{DivChange_{i,t} - (\lambda + (\hat{\gamma}_1 \cdot EARN_{i,t}) + (\hat{\gamma}_2 \cdot Div_{i,t-1}) + (\hat{\gamma}_3 \cdot Tobins \_ q))}{MV_{i,t}} \right]
\end{align*}
\]

DivChange is the change in dividends from time t-1 to t, EARN is earnings before extraordinary items (COMPUSTAT #18), Div is dividends (COMPUSTAT #21), and Tobins \_ q is the ratio to the firm’s market value of equity to book value of equity (calculated using COMPUSTAT as: [Item #6 + (Item #24 \times Item #25) – Item #216]/(Item #6)). Median values are in brackets. In Panel C, we conduct an event study analysis on repurchase announcements. We collect share repurchase announcement dates from 1985 to 2003 for tobacco firms from SDC and present mean values of CAR(–1,+1) calculated using the market model benchmark for days (–300, –46). Median values are in brackets. All dollar values ($000’s) are inflation-adjusted to 2001 dollars.

### Panel A: Repurchases, net repurchases, and dividends

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean annual share repurchases</td>
<td>1,840</td>
<td>4,107</td>
<td>2,267 (^c)</td>
</tr>
<tr>
<td>Total share repurchases</td>
<td>23,915</td>
<td>24,641</td>
<td></td>
</tr>
<tr>
<td>Mean annual net repurchases</td>
<td>671</td>
<td>2,922</td>
<td>2,251 (^b)</td>
</tr>
<tr>
<td>Total net repurchases</td>
<td>8,721</td>
<td>17,533</td>
<td></td>
</tr>
<tr>
<td>Mean annual cash dividends paid</td>
<td>4,289</td>
<td>6,302</td>
<td>2,013 (^a)</td>
</tr>
<tr>
<td>Total cash dividends paid</td>
<td>55,755</td>
<td>37,813</td>
<td></td>
</tr>
<tr>
<td>Mean annual dividend payout ratio</td>
<td>0.265</td>
<td>0.409</td>
<td>0.144 (^a)</td>
</tr>
</tbody>
</table>

### Panel B: Unexpected dividends paid

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>UnExpDiv (Original)</td>
<td>–0.0449</td>
<td>0.0244</td>
<td>0.0693</td>
</tr>
<tr>
<td>([-0.00112] \quad [0.0092] \quad [0.01032] (^b) \quad n = 70 \quad n = 28]</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>UnExpDiv (Tobins _ q)</td>
<td>–0.0116</td>
<td>0.0288</td>
<td>0.0404</td>
</tr>
<tr>
<td>([-0.00076] \quad [0.01] \quad [0.01076] (^b) \quad n = 70 \quad n = 28]</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\(^a\) Statistical significance at the 1% level.
\(^b\) Statistical significance at the 5% level.
\(^c\) Statistical significance at the 10% level.
Table 8
Merger/acquisition announcement abnormal returns for bidders in sin industries other than tobacco
The sample contains 119 announcements of diversifying mergers or acquisitions by firms in the alcoholic beverages (SIC codes 2080-2085) and gaming (NAICS codes 7132, 71312, 713210, 71329, 713290, 72112 and 721120) industries. We compare the average abnormal return from this sample to that of all other diversifying acquisitions on the SDC database (except those made by tobacco firms). We measure abnormal return as CAR(–1, +1), the three-day cumulative abnormal return (in percent) measured using the market model. We measure excess abnormal returns as the difference between CAR(–1, +1) and the predicted abnormal returns from the Moeller et al. (2004) model (see Table 4).

<table>
<thead>
<tr>
<th></th>
<th>Sin Firms</th>
<th></th>
<th>Non-Sin Firms</th>
<th></th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>Mean</td>
<td>Median</td>
<td>n</td>
<td>Mean</td>
</tr>
<tr>
<td>Abnormal Return</td>
<td>119</td>
<td>2.10*</td>
<td>0.92</td>
<td>22,289</td>
<td>0.88</td>
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<td>Excess Abnormal Return</td>
<td>75</td>
<td>1.70*</td>
<td>0.83</td>
<td>9,422</td>
<td>−0.03</td>
</tr>
</tbody>
</table>

*Statistical significance at the 1% level.
Statistical significance at the 5% level.
Statistical significance at the 10% level.