Focusing the Corporate Product:
Securities Analysts and De-diversification*

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Abstract
Prominent accounts of the rise and fall of the corporate conglomerate cite the changing relationship between financial markets and public corporations. In particular, de-diversification is attributed to investor demands that firms refocus on a core set of related industries. However, how and why investors distinguish between core and peripheral activities is often rather unclear. The present paper addresses these concerns. I argue that the structure of contemporary securities markets stands in tension with the very nature of diversified firms. In particular, such markets resemble certain product markets in that corporations are analogous to products, industries serve as product categories, and Wall Street securities analysts act as product critics. By straddling the market’s product categories that are used by investors—and, in particular, analysts—to compare like assets, diversified firms pose valuation problems. I test this perspective in an analysis of divestiture patterns from 1985-1994. Results indicate that a diversified firm is most likely to exit an industry when the analysts who specialize in that industry do not cover the firm. Corporate de-diversification should be understood, at least in part, as a realignment of a firm’s market identity with that given in its network of reviews from analysts. Firms remove those portions of their corporate identity that have not been legitimated by its critical audience.
“For the mark, cooling represents a process of adjustment to... a situation arising from having defined himself in a way the social facts have come to contradict... A process of redefining the self along defensible lines must be instigated...” Goffman 1952, p.156.

Introduction

The question of corporate scope-- what is the appropriate range of industries in which a firm should compete?-- emerged as a particularly vexing puzzle during the ‘conglomeration’ wave of the late 1950s and 1960s. By expanding into a wide variety of unrelated industries, conglomerate firms challenged traditional theories of organizational growth and integration. The seemingly clear connection between firm and industry suddenly appeared quite tenuous.

No sooner had the revolution begun than a Thermidorian counterwave caused it to reverse course. Rather than inaugurating a new form of corporation and a different answer to the question of corporate scope, conglomeration is now widely seen as an aberration in the history of the firm. Virtually all interpretations of the conglomeration boom view it as a product of unique historical circumstances. With the removal of these conditions, conglomerates disappeared from the scene.

While scholars cite a variety of factors as responsible for the rise and fall of the conglomerate, the changing relationship between managers and investors takes center stage in several prominent accounts. One such view sees the rise of conglomerates as coincident with the perfection of internal capital markets as mechanisms for allocating capital. By contrast, the decline of such firms reflects the enhanced allocative efficiency of public markets (e.g., Bhide 1990). A second interpretation, advanced by agency theory, cites a shift in the relative power of managers and investors. While managerial power allowed for the construction of inefficient conglomerates during the 1960s, increased investor power during the 1980s led to their dismantling (Jensen 1986, 1988, 1993; Useem 1993; Donaldson 1994). Finally, neo-institutional theorists look to a cultural change whereby the notion, prevalent in the 1960s, that firms are investment portfolios to be managed by top executives, evolved into a stress on investor, rather than
firm, portfolio management (Espeland and Hirsch 1990; Fligstein and Markowitz 1993; Davis et al., 1994). While the three approaches differ, they agree that present financial market conditions encourage a return to traditional patterns of growth and integration. In particular, large American public firms are seen as having ‘refocused’ on their ‘core’ activities.

The present paper explores the relationship between financial markets and de-diversification by examining two assumptions embedded in existing approaches. First, I note that identifying a core set of related activities for a given corporation is frequently a significant challenge. It is often quite difficult to say which of a firm’s business lines is central to its strategy and which is more peripheral. Indeed, various participants in and observers of a firm may have very different opinions on such matters. As a result, simply describing de-diversification as the shedding of non-core activities leaves much unanswered. In particular, if investors are responsible for demanding that firms refocus, we must inquire how investors determine which business lines should be divested.

Indeed, the first objection suggests difficulties with a second assumption—the notion, especially critical to the agency-theoretic perspective, that investor appeals for the divestiture of a business line indicate only that it hinders the firm’s performance—that financial markets are neutral filters of information about firm prospects. As against this view, I argue that the uncertainty endemic to forecasting economic events confers on capital markets certain structural features, which in turn generate unique demands on public corporations. In particular, participation in capital markets carries certain implications for diversified firms that cannot be reduced to performance-based factors.

Two critical observations about such markets motivate my study. First, as are most product markets, corporate securities markets comprise relatively distinct categories, which correspond to industries or broad sectors. Investors evaluate a firm primarily by comparing it to its industry peers. In this context, statements regarding a firm’s industrial affiliation constitute judgments regarding correct product category assignments.

Second, securities analysts, who play the role of the critic in these markets, specialize by industry. An analyst’s coverage of a firm reflects a belief that the firm is a member of the industry followed by that analyst. As do critics in many other markets,
analysts serve as powerful arbiters of legitimate product identity. Indeed, lack of analyst recognition for a firm’s participation in a particular industry carries severe consequences, including a price discount (Zuckerman 1997a, 1997b).

These observations generate two critical consequences for diversified firms. First, such firms are especially vulnerable to such crises of product identity. Like brand images that are stretched across disparate product categories, conglomerates promote investor confusion because they hinder cross-product comparison: To what should such corporations be compared? Such questions are exacerbated by the analysts’ industry-based division of labor: What sort of analyst should follow a conglomerate? These troubling questions should be seen as responsible, at least in part, for corporate de-diversification. Refocusing moves represent efforts to clarify a firm’s product identity.

This perspective suggest a particular pattern of de-diversification. As a diversified firm’s identity tends to be more closely associated with certain industries than others, this should be reflected in the degree of coverage it receives from the analysts who follow such industries. A firm’s network of coverage by analysts indicates which of its activities are central and which peripheral to its market identity. Thus, a firm is more likely to divest those business lines where its participation has not been legitimated in the eyes of securities analysts. As such, patterns of de-diversification reflect a process by which actors retrench to the identity ascribed to it by a critical audience.

The following sections detail this argument and provide evidence to support it. First, I review the literature on corporate de-diversification and underline its uncritical treatment of core and peripheral corporate activities and the tendency by certain scholars to assume efficiency-driven divestment patterns. Next, I develop an alternative perspective that focuses on the marketing of corporate identity to financial markets and specify a particular pattern of de-diversification based on this theory. In addition, I discuss a series of additional factors that should affect divestment activity. Next, I describe the data sources and the measurements used. Finally, I present results supporting the proposed hypothesis and then conclude by discussing substantive and theoretical implications.
The Rise and Fall of Unrelated Diversification

The rise of the corporate conglomerate in the late 1950s and 1960s challenged existing conceptions of corporate scope. Traditional understandings of corporate expansion and integration share two basic assumptions. First, scholars see decisions to enter new business lines as attempts to further the interests of the firm. Second, such actions are assumed to be efforts at protecting or expanding upon the corporation’s existing business lines. Whether a matter of vertical integration to counteract a difficult exchange relationship (e.g., Coase 1937; Thompson 1967; Williamson 1985; Pfeffer and Salancik 1978); horizontal integration to enhance market power within an industry (e.g., Stigler 1957; Pfeffer and Salancik 1978); or related integration to enhance scope economies (e.g., Penrose 1959; Rumelt 1974; Chandler 1990; Scott 1993; Markides and Williamson 1996), entry into new industries is traditionally viewed as designed to reduce the difficulties that are incurred or exploit the opportunities that arise from participation in a particular product market.

These conventional frameworks faltered when confronted with the unrelated diversification that typified the merger wave of the 1960s. While many acquisitions of the time were touted as producing complementarities or ‘synergies’ with a firm’s existing line of business (Jacoby 1969; Brooks 1984; Sobel 1984), such interpretations typically stretched received notions of inter-industry relatedness. Indeed, certain conglomerates often acquired businesses precisely because they were unrelated to other operations of the firm. Either implicitly or explicitly, such firms advocated a ‘portfolio’ model of the corporation whereby corporate divisions are investments that should be diversified so as to minimize risk. This ‘financial conception of control’ (Fligstein 1990; cf., Espeland and Hirsch 1990) reflected a clear departure from the traditional focus on a firm’s principal product market.

In retrospect however, the threat to traditional theories of corporate scope proved fleeting. Conglomeration peaked during the bull market of the late 1960s, subsided in the 1970s, and underwent a significant decline during the 1980s and 1990s (Ravenscraft and Scherer 1987; Comment and Jarrell, 1995; Davis et al., 1994; Davis and Robbins 1997). While many large public firms remain involved in multiple lines of business, the general
wisdom of recent years has urged firms to ‘refocus’ on their ‘core competence’ and enable investors, rather than firms, to diversify their holdings (e.g., Jensen 1986; Prahalad and Hamel 1990). Thus, highly diversified firms have suffered from a ‘conglomerate discount’ in the stock market during the 1980s and 1990s whereby total market value is less than the sum of the estimated value of individual business lines (LeBaron and Speidell 1987; Lang and Stulz 1994; Berger and Ofek 1995; Comment and Jarrell 1995; Kose and Ofek 1995).

The rise and fall of the conglomerate raises two critical questions. First, what accounts for these historical patterns? That is, what occurred to popularize unrelated diversification in the late 1950s and 1960s and what triggered the reversal of the 1980s and 1990s? Second, to the extent that these trends contradicted received views on corporate scope, do they contribute anything to our understanding of this question? That is, apart from product market difficulties and opportunities, what else accounts for corporate decisions to enter new business lines and exit from existing ones? To answer these questions, we require an understanding of recent corporate history as well as better tools for addressing the general question of corporate scope.

**Historical Explanations**

As are most unique historical processes, the conglomeration and de-conglomeration waves were overdetermined. However, two factors have achieved most prominence in explaining these trends: changing federal antitrust policy and a shift in the relationship between firms and corporate securities markets.

Many observers cite Federal antitrust policy as having rendered unrelated diversification the only remaining avenue for rapid corporate growth (e.g., Fligstein 1990; Espeland and Hirsch 1990; Davis et al., 1994; see Matsusaka 1996 for contrary evidence). Following the Celler-Kefauver Act of 1950, corporations were greatly limited in their ability to engage in vertical and horizontal mergers. Thus, managers who wished to expand their firms were compelled to acquire businesses in unrelated industries. This regulatory impetus for conglomeration dissolved during the 1980s as the Reagan and subsequent administrations allowed mergers that would previously have been voided. As
a result, firms reverted to more traditional patterns of merger, as they increasingly acquired competitors or those engaged in related businesses (Davis et al., 1994; Davis and Robbins 1997).

This account supplies an insufficient basis for the rise and fall of conglomeration, however. While change in the regulatory environment may explain why firms could no longer pursue traditional forms of expansion, it does not explain why such growth was desirable. Indeed, traditional theories of corporate scope do not recognize expansion per se as advantageous, only growth in existing or related business lines. Thus, while the antitrust environment may have made unrelated diversification the only available form of acquisition, the question remains: why was this strategy attractive to corporate executives?

Various observers address this issue by pointing to factors that made conglomeration sensible and profitable in the earlier period and less beneficial or even harmful in recent years. These include the tax code, which rewarded mergers in the 1960s but ceased to do so in the 1980s (Steiner 1975; Markides 1995); the disappearance of gains available by exporting modern management skills, which were scarce in the earlier period (Markides 1995; cf., Jacoby 1969); and the heightened competition of recent years, which has made complex enterprises more difficult to manage (Markides 1995). Each of these factors may indeed have caused unrelated diversification to be effective before the 1980s and less potent afterwards. Nevertheless, none of these are well established empirically and at least one—the exportation of management skills--seems dubious (Holland 1989; Matsusaka 1990). Few scholars would attribute the rise and fall of conglomerates to these forces alone.  

By contrast, considerable agreement exists that these trends were greatly influenced by the changing relationship between financial markets and public firms. At least three related accounts see something about the nature of the firm’s interaction with investors as having changed over the past half-century, first encouraging and then discouraging

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1 There are other motives for diversification, such as the collusion that may arise from multipoint competition (e.g., Scott 1993) or various advantages that accrue to large firms (Steiner 1975, p. 31). However, none of these factors is thought to have undergone historical shifts that would have encouraged unrelated diversification in the 1950s and 1960s and discourage it in recent years.
conglomeration.

The first such perspective views both the rise and the fall of unrelated diversification as efficient responses to the conditions of particular time periods. This view sees the original basis for diversification in the attempt to diversify the firm’s holdings so as to reduce the risks associated with participation in a given product market. Conglomeration reflected the notion that the firm constitutes a portfolio of businesses to be entered or exited based on prospects for profit and the elimination of risk (Fligstein 1990; cf., Espeland and Hirsch 1990). Further, large diversified firms serve as private capital markets that can swiftly move resources to businesses that required them (Weston 1970; Williamson 1975; Salter and Weinhold 1979). However, recent improvements in information flow and competition have made public markets more efficient allocators of capital than are internal capital markets (e.g., Bhide 1990). Thus, while firm-level diversification was the appropriate solution for the 1960s, investors can now efficiently diversify their holdings themselves.

Agency theorists have voiced a more influential version of this account. Agency theory (e.g., Jensen and Meckling 1976; Fama 1980) questions the first of the two assumptions held by traditional approaches to corporate integration-- that firms follow singular interests, assumed to be that of managers. Rather, such scholars as Michael Jensen (1986, 1988) argue that the primacy of managers reflects a distortion engendered by the separation of shareholder ownership from control over the corporation (Berle and Means 1933). This view is troubled by the fact that widespread patterns of unrelated diversification persisted for years despite growing evidence that it was inefficient (e.g., Rumelt 1974; Ravenscraft and Scherer 1987; Porter 1987). According to this perspective, such inefficiency could have persisted only if managers were not pursuing shareholder interests. Unrelated diversification reflected the displacement of owners’ interests with managers’ penchant for empire-building, and the desire of the latter for job security and higher pay, which are more attainable in large firms (Amihud and Lev 1981; Murphy 1981).

Marxist-oriented theorists have also challenged the assumption of complete managerial control, emphasizing the continued influence of founding families (Zeitlin 1974) or banks (Kotz 1978; Mintz and Schwartz 1985). This research is less useful for present concerns because it has generally failed to demonstrate the specific manner by which such financial stakeholders influence corporate actions and, in particular, how such actors effect changes in corporate scope.
1985, 1986; Jensen 1993; Donaldson 1994; Dial and Murphy 1995). Similarly, Roll (1986) argues that, when they are free to ignore investors, managers often display a careless optimism that such actions as unrelated diversification will prove beneficial. Thus, agency theory treats conglomerates as a symptom of a dysfunctional power imbalance in corporate governance.

Conversely, the shift in the balance of power from managers to owners in the 1980s compelled a reversal of conglomeration. Jensen and Ruback (1983) characterize the wave of mergers, acquisitions, and buy-outs, which at times reached even the largest corporations, as an efficient market for corporate control (Marris 1964), which removed managers who engaged in such unprofitable ventures as unrelated diversification. Similarly, the increased concentration of shareholdings in the 1980s and the move to tie executive compensation to a firm’s stock price brought about an ‘alignment’ of managers with shareholder interests (Useem 1993, 1996; Donaldson 1994; Dial and Murphy 1995; Davis and Stout 1992; Davis and Thompson 1993). Thus, what distinguished the 1980s from the 1960s was not the greater efficiency of financial markets but increased investor power. The wave of de-diversification of the 1980s and 1990s represents a needed correction as it directs firms to engage only in those activities that further ‘shareholder value’ and refrain from those that are geared to executive interests alone.

Sociologists influenced by neo-institutional theory offer a complementary but different interpretation of the rise and fall of conglomerates. Rather than seeing these as discontinuous trends, neo-institutionalists argue that de-conglomeration represents the logical outgrowth of a cultural process begun during conglomeration. Fligstein (1990; cf., Espeland and Hirsch 1990) characterizes the rise of unrelated diversification as a product of the ‘financial conception of control.’ He attributes this new model of corporate strategy to the vigorous antitrust regime and the multidivisional form of governance, both of which de-emphasized a focus on specific product markets. Further, the conglomerate form spread as unrelated growth became a matter of competition among managers of top corporations, who increasingly hailed from a finance, rather than a manufacturing or marketing, background. Unrelated diversification became a legitimating marker sought by all.
Davis et al. (1994; cf., Espeland and Hirsch 1990; Fligstein and Markowitz 1993) and portray the rollback of rampant unrelated diversification as the inevitable result of the rise of the financial conception of control. According to this perspective, the very acts of buying and selling corporate components undermined the legitimacy of the conglomerate form. Such activity changed the view of the large corporation from that of a bounded actor to that of a profile of distinct investments. Rather than regard corporate units as part of a coherent whole, investors began to demand the divestiture of poor performers. This neo-institutionalist perspective complements the agency-theoretic model of corporate governance, seeing the latter not as an empirical account but as a normative model that has gained legitimacy over previous conceptions of organizational control (Davis et al., 1994). Thus, conglomeration has receded with the ascendance of the ‘nexus of contracts’ (Jensen and Meckling 1976) as the appropriate metaphor for conceiving of the corporation.

**Theoretical Puzzles**
The preceding discussion strongly suggests that, while many factors were undoubtedly at work, a strong impetus for corporate refocusing came from financial markets. Whether because of improved market efficiency, increased investor power, or the de-institutionalization of the conglomerate form, investor demands helped spur a reversal of conglomeration during the 1980s and 1990s. Note as well that, while these and other accounts differ on the historical basis for the rise and fall of conglomerates, they give essentially the same answer to the second question asked above, that regarding the direction of de-diversification. All agree that, since the conglomerate was an historical anomaly, traditional explanations for merger and growth still hold. Accordingly, de-diversification is presumed to involve a return to a core set of related business lines since such focused strategies promote economic performance.

*What Constitutes the ‘Core’?*
Note, however, that identifying core activities is rarely straightforward. This ambiguity was most marked in the case of such conglomerates as ITT, LTV, or Gulf & Western,
which, before restructuring, could not be closely identified with any single industry. Firms that exited their original industries and assumed completely different identities similarly illustrate the tenuousness of industry attachments. Consider, for example, the evolution of the American Can Corporation into Primerica, a financial services company, or Greyhound into Dial, a consumer-products company. More subtle shifts in corporate strategy-- such as Intel’s change in focus from memory to processor manufacturer (Burgelman 1994)-- underline the volatility of industry attachment. It is often quite difficult to determine what is a firm’s core industry.

Those who would identify a core group of related business lines face a significant challenge as well. Scholars have long wrestled with the task of properly measuring inter-industry proximity with little resolution (e.g., Rumelt 1974; Teece et al., 1994; Markides and Williamson 1996). It seems likely that managers and investors face similar difficulties. While certain pairs of industries seem clearly related and others unrelated, a vast gray area separates these extremes. Indeed, this indeterminacy allows managers to claim ‘synergies’ for virtually any combination of business lines (Kanter 1989).

It would seem then that simply describing de-diversification as refocusing on a core set of related activities, coupled with the assumption that unrelated business lines hinder overall performance, is inadequate. At the very least, such descriptions are imprecise. Thus, the claim that investor pressure is responsible for inducing the reversal of conglomeration begs a critical question: How do investors determine which business lines are central and which are more peripheral to a firm’s strategy?

How Do Investors Influence?

Indeed, a second difficulty emerges from an examination of the most influential interpretation of investor influence on refocusing, that of agency theory. This perspective holds that financial-market devaluation of conglomerates reflects their poor performance and that renewed investor power allows for the elimination of such inefficiency. This account seems to differ among themselves. In particular, while Davis et al. (1994) views the low stock prices of conglomerates as indicators of their inefficiency, Espeland and Hirsch (1990) imply that stock market
position rests on a belief in capital market efficiency, the notion that corporate securities prices represent all publicly available information about a firm’s earnings prospects, appropriately discounted for risk and time, and are unaffected by extraneous factors (Fama 1970; 1976; 1991; Jensen 1978). In particular, investor demands for the divestiture of certain corporate divisions are inspired by nothing more than a desire for improved firm performance.

This perspective seems suspect, however, when we note that the stock market has in fact varied greatly in how it has valued diversification. Judging by reaction to changes in corporate scope, investors encouraged conglomerates during the early to mid-1960s, became ambivalent in the late 1960s and 1970s, and turned negative during the 1980s (Shleifer and Vishny 1991; Matsusaka 1993; cf., Sobel 1981, 1984; Malkiel 1985; Espeland and Hirsch 1990). Rather than a clear bellwether of the inefficiency of conglomerate firms, stock market participants have displayed contrasting opinions at various points in time. Indeed, given the consonance of investor opinion with contemporary diversification trends, it seems dubious to suggest that the construction of conglomerates represented a managerial indulgence at shareholder expense.

Rather, such dramatic swings in investor attitudes towards conglomerates in general reinforce the question asked above regarding particular paths of de-diversification: how do investors choose a business line for divestiture? Demands for refocusing may indeed reflect a desire for enhanced corporate performance, which is thought to be enhanced by the divestiture of peripheral activities. However, we must then ask how investors determine which business lines are more and which are less central to a firm.

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4 This description reflects what Fama (1970) terms the ‘semi-strong’ version of the theory.
Corporate Scope and Securities Market Product Categories

The Analogy

A consideration of the general process by which corporate securities are evaluated helps illuminate this question. In particular, it is important to recognize that, as are many goods and services, the valuation of financial asset is subject to significant uncertainty.\(^5\) Two principal sources of uncertainty may be identified, one more severe than the other. First, a consumer may be uncertain as to the private benefit she will obtain from the product.\(^6\) Private uncertainty plagues financial assets as well in that investors may be uncertain as to the nature of the income stream that an asset will generate.

A second and more consequential type of uncertainty emerges when a significant component of the benefit derived from a purchase is social: when the value of an item to one person depends on how members of critical reference groups value it. Social uncertainty is especially evident in markets for goods and services that are used to mark placement on social hierarchies (e.g., Veblen [1899] 1953; Douglas and Isherwood [1979] 1996; Hirsch 1976; Frank and Cook 1995). Such uncertainty plagues financial assets to the extent that investors focus on capital gains and losses rather than yield.\(^7\) In such contexts, the value placed on a financial product derives, in recursive fashion, from that placed on it by significant others (Keynes [1936] 1960). This social basis for uncertainty confronts novice and experienced investors alike. Indeed, the short-term relative standing by which professional investors are generally evaluated makes them especially sensitive to opinion trends (Keynes [1936] 1960; Scharfstein and Stein 1990; Friedman [1984] 1993). Prices for financial assets, as for any product whose value is socially driven, reflect interpretations of available information based on the theories of value that market participants perceive will govern future purchasing patterns (Shiller 1990; Zuckerman 1996).

\(^5\) Following Knight (1921), uncertainty, in which the probability of a particular outcome is unknown, is distinguished from risk, where such probabilities are known.

\(^6\) This uncertainty is responsible for Nelson’s (1974) influential distinction between ‘search’ and ‘experience’ goods.

\(^7\) Note that an orientation towards capital gains has been encouraged in recent years by efficient-market theorists who argue that a firm’s dividend policy should not matter (Miller and Modigliani 1961). In such models—and in the minds of most contemporary investors, yield emerges as a theoretical construct and the focus shifts to a firm’s earnings stream rather than an investor’s. Thus, price changes become the paramount issue in an investor’s mind.
Markets take on three characteristic features as value becomes more uncertain--and particularly where valuation has a significant social component (Zuckerman 1997a, 1997b). First, the need to ascertain prevailing opinion fosters the emergence of a field of critics or ‘surrogate consumers’ (Hirsch 1972) who review product offerings and shape demand through public recommendations. The rise of critics in turn changes the nature of market relations. In markets that are significantly mediated in this fashion, marketing campaigns focus largely on managing relations with critics rather than projecting broad appeals to a mass public (Hirsch 1975). At the extreme, gaining the favor of critics is a necessary and sufficient condition for attracting demand in such ‘mediated’ markets.

The salience of product category membership represents a second symptom of value uncertainty (Zuckerman 1997a, 1997b). The availability of a ready comparison set greatly reduces uncertainty regarding the value of any member of that category. However, when multiple frames of reference may apply, value becomes less obvious. That is, ambiguity regarding a product’s classification exacerbates uncertainty as to its value. Accordingly, markets are stable only when producers present offerings that are amenable to cross-product comparison (White 1981; Leifer 1985; White 1988). Products that are not recognized by consumers as members of a given category are likely to be screened out of competition and ignored (Zuckerman 1997a, 1997b).

Note that the role of consumers in punishing the violation of category boundaries is difficult to observe. As a result, scholars tend to focus on mutual monitoring among sellers and to treat consumers as essentially irrelevant (e.g., White 1981). However, additional conditions are likely the scale of the market and the amount of capital involved.

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8 Note that we may identify a third type of uncertainty, which affects both financial and non-financial products, and underlines the inherent ambiguity of financial value. I refer here to what may be termed usage uncertainty—the question of how the multiple uses to which a good may be put should figure into its value. Such difficulties are familiar in the context of such items as homes or autos where the good can be assessed either on the basis of its intended use or by breaking the item down and selling its parts. Given two fundamentally different bases for valuation, what value does one then place on a good? Parallel difficulties arise in the context of corporate securities. A corporation can be valued on the basis of the income it generates or the assets that it owns. While the latter mode of valuation has yielded to the former in contemporary markets, it had significant influence in earlier periods (Burk 1988; cf., Babson 1967) and plays an important role in the ‘value investing’ strategies of Graham and Dodd [1934] 1940 as well as the ‘bust-up’ takeovers popularized in the 1980s (LeBaron and Speidell 1987).

9 Valuation difficulties are a necessary but insufficient condition for the emergence of such structures.
critical reaction in a mediated market is both highly salient to sellers and visible to scholars. In addition, observe a third structural symptom of uncertain product value: critics often specialize by product category. As a result, the aggregate pattern of reviews from critics to products generates a network map of the market’s classificatory system. Further, the network of reviews attracted by an individual product provides a means for assessing its legitimacy. Before a seller can distinguish its product as worthy of purchase, it must first attract reviews from the critics that follow the product’s intended category. A product that does not gain standing as a legitimate entry in a recognized product category incurs significant penalties (Zuckerman 1997a, 1997b).

Two of these three features have clear parallels in corporate securities markets (Zuckerman 1997a, 1997b). First, securities analysts act as the critics of corporate securities markets. Such analysts generally work for Wall Street investment firms and brokerage houses. They are each charged with following particular sets of public firms and produce two principle products: investment recommendations and forecasts of future earnings for the firms they review. Just as do influential critics in other industries (e.g., Hirsch 1972, 1975), analyst recommendations and forecasts of firms’ future profits are thought to impact significantly on the demand for a firm’s securities. Indeed, such forecasts are especially consequential as they are the primary standard by which quarterly profits are judged in the market.10

This influential role renders analysts, along with large institutional investors, the principal target for ‘investor relations’ campaigns—the efforts by firms to manage their ties with owners and cultivate the interest of potential investors (Useem 1993, 1996; Rao and Sivakumar, forthcoming). The significance of analysts in this regard is evident in visits by managers to analyst associations (Francis et al., 1996); the increasingly routine conference calls with analysts in which significant corporate announcements are made (e.g., Lachanski 1996); and the finding that attention from analysts drives corporate investor relations activity (Rao and Sivakumar, forthcoming). Further, corporate executives work at managing analyst expectations so that the firm does not suffer from ‘earnings surprises’ (e.g., Ip 1997; Lowenstein 1997). Just as in other mediated markets,

10 See Burk 1988, Zuckerman 1997a, for more extensive descriptions of the profession of security analysis.
managers promote their firms directly to critics.

Second, analysts resemble critics in other markets in that they specialize by industry, the product categories of corporate securities markets. That a classification by industry dominates prevalent methods of security valuation is evident in public discussion, newspaper tables, academic research (King 1963; Boudoukh et al., 1994; Firth 1996), and corporate self-presentations (e.g., Pfizer 1994, note-20; McDonnell Douglas 1994, note-14). The analyst division of labor reflects the dominance of the ‘pragmatic’ theory of value (Graham and Dodd [1934] 1940), which values firms on their profits and views such earnings flows as industry-specific (see Burk 1988). An analyst is typically responsible for following a set of firms from a single industry or a few industries that are thought to be related in some way (see e.g., Zuckerman 1997a, 1997b; cf., Nelson’s Directory of Investment Research). Thus, industry boundaries distinguish among securities market product categories as well the professional specialties of analysts. Indeed, analysts compete for intraprofessional status by industry (e.g., Wall Street Journal 1997; Institutional Investor 1996).

Hypothesis

We see then that corporate securities markets resemble other markets where valuation is uncertain in that a recognized audience of critics, who specialize by product category, plays a significant role in shaping demand and influencing marketing activity. In addition, I have proposed that the violation of product category boundaries is especially problematic in such contexts. Accordingly, if industries represent the product categories of corporate securities markets then firms pose valuation problems when they do not readily lend themselves to classification in a particular industry. Indeed, by institutionalizing such categories, the analyst division of labor intensifies such difficulties. As shown elsewhere, a firm’s securities suffer when it fails to gain recognition for its participation in an industry by the analysts who cover the industry (Zuckerman 1997a, 1997b). Given the negative consequences of such ‘coverage mismatch’, we would expect firms to strive to align their corporate identity with a particular industry.
Armed with this insight, we may now take a fresh look at diversified firms. By participating in multiple industries, such corporations contradict the logic of the accepted structure of valuation. Rather than residing in a single category, diversified firms present themselves as multi-category products, thereby invoking multiple frames of reference and multiple analyst specialties. As such, a diversified firm runs the risks akin to those involved in ‘brand extension’: stretching a brand image to include many dissimilar products threatens the brand with incoherence in the eyes of consumers (Aaker 1991; Park et al., 1991; DeGraba and Sullivan 1995; Curtis 1996). What is an investor—and, in particular, an analyst—to make of a diversified firm? To what should it be compared?

As illustrated in exhibit 1, corporate executives frequently explain proposed or actual divestitures and spin-offs by citing such difficulties. In each of these quotes, managers express their frustration with the fact that the structural context for the marketing of their firms’ securities produces pressures for divestiture, which do not reflect considerations of economic performance. In particular, these firms face pressure to change their identity so as to more closely match analyst specialties. De-diversification promises to ease the valuation difficulties incurred by a firm’s participation in multiple industries.

EXHIBIT 1 ABOUT HERE

As suggested by these quotes, de-diversification activity seems to involve a purification of corporate identity so that a firm more closely matches analyst industry specialties. Further, this understanding of de-diversification holds clear implications for the pattern of such refocusing activity. In particular, a firm’s reception from analysts indicates which business lines are central and which peripheral to its market identity. Since a single analyst from a particular brokerage house tends to be responsible for a given firm, such coverage patterns indicate the industry or industries with which a firm is most closely associated. Thus, we may calculate for each of a firm’s business lines its degree of ‘coverage mismatch’ or the extent to which the firm is not followed by the analysts who specialize in the business line’s industry. Business lines with high levels of coverage mismatch detract from a straightforward valuation of the firm. They are
peripheral to the firm’s identity and are thus ripe for divestiture.\textsuperscript{11} In particular, we would expect that

\textit{Hypothesis: Ceteris paribus, de-diversifying firms divest (retain) business lines with higher (lower) levels of coverage mismatch.}

That is, I interpret corporate de-diversification as, at least in part, a process of retrenchment to the identity ascribed to a firm by securities analysts.

\textit{Historical Specificity}

Before proceeding to test the stated hypothesis, it is worth considering its historical specificity. In particular, I have implied that diversified firms suffer from problems that are inherent in the structural context of valuation. If so, why should they ever have been in favor, as they seemingly were during much of the 1960s?

To answer this question, it is important to recognize there is nothing inherent or timeless in the industry-based classification of corporate securities-- it is contingent on a particular way of understanding the value of firms (see fn. 8). In particular, the proposed framework is only valid for securities markets that group securities by industry. Such a structure has clearly been in place since the ‘pragmatic’ revolution of the 1930s, which ushered in an era of valuation based on future earnings (see Burk 1988). Indeed, the development in the previous period of indexes for railroad, manufacturing, and utilities stocks suggests that industry boundaries have long been salient to investors. Thus, the conglomerate firms that emerged in the 1960s presented a profound challenge to deep-seated principles of valuation. At first, market participants latched onto the theory that the conglomerators were selling them: that the violation of the product-category boundaries represented a new category, which merited a high valuation. However, with the collapse of the general optimism associated with the 1960s bull market, the mounting

\textsuperscript{11} Note that an alternative solution to the problem of coverage mismatch is the creation of ‘tracking’ or ‘letter’ stock (see Neish 1995; Hamilton 1996; Gilson et al., 1997). Made prominent when General Motors regarding its Electronic Data Systems and Hughes Aircraft divisions, the parent firm retains ownership but allows investors to follow a division as a ‘pure play’. However, this solution has remained relatively unpopular as investors have had difficulty evaluating shares that do not involve ownership rights.
evidence that conglomerates did not improve economic performance, and the opening of new avenues for traditional growth, the conglomerate category fell into disfavor and was de-institutionalized by the early 1980s (Espeland and Hirsch 1990; Davis et al., 1994; Davis and Robbins 1997). The theory was debunked.

Indeed, while the 1960s may have been a temporary aberration, in which predominant theories of valuation encouraged a violation of the industry-based product structure, the 1980s and 1990s may represent a backlash, in which strict adherence to this structure is demanded. Thus, while the described process of conformity with industry-based product categories should be in evidence for many years (see e.g., Fisher 1958 [1996] p.111), it was clearly overshadowed by the conglomerate fever of the mid-1960s and may be especially salient in recent years. Further, it is important to recognize that historical change in opinion regarding conglomerates is not sufficient to explain de-diversification. Rather, one must still specify which of a firm’s business lines will be viewed as contributing to lack of focus. The proposed hypothesis addresses this question.

Data

Two data sources are central to this analysis. The first, Standard & Poor’s Compustat Industry Segment File, characterizes the involvement by public firms in various industries. The second, Zacks Historical Database, supplies information on the network of coverage of firms by securities analysts. As detailed descriptions of these data are given elsewhere (Zuckerman 1997a, 1997b), I describe them briefly here.

Industry Segment Data

As with Compustat’s Industrial Annual File, from which I obtain firm-level data, data in the Industry Segment File are compiled largely from quarterly and annual reports filed with the Securities and Exchange Commission. In particular, FASB No. 14 and SEC Regulation S-K require public corporations to report their assets, net sales, earnings before interest and taxes (EBIT), depreciation, and capital expenditures in up to ten business segments, starting in 1978. Segments represent a higher level of aggregation
than individual business lines. While in most cases they correspond to a recognized corporate division, they may include multiple operations. Nevertheless, the *Industry Segment* data are unique in that they cover the time period under question, allow for a linkage with firm-level information on performance and analyst coverage, and include extensive financial data on segments or business lines. Further, as they originate in the various statements and reports presented by corporations to the investment community, these data reflect the presentations of corporate self under study.

In addition, these data have been shown to represent accurately variation in scope among firms (Palepu 1985) as well as change in aggregate levels of diversification in recent years (Comment and Jarrell 1995; Davis et al., 1994; Lichtenberg 1992; Zuckerman 1997a). Figure 1, which shows the decrease from 1978 to 1995 in the mean number of primary 3-digit industries in which firms participated, illustrates such change. As shown elsewhere, this aggregate decline is accounted for by the greater diversification and smaller number of corporate deaths relative to births as well as by a reduction in the number of segments in which existing firms operate—the subject of the present analysis (Lichtenberg 1992; Davis et al., 1994; Zuckerman 1997a).

FIGURE 1 ABOUT HERE

Note that certain scholars have questioned whether the de-diversification trend, which appears in these data, reflects an actual decrease in corporate diversification or the fact that managers have become increasingly skilled at hiding divisional performance in aggregate firm data (Lichtenberg 1991). Two considerations discount these concerns. First, given the intensification of investor and analyst scrutiny of corporate action and their particular concern with the publication of segment data (e.g., Practer 1996), it seems unlikely that managers could easily manipulate such data—especially when they had already been providing segment-level data. Indeed, the agency perspective sees such monitoring as the analyst’s principal task (Jensen and Meckling 1976). In addition, indications exist that segment reporting has been quite consistent in its reliability. In
particular, figure 2 charts the proportion of firms for which aggregate and summed segment data for three critical accounting variables--sales, assets, and operating earnings (EBIT)--differed by more than 10%. We see that, over the time period in question, the relationship between segment and aggregate data has remained largely unchanged with a slight trend toward smaller discrepancies.

**FIGURE 2 ABOUT HERE**

*Zacks Historical Database*

*Zacks Historical Database* provides data on analyst coverage of industries and firms. Since the 1970s, several firms including *Zacks* have been collecting analysts’ forecasts of corporate earnings. These data are useful for present purposes because every published earnings forecast indicates a relationship between a particular analyst and a particular firm. Thus, one can use these data to measure the degree to which a firm that is active in a given industry is followed by the analysts who specialize in that industry—that is, a business line’s degree of coverage match or mismatch.

*Zacks* data do not contain the full set of analyst forecasts. Nevertheless, five considerations suggest that treating these data as approximating a complete network involves minimal bias. First, since the forecasts are published by brokerage houses and not the firms themselves, the presence or absence of a forecast should be uncorrelated with firm characteristics. Second, as they are used in public rankings for which analysts and their employers compete intensely, brokerage houses have significant motivation to publicize these forecasts. Third, there is a longstanding tradition to consider these data as if they represent the full population of analysts such that they contain the complete range of information available to market participants at a particular point in time (see Givoly and Lakonishok 1984; Schipper 1991; cf., Haunschild 1994). Fourth, the data are largely complete in terms of the most prominent analysts, those who rank highest in the *Institutional Investor* rankings (Zuckerman 1997a, 1997b). Finally, the coverage of a
firm in the Zacks data is patterned in a manner that one would expect. This includes a high correlation between the number of analysts following a firm and its size (Bhushan 1989; Zuckerman 1997a, 1997b) as well as a clear division of labor by industry (Zuckerman 1997a, 1997b).

Variables in the Analysis

Coverage Mismatch

The primary hypothesis of this paper is that, for a given diversified firm, segments with greater coverage mismatch are more likely to be divested. Coverage mismatch refers to a condition in which a firm that does business in an industry fails to attract coverage from analysts who specialize in that industry. This definition requires a criterion by which to establish an analyst as covering an industry. I follow the following steps in making such assignments (see Zuckerman 1997a, 1997b for details). First, the publication of at least one earnings forecast for a firm during a particular fiscal year is taken to indicate that the analyst covered the firm that year. Such firm-analyst dyads provide information on analyst industry specialization. In particular, an analyst is treated as covering a firm in an industry when that firm generates the greatest proportion of its sales in that industry. An analyst is then defined as an industry specialist when she follows a minimal proportion of all firms in the industry that attract any analyst coverage. This proportion varies with the number of covered firms in the industry, as shown in table 1. Finally, sensitivity tests indicate that the measurement of coverage mismatch is robust across criteria for establishing analyst industry specialization.

TABLE 1 ABOUT HERE

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12 Note that, absent this assumption, the pattern of diversification would influence the observed pattern of analyst specialization. However, this assumption proves to have little impact in that assignment of analysts to industry specialties is substantially the same when multi-segment firms are removed from these calculations. Note further that this assumption is not applied to the calculation of coverage mismatch.

13 Using the number of firms in an industry that receive coverage as the denominator controls for inter-industry differences in the likelihood of attracting coverage. An alternative denominator would be the number of firms covered by the analyst in question. Results change little when such a measure is used.

14 In addition, informal comparisons of the industry assignments generated with this procedure with the industry assignments reported by brokerage firms and listed in Nelson’s Directory of Investment Research reveal broad agreement.
Having assigned analysts to industries, I measure coverage mismatch as follows. First, define $c_{fi}$ as the number of analysts following firm $f$ during the relevant fiscal year who also cover the industry $i$ that corresponds to industry segment $s$. Then, coverage mismatch can be measured as:

$$cm_{fs} = 1 - \left( \frac{c_{fi}}{\max(c_{gi})} \right)$$

where $\max(c_{gi})$ refers to the maximum number of analysts covering industry $i$ that follow any firm $g$ that does business in industry $i$.

While a score of zero indicates that the firm has attracted the maximum number of analysts who follow an industry to cover the firm, a score of 1 means that it has attracted none of these analysts. Using the maximum, rather than the total, number of analysts following firms in an industry standardizes the criterion across industries.

*An Illustration: General Mills in 1985*

Table 2 illustrates coverage mismatch in 1985 for General Mills, a conglomerate that underwent significant refocusing during the 1980s and 1990s. At that time, General Mills reported segments in three different 3-digit SIC industries: 204, grain mills products; 581, restaurants; and 562, women’s clothing stores. From the table, we see that General Mills’ primary market identity lies in the grain mills products industry. The six grain mills products specialists who follow General Mills form the largest group of specialists to follow any firm in this industry. Further, the industries listed at the bottom of the table indicate that General Mills’ broad identity is that of a marketer of retail food products. By contrast, none of the specialists from either the restaurant or women’s clothing store industries covers General Mills. These industries appear to be peripheral to its identity. Thus, of its segments, General Mills should face pressure to divest itself from restaurants and even stronger pressure to exit women’s clothing stores. By 1994-- General Mills had left both of these industries.
Control Variables

As suggested by Table 2, additional factors likely affect the tendency for a firm to stay in or exit from an industry. Further, some of these variables may also influence the likelihood that securities analysts who specialize in an industry cover a particular firm. Figure 3 illustrates these factors, many of which derive from Ravenscraft and Scherer’s (1987) study of corporate divestiture.

FIGURE 3 ABOUT HERE

The first represents financial health and efficiency. Thus, a firm tends to remain in those industries that generate the most profit for it. This variable is measured as the ratio of EBIT to assets (Ravenscraft and Scherer 1987). In addition, corporations are less likely to leave industries that have high average profitability. This variable is simply the mean segment-level profitability by 3-digit SIC industry.

A second set of factors reflect the intensity of a firm’s participation in its segments. First, firms may be more likely to remain in industries in which they have competed for many years relative to those more recently entered. Second, segments that generate a great deal of sales for the firm and those that represent a large share of the corresponding industry’s total sales should exhibit lower levels of exit (Ravenscraft and Scherer 1987). Calculation of the latter variable uses the total amount of goods sold by public firms in that industry as the denominator. Finally, significant sunk costs in R&D and advertising should represent barriers to exit and thus make such actions less likely (Ravenscraft and Scherer 1987). Unfortunately, advertising investment is unavailable and R&D investment is missing for many cases in the Compustat Industry Segment file. As proxies, I take the industry averages from firm-level data with each firm assigned to the 3-digit SIC code of its largest business segment.

15 In addition, one may hypothesize that the change in profitability from year to year affects the likelihood of divestiture. As this variable produced no association with divestiture and because it involves significant measurement difficulties (see Zuckerman 1997a, p. 150, fn.3), I exclude it here.
As suggested by the literature reviewed above, an additional factor contributing to the likelihood of divestiture is the degree to which a given segment complements other segments of the firm. While direct measurement of industry relatedness has proven difficult, an indirect method, introduced by Teece et al. (1994) looks to the business-line combinations that exist and infers that these are optimal combinations. As detailed in the Appendix, I follow this procedure in calculating a measure of inter-industry relatedness, \( t_{ij} \), by comparing the prevalence of an industry-combination to its expected prevalence due to random chance (Teece et al. 1994).

Based on this measure of inter-industry proximity, we may measure *prevalence match* for segment \( s \) in firm \( f \) as:

\[
p_{mf} = \sum_{s \neq b} \frac{\tau_{sb} + \tau_{bs}}{2S - 1}
\]

That is, a segment increases a firm’s conformity with prevalent industry combinations when its corresponding industry is distant from the firm’s other business lines in the prevalence structure.\(^{16}\) Segments with low prevalence match should be at greater risk of divestiture.

Note that, in addition to an efficiency-based explanation for such an effect, an alternative reflects the legitimacy-based considerations stressed in the present paper. In particular, one pair of industries may display greater overlap in their analyst coverage than does another pair. As a result, firms that do business in the latter pair more clearly violate analyst coverage specialties. Thus, as illustrated in table 2, General Mills’ potential participation in the tobacco industry should produce less pressure for divestiture than its actual involvement in women’s clothing stores. In general then, the effect of ‘relatedness’ on exit rates reflects a combination of efficiency and legitimacy-based

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\(^{16}\) A limitation of this measure is that it ignores the possibility that a firm may contain multiple sets of segments, characterized by high relatedness within and low proximity between sets. Given the relatively small average number of segments, this does not appear to be a common condition.
forces. ¹⁷

We see in figure 2 that coverage mismatch occupies an intermediate place in the proposed causal scheme. Several of the factors indicating the intensity of a firm’s involvement in its segments should affect its level of analyst coverage mismatch. Thus, to the extent that these variables -- segment-level sales, market share, and the segment’s age-- reflect a firm’s identification with a particular industry, they should influence its social or market identity, as reflected by its reception from analysts. Further, as analyst coverage follows product category boundaries, mismatch should be heightened when firms do business in industries that cross such boundaries. Segments with low prevalence match—i.e., those that most stand out as unusual in a firm’s segment profile-- should have high levels of coverage mismatch. Thus, we see in table 2 that these variables to correlate with coverage mismatch in the case of General Mills. However, across the full set of firms, to the extent that coverage mismatch enhances the likelihood of divestiture net of these factors, this reflects the operation of an unobserved variable-- the centrality of that segment to the firm’s securities-market product identity. Above and beyond a firm’s degree of commitment to its business segments and the degree of relatedness of these segments to one another, a significant effect of coverage mismatch on industry exit testifies to the impact of legitimacy in the eyes of analysts.

A Note on Aggregation

I choose the 3-digit SIC industry as the level of analysis for several reasons. First, as shown elsewhere, combining segments in this fashion does not substantially change aggregate patterns of corporate scope (Zuckerman 1997a). In addition, this middle-range of aggregation gives a more useful rendering of the analyst coverage structure. Few 2-digit industries attract more than a small handful of coverage. By contrast, at the 4-digit

¹⁷ This variable is correlated with a measure of inter-industry correlation in common analyst coverage at .65 (Zuckerman 1997a).
level, too few analysts and firms are associated with an industry to give reliable estimates of the measures introduced above. The 3-digit level provides a useful middle ground between these extremes. Nevertheless, analyses performed at the 2 and 4-digit levels generate results that, while generally weaker, are highly consistent with those that emerge at the 3-digit level.

Analytic Framework

I model the differential odds of divestiture among business segments of the same firm. That is, for a particular firm at a particular point in time, I ask: which of its segments are most likely to be divested by a second time point? I posit that coverage mismatch should have a significant positive effect on this likelihood net of the control factors displayed in figure 1.

Several unusual features of the data under study call for a somewhat unorthodox modeling framework. First, as the data are given by year rather than in continuous time, I analyze the event-history as a discrete-time logit. For a segment of a firm in a particular fiscal year, I assess the effect of a series of covariates on the log-odds that the segment will be divested by the subsequent fiscal year. Divested segments are removed from the analysis in all years subsequent to divestiture. Such analyses are then interpretable in the manner of standard logistic regression analyses (Allison 1982; Yamaguchi 1991).

Second, as the data involve segments nested within firms, I employ fixed-effects or ‘conditional logit’ models. That is, I analyze how within-firm changes in the covariates discriminate among segments in terms of their likelihood of being divested. An alternative procedure would be to include both yearly firm means and segment deviations from those means as separate variables in the analysis (cf., Allison 1977). However, in an event-history framework, this approach introduces severe

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18 I use the ‘clogit’ command in Stata 5.0.
interdependence among cases across years. Interdependence becomes a problem because, when a segment is divested, this changes the values of the means and deviation variables for subsequent years. As fixed-effects models examine within-firm differences alone, they avoid this problem. In addition, they have the advantage of eliminating any unexplained heterogeneity across firms that could bias coefficient estimates (Yamaguchi 1991).

A third issue involves left-censoring. As the SEC began mandating the publication of segment information in 1977, segment-level data for years prior to 1978 are unavailable. Indeed, the start dates for these segments are unknown as well. Table 3 gives the distribution of start dates for those 3-digit segments that were in existence in 1993. Clearly, a large proportion of segments are left-censored in this fashion. Further, as older segments tend to belong to older and larger firms, left-censored cases represent a significant portion of public firms, the universe that I am trying to understand.

I address this issue in the following manner. First, I open the time window, or the interval during which segments are at risk of divestiture, in 1985. I close it in 1994, the last year for which appropriate data are available. This allows me to distinguish between segments that are left-censored and those that are left-truncated, the latter referring to those for whom earlier data are unavailable but whose start year is known (Yamaguchi 1991). In addition, I perform three separate analyses based on three selection criteria: all segments; those segments whose start year was subsequent to 1978; and those segments that began operation after 1983—that is, those that are neither left-truncated nor left-censored. To the extent that results are robust across these selection criteria, we may have greater confidence in the strength of coefficients and in the confirmation or disconfirmation of the stated hypotheses.

Fourth, the question arises as to what should be done with single-segment firms. Such firms are clearly not at risk of de-diversification and are thus not subject to the
stated hypothesis. Indeed, it might be argued that there should be no effect of coverage mismatch on the likelihood that a single-segment firm expires. However, this may not be the case. Since high coverage mismatch in a single-segment firm lowers a firm’s market value (Zuckerman 1997a, 1997b), the firm may be more likely to fail for lack of necessary capital. Indeed, to the extent that such firms suffer from a discount in capital markets, they may be more likely to become takeover candidates. While results concerning single-segment firms do not have clear implications for my thesis, I present them so as to facilitate comparison with diversified corporations. Note as well that when a two-segment firm divests one segment, I code the second segment as right-censored in subsequent years.

Finally, the Compustat Industry Segment files present challenges in terms of the coding of the timing of divestiture. First, in many instances, breaks occur in the publication of segment data for a particular firm. I consider such segments as missing cases for the missing years. A related problem concerns corporate restructurings in which divisionalization and consequently, segment reporting, changes from one year to the next. In such cases, a segment may appear to be divested when in fact it has merely been continued under a different label. To correct for this, I examine every case in which a 3-digit SIC code disappears from a firm’s profile of segments. Whenever a segment with the same 2-digit SIC code emerges to replace the missing segment, I code the new segment as a continuation of the previous segment. Such a segment is not coded as a having been divested but as continued under a slightly different identity.
Results

Table 4 gives descriptive statistics and the correlation matrix for the independent variables to be used in the analyses of multi-segment firms. The unit of analysis in this and subsequent tables is the segment-year. Note that, as expected, coverage mismatch is low in large segments, as indicated by high sales and market share; in those with high prevalence match; and in older segments, or those with an earlier start year.

**TABLE 4 ABOUT HERE**

Divestiture in Multi-Segment Firms

Tables 5a-5c present the fixed-effect logit event histories on multi-segment firms for each of the three selection criteria: all segments in multi-segment firms; those that began after 1978; and those that began after 1983. In addition, each set of models is presented with covariates lagged at one and two years prior to the year of potential divestiture. The latter set of analyses examine fewer cases because of the loss of the first year of cases, 1985, for which variables at a two-year lag are not measured and the fact that covariates at a two-year lag are undefined in the first year during which a segment is at risk of divestiture. Note as well that firms that did not engage in any divestiture during this period are excluded from all analyses. Since the analysis investigates within-firm variation in divestiture, such firms exhibit no variation on the dependent variable of interest. Finally, note that, as neither advertising intensity nor R&D intensity has a significant impact on the probability of exit and both variables are missing for many cases, I exclude them from the presented tables.

**TABLES 5A-5C ABOUT HERE**

Models 1a and 1b in each table includes all firms regardless of whether they were followed by securities analysts. Results from these equations match our expectations, as presented in figure 2. Thus, we see that all coefficients have the appropriate sign and that segments that are larger, more profitable, and closely related to other segments of the firm
are significantly less likely to be divested. In addition, note the reversal of the inverted-U shaped effect of age on survival typically found in ecological research (Hannan and Freeman 1989). That is, it would appear that firms are loath to exit industries that they have recently entered and that they develop commitments to those in which they have been long involved. Results remain largely unchanged across tables. Left-censoring thus does not appear to bias the findings.

Models 2 and 3 in each table exclude firms that were not covered by at least one analyst and for which there is necessarily no variation in coverage mismatch by segment. Comparing models 1 and 2, we see that the coefficients for prevalence match and the control variables remain largely the same. Two exceptions are market share and profitability. When considered at a lag of one year, profitability seems not to affect divestiture rates among firms that are covered by analysts. At a lag of two years however, the effect of profitability seems stronger among such firms. The case of market share is more readily interpretable. The fact that its effect on divestiture appears significant only among firms followed by analysts may represent something of a nonlinear relationship. Since the segments of firms that attract coverage tend to be older and larger, it may be that market share leads to lower coverage mismatch only among segments that have high levels of market share. By contrast, at the lower end of the spectrum, the effect is weaker.

Models 3a and 3b in each table assess the effect of coverage mismatch, net of all other factors. We see that segments that do not attract coverage by the analysts who specialize in the corresponding industry are significantly more likely to be divested. Further, this effect is robust across the three selection criteria and the two lags. Indeed, while the effect at a one-year lag appears insignificant for the final table, the effect at a two-year lag is quite strong. Across all tables, that coverage mismatch increases the likelihood of divestiture two years later suggests that coverage mismatch does not reflect short-term expectations but rather the abiding impact of a firm’s market identity on its refocusing activity. Once they are set in the minds of critical audiences, it is very difficult
for market participants to manipulate their identities. Rather, analyst attributions of a segment as peripheral or central to a firm’s identity have a deep and enduring impact on the likelihood that it will be divested.

As each firm in the conditional logit model has a different intercept, the substantive size of the effect of coverage mismatch differs across firms. However, estimates of such effects may be calculated by deriving an estimate of a segment’s probability of divestiture and then regressing it on coverage mismatch. As performed on model 3 in table 5b, such computations reveal that an increase in coverage mismatch of one standard deviation (.36) increases the probability that a segment will be divested both in the following year and in two years by .12. Slightly higher estimates emerge from table 5a and somewhat lower estimates from table 5c. Overall, it seems clear that the nature of a firm’s analyst coverage helps define what it means for an activity to be in the core or periphery of a corporation. A firm is significantly less likely to exit those industries where its participation is regarded as integral to its identity by analysts.

**Single-Segment Firms**

In table 6, I present discrete-time logit models of the same covariates on the likelihood of divestiture for single-segment firms that were followed by at least one analyst. The first three columns reflect one-year lags and the second set, two-year lags. In addition, for each set of lags, I present three models corresponding to the three selection criteria. Note that prevalence match is undefined for these firms. Further, as these are no longer conditional logits, the coefficients reflect the effect of cross-firm, rather than within-firm, variation in the variables of interest on the probability of exit.

In general, the results parallel those found for multi-segment firms. One notable difference in the single-segment results is that, in contrast to the analyses on multi-segment firms, the former evince the ‘liability of newness’ (Hannan and Freeman 1989) that was missing from the latter. Most relevant to our discussion is the insignificance of
the coverage mismatch variable. In the case of single-segment firms, failure to attract coverage from the analysts who cover the firm’s industry does not have an appreciable impact on the probability that the firm fails. Thus, while helpful in charting which segments of diversified firms will be divested, coverage mismatch does not help explain the expiration of a stand-alone business. Indeed, coupled with findings on the ‘legitimacy discount’ suffered by such firms in capital markets (Zuckerman 1997a, 1997b), this result speaks to the disjuncture between capital market and product market success and failure. While coverage mismatch lowers the market value of single-segment firms, it does not influence their failure rate.

**TABLE 6 ABOUT HERE**

**Conclusions**

The foregoing analyses offer two principal lessons, one substantive and the other theoretical. Substantively, the proposed argument deepens our understanding of corporate de-diversification. Previous research tends to portray the aggregate decline in industrial scope during the 1980s and 1990s as an efficiency-driven refocusing on core sets of related activities. By contrast, I interpret pressures for de-diversification as analogous to the difficulties of marketing a multi-category product and I stress that such challenges are exacerbated by the mediation of a field of influential critics, who specialize by product category. Diversified firms contradict the dominant logic of valuation, which classifies firms by industry, and the corresponding structures that rest on that framework. As a result, such corporations face pressure to align their corporate identity with one that more readily fits this system. In particular, a firm’s network of coverage by securities analysts indicates the centrality of its business lines to its market identity, and correspondingly, which ones are ripe for divestiture. In sum, much of what goes under the rubric of corporate refocusing involves a realignment of a firm’s self-conception with its financial-market identity, as given by its position in the analyst review network.
Two caveats to this conclusion should be stressed. First, as suggested above, the findings presented here are specific to the time and place studied. In particular, diversified firms are subject to the described pressures only where industry boundaries distinguish among asset classes. While the industry-based classification system has a long history in American corporate securities markets, the rise of conglomerates in the 1960s challenged their governing logic. Thus, during much of that period, industry boundaries did not constrain corporate identity in the manner depicted here. Conversely, the de-institutionalization of this corporate form during the 1980s (Espeland and Hirsch 1990; Fligstein and Markowitz 1993; Davis et al., 1994) likely heightened the salience of industry boundaries, thereby raising the penalties for crossing such lines during this period. Furthermore, the responsiveness of corporate executives to such pressures undoubtedly increased with the resurgence of investor power in the recent period (Useem 1993; Donaldson 1994). Finally, note that as the present analysis hinges on problems of valuation, pressures for de-diversification should be diminished to the extent that securities are treated as long-term, illiquid commitments. Such a culture of investing in fact dominates many advanced economies, as exemplified by the cross-holdings that underpin Japanese *keiretsu* networks (Gerlach 1992).

A second caveat is that the marketing difficulties spotlighted here are by no means the sole causes of corporate de-diversification. In particular, I do not claim that investor pressure for de-diversification reflects a disregard for economic performance. While the present paper is agnostic as to the efficiency of diversified firms, it is quite likely that such firms present managerial challenges that compromise their efficiency. However, a separate impetus for de-diversification lies in the nature of the interface between firms and financial markets. The uncertainty --in particular, the *social* uncertainty-- that pervades the valuation of financial assets generates a particular logic and structure of valuation that is unfavorable to diversified firms. Indeed, while the categories used to group financial assets originate in efforts to isolate sets of similarly performing firms,
these categories endure such that they have an impact that outlives such origins. As illustrated in the case of diversified firms, involvement in securities markets introduces a set of demands on corporations that are particular to the financial realm.

This observation regarding the interplay between economic and financial performance suggests a more general theoretical lesson: valuation matters. Neoclassical approaches treat the process by which value is assigned to product offerings as essentially unproblematic. While information may be incomplete, there are no systematic reasons why the value attributed by consumers to a product should deviate from its true value to them. Given full information, the question of valuation dissolves.

By contrast, the current perspective focuses not on issues of information but of interpretation. The difficulties faced by diversified firms do not stem from a lack of information about their past or future performance. The problem is that they do not lend themselves to comparison with a clear reference group. Without a context within which they may be framed, multi-industry firms are difficult to assess. Further, the encoding of valuation categories in the analyst review network reinforces such difficulties. Once a firm’s identity becomes translated into a distinct network position, it becomes less amenable to change. Accordingly, firms that alter their industrial scope in a significant manner tend to change their corporate names and thereby promote a new position in such networks. Without a strong signal that a firm is assuming a new identity, existing attributions continue to define it.

Note the theoretical kinship between the present argument and Podolny’s theory of market status (Podolny 1993). According to Podolny, status and product quality tend to be loosely linked largely because various social networks reinforce status attributions and buffer high-status producers from information that might threaten their advantage.

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19 Indeed, that such name changes occur even when product brand changes do not—e.g., the metamorphosis of Westinghouse into CBS—suggests an attempt to alter the firm’s position with respect to securities-market categories.
Indeed, such networks constrain high-status actors from entering lower-status product categories lest such affiliations tarnish their status image. As in the present case, sellers must promote entirely new brand identities to overcome the force of existing attributions.

Thus, while the present analysis examines the first stage of valuation—classification—and Podolny examines the second—preference ranking within such categories—both studies suggest that processes of valuation generate particular product identities in the form of network positions. These positions, in turn, shape performance and constrain future action in a manner independent of product characteristics. Markets involve sellers not only in a set of transactions with buyers but a network of attributions by buyers and critical third-parties, which classify and stratify offerings and thereby generate abiding and consequential market identities.²⁰

²⁰ It is worth noting that while both theories are designed to study any product market, they are both tested in financial markets. This may stem from the fact that, as financial markets are subject to high social uncertainty, they make product identity changes much more difficult. When a seller of a financial product wishes to alter its market identity—either by climbing the status hierarchy or changing its affiliation with a product category—it must convince a given investor or analyst not only to accept such a change but that marginal market opinion is poised to accept this change as well. Accordingly, any uncertainty as to whether the change will be accepted tends to diminish the likelihood that such acceptance takes place.
Measurement of Inter-Industry Relatedness

Following Teece et al. 1994, I assume that the number of business lines in industry i \( (n_i) \) and the number in industry j \( (n_j) \) is fixed. A sample without replacement of size \( n_i \) is drawn from a population of K corporations and assigned business lines in industry i. A second sample, independent of the first, is also drawn, with \( n_j \) business lines assigned to industry j. Then, the number of firms with business lines in both industries i and j is a hypergeometric random variable whose probability may be expressed as:

\[
\Pr(X_{ij} = x) = \frac{\binom{n_i}{x} \binom{K-n_i}{n_j-x}}{\binom{K}{n_i+n_j}}
\]

The mean of \( X_{ij} \) is:

\[
\mu_{ij} = \frac{K}{n_i+n_j} \cdot \left( \frac{n_i}{n_i+n_j} \right) \cdot n_j
\]

The variance of \( X_{ij} \) is:

\[
\sigma^2_{ij} = \mu_{ij} \cdot \left( 1 - \frac{n_i}{K} \right) \cdot \left( 1 - \frac{n_j}{K} \right)
\]

Teece et al.’s (1994) measure of inter-industry relatedness is the t-statistic:

\[
t_{ij} = \frac{J_{ij} - \mu_{ij}}{\sigma_{ij}}
\]

with the matrix \( T \) referring to the full set of inter-industry proximity scores.
Table 1:
Minimal Proportions for Establishing Analyst Coverage of an Industry

<table>
<thead>
<tr>
<th>Number of Firms With Highest Proportion of Sales in the Industry</th>
<th>Minimal Proportion for Analyst Coverage</th>
<th>Number of Relevant 3-Digit Industries, 1986</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-3</td>
<td>1</td>
<td>165</td>
</tr>
<tr>
<td>4-5</td>
<td>.80</td>
<td>30</td>
</tr>
<tr>
<td>6-10</td>
<td>.60</td>
<td>36</td>
</tr>
<tr>
<td>11-15</td>
<td>.50</td>
<td>9</td>
</tr>
<tr>
<td>16-20</td>
<td>.40</td>
<td>9</td>
</tr>
<tr>
<td>21-25</td>
<td>.30</td>
<td>5</td>
</tr>
<tr>
<td>26+</td>
<td>.20</td>
<td>3</td>
</tr>
</tbody>
</table>
Table 2
General Mills in 1985:
Coverage Mismatch and Controls:

<table>
<thead>
<tr>
<th>3-Digit SIC Code</th>
<th>Name of Industry</th>
<th>( c_{is} )</th>
<th>( \max(c_{ij}) )</th>
<th>Coverage Mismatch</th>
<th>Prevalence Match</th>
<th>Sales in Segment*</th>
<th>Market Share</th>
<th>Profitability</th>
<th>Years in Segment</th>
<th>Year Divested</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Industries in which General Mills does business</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>204 Grain Mills Products</td>
<td>6</td>
<td>6</td>
<td>0</td>
<td>2.33</td>
<td>3061.30</td>
<td>.17</td>
<td>.282</td>
<td>7+</td>
<td>--</td>
<td></td>
</tr>
<tr>
<td>581 Restaurants</td>
<td>0</td>
<td>10</td>
<td>1</td>
<td>1.59</td>
<td>1051.00</td>
<td>.05</td>
<td>.189</td>
<td>7+</td>
<td>1994</td>
<td></td>
</tr>
<tr>
<td>562 Women’s Clothing Stores</td>
<td>0</td>
<td>2</td>
<td>1</td>
<td>1.04</td>
<td>474.30</td>
<td>.07</td>
<td>.136</td>
<td>0</td>
<td>1987</td>
<td></td>
</tr>
<tr>
<td><strong>Other Industries Followed by 4 or More of General Mills’ Analysts</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>206 Sugar &amp; Confectionery Producers</td>
<td>4</td>
<td>5</td>
<td>0.2</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td></td>
</tr>
<tr>
<td>514 Groceries</td>
<td>3</td>
<td>4</td>
<td>0.25</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td></td>
</tr>
<tr>
<td>213 Chewing, Smoking Tobacco</td>
<td>3</td>
<td>19</td>
<td>0.84</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td></td>
</tr>
</tbody>
</table>

* In millions
Table 3:

Frequency of Start Year of 3-Digit Industry Segments, 1993

<table>
<thead>
<tr>
<th>Start Year</th>
<th>Number</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>78</td>
<td>1728</td>
<td>22.53</td>
</tr>
<tr>
<td>79</td>
<td>86</td>
<td>1.12</td>
</tr>
<tr>
<td>80</td>
<td>126</td>
<td>1.64</td>
</tr>
<tr>
<td>81</td>
<td>126</td>
<td>1.64</td>
</tr>
<tr>
<td>82</td>
<td>506</td>
<td>6.60</td>
</tr>
<tr>
<td>83</td>
<td>212</td>
<td>2.76</td>
</tr>
<tr>
<td>84</td>
<td>216</td>
<td>2.82</td>
</tr>
<tr>
<td>85</td>
<td>272</td>
<td>3.55</td>
</tr>
<tr>
<td>86</td>
<td>372</td>
<td>4.85</td>
</tr>
<tr>
<td>87</td>
<td>318</td>
<td>4.15</td>
</tr>
<tr>
<td>88</td>
<td>373</td>
<td>4.86</td>
</tr>
<tr>
<td>89</td>
<td>353</td>
<td>4.60</td>
</tr>
<tr>
<td>90</td>
<td>528</td>
<td>6.88</td>
</tr>
<tr>
<td>91</td>
<td>604</td>
<td>7.87</td>
</tr>
<tr>
<td>92</td>
<td>866</td>
<td>11.29</td>
</tr>
<tr>
<td>93</td>
<td>985</td>
<td>12.84</td>
</tr>
</tbody>
</table>

---

21 Includes segments that may have started before 1978 but whose start year is unknown.
## Table 4:
### Descriptive Statistics and Correlations

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Coverage Mismatch</td>
<td>0.75</td>
<td>0.36</td>
<td>20,199</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>2</td>
<td>Prevalence Match</td>
<td>6.20</td>
<td>6.98</td>
<td>34,712</td>
<td>-0.21</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>3</td>
<td>Sales(^a)</td>
<td>0.72</td>
<td>3.63</td>
<td>34,760</td>
<td>-0.26</td>
<td>0.03</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>4</td>
<td>Market Share</td>
<td>0.05</td>
<td>0.13</td>
<td>34,752</td>
<td>-0.30</td>
<td>0.02</td>
<td>0.14</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>5</td>
<td>Profitability</td>
<td>0.09</td>
<td>1.32</td>
<td>34,555</td>
<td>-0.02</td>
<td>0.01</td>
<td>0.00</td>
<td>0.02</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>6</td>
<td>Average Industry Profitability</td>
<td>0.06</td>
<td>0.18</td>
<td>34,757</td>
<td>-0.08</td>
<td>0.03</td>
<td>-0.01</td>
<td>0.07</td>
<td>0.15</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>7</td>
<td>R&amp;D/Sales</td>
<td>0.31</td>
<td>1.85</td>
<td>29,709</td>
<td>-0.01</td>
<td>-0.02</td>
<td>0.00</td>
<td>-0.02</td>
<td>-0.01</td>
<td>-0.17</td>
<td>--</td>
</tr>
<tr>
<td>8</td>
<td>Advertising/Sales</td>
<td>0.05</td>
<td>0.21</td>
<td>29,090</td>
<td>-0.04</td>
<td>-0.04</td>
<td>0.02</td>
<td>-0.02</td>
<td>-0.00</td>
<td>-0.05</td>
<td>0.10</td>
</tr>
<tr>
<td>9</td>
<td>Age(^b)</td>
<td>3.73</td>
<td>3.17</td>
<td>20,568</td>
<td>-0.14</td>
<td>0.03</td>
<td>0.11</td>
<td>0.02</td>
<td>0.02</td>
<td>-0.04</td>
<td>0.03</td>
</tr>
</tbody>
</table>

\(^a\) In Millions.
\(^b\) Excluding segments that began in 1978 or earlier and whose start-date is therefore unknown. There are 14,168 such segment-years that have been in existence an average of 9.83 years since 1978.
Table 5a:
Discrete-Time Conditional Logit Analysis of Exit from 3-Digit Industries, 1985-1994:
All Multi-Segment Firms

<table>
<thead>
<tr>
<th></th>
<th>All Firms</th>
<th>Firms Followed by ≥ 1 Analyst</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>One-Year Lag</td>
<td>Two-Year Lag</td>
</tr>
<tr>
<td></td>
<td>Model 1a</td>
<td>Model 1b</td>
</tr>
<tr>
<td>Variable</td>
<td>B (S.E.)</td>
<td>B (S.E.)</td>
</tr>
<tr>
<td>Coverage Mismatch</td>
<td>-0.06 (.01)***</td>
<td>-0.05 (.01)***</td>
</tr>
<tr>
<td>Prevalence Match</td>
<td>-0.97 (.07)***</td>
<td>-0.93 (.07)***</td>
</tr>
<tr>
<td>Sales</td>
<td>-0.19 (.20)</td>
<td>0.15 (.24)</td>
</tr>
<tr>
<td>Market Share</td>
<td>-0.09 (.03)**</td>
<td>-0.33 (.06)***</td>
</tr>
<tr>
<td>Profitability</td>
<td>-0.18 (.12)</td>
<td>0.01 (.15)</td>
</tr>
<tr>
<td>Avg Industry Profitability</td>
<td>25,709</td>
<td>19,371</td>
</tr>
<tr>
<td>N (segment-years)</td>
<td>582.88 (5)</td>
<td>470.45 (5)</td>
</tr>
<tr>
<td>Model $\chi^2$ (df)</td>
<td>-2 * Log-Likelihood</td>
<td>12561.12</td>
</tr>
</tbody>
</table>

*** p ≤ .01  
** p ≤ .05  
*  p ≤ .10

---

b In millions  
c Firms who did not divest any business lines during this period are excluded.
### Table 5b:
Discrete-Time Conditional Logit Analysis of Exit from 3-Digit Industries, 1985-1994:
Segments Entered After 1978 in Multi-Segment Firms

<table>
<thead>
<tr>
<th>Variable</th>
<th>All Firms</th>
<th>Firms Followed by ≥ 1 Analyst</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>One-Year Lag</td>
<td>Two-Year Lag</td>
</tr>
<tr>
<td></td>
<td>Model 1a</td>
<td>Model 1b</td>
</tr>
<tr>
<td>B (S.E.)</td>
<td>B (S.E.)</td>
<td>B (S.E.)</td>
</tr>
<tr>
<td>Coverage Mismatch</td>
<td>0.56 (.18)***</td>
<td>0.56 (.20)***</td>
</tr>
<tr>
<td>Prevalence Match</td>
<td>-0.66 (.09)***</td>
<td>-0.60 (.09)***</td>
</tr>
<tr>
<td>Sales(b)</td>
<td>-0.68 (.09)***</td>
<td>-0.60 (.09)***</td>
</tr>
<tr>
<td>Market Share</td>
<td>-0.12 (.27)</td>
<td>-0.15 (.33)</td>
</tr>
<tr>
<td>Profitability</td>
<td>-0.08 (.03)**</td>
<td>-0.22 (.06)***</td>
</tr>
<tr>
<td>Avg Industry Profitability</td>
<td>-0.14 (.14)</td>
<td>0.08 (.18)</td>
</tr>
<tr>
<td>Age</td>
<td>0.08 (.01)***</td>
<td>0.07 (.01)***</td>
</tr>
<tr>
<td>Age Squared</td>
<td>-0.01 (.00)***</td>
<td>-0.01 (.00)*</td>
</tr>
<tr>
<td>N (segment-years)(c)</td>
<td>14,536</td>
<td>10,409</td>
</tr>
<tr>
<td>Model (\chi^2) (df)</td>
<td>231.05 (7)</td>
<td>156.42 (7)</td>
</tr>
<tr>
<td>-2 * Log-Likelihood</td>
<td>8088.21</td>
<td>5803.36</td>
</tr>
</tbody>
</table>

***  \(p \leq .01\)
**   \(p \leq .05\)
*    \(p \leq .10\)

\(23\) Estimated on years 1986-1994.
\(b\) In millions
\(c\) Firms who did not divest any business lines during this period are excluded.
Table 5c:
Discrete-Time Conditional Logit Analysis of Exit from 3-Digit Industries, 1985-1994:
Segments Entered After 1983 in Multi-Segment Firms

<table>
<thead>
<tr>
<th>Variable</th>
<th>All Firms</th>
<th>Firms Followed by ≥ 1 Analyst</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>One-Year Lag</td>
<td>Two-Year Lag&lt;sup&gt;24&lt;/sup&gt;</td>
</tr>
<tr>
<td></td>
<td>Model 1a</td>
<td>Model 1b</td>
</tr>
<tr>
<td>Coverage Mismatch</td>
<td>-0.06 (.01)***</td>
<td>-0.06 (.01)***</td>
</tr>
<tr>
<td>Prevalence Match</td>
<td>-0.81 (.12)***</td>
<td>-0.58 (.13)***</td>
</tr>
<tr>
<td>Sales&lt;sup&gt;b&lt;/sup&gt;</td>
<td>-0.02 (.35)</td>
<td>-0.12 (.44)</td>
</tr>
<tr>
<td>Market Share</td>
<td>-0.15 (.05)***</td>
<td>-0.18 (.08)**</td>
</tr>
<tr>
<td>Profitability</td>
<td>-0.04 (.18)</td>
<td>-0.00 (.21)</td>
</tr>
<tr>
<td>Avg Industry Profitability</td>
<td>0.12 (.04)***</td>
<td>0.06 (.06)</td>
</tr>
<tr>
<td>Age</td>
<td>-0.02 (.01)***</td>
<td>-0.03 (.01)***</td>
</tr>
<tr>
<td>Age Squared</td>
<td></td>
<td></td>
</tr>
<tr>
<td>N (segment-years)&lt;sup&gt;c&lt;/sup&gt;</td>
<td>8,012</td>
<td>5,335</td>
</tr>
<tr>
<td>Model $\chi^2$ (df)</td>
<td>241.96 (7)</td>
<td>158.67 (7)</td>
</tr>
<tr>
<td>-2 * Log-Likelihood</td>
<td>4602.44</td>
<td>3077.10</td>
</tr>
</tbody>
</table>

*** p ≤ .01
** p ≤ .05
* p ≤ .10

<sup>24</sup> Estimated on years 1986-1994.
<sup>b</sup> In millions
<sup>c</sup> Firms who did not divest any business lines during this period are excluded.
Table 6:  
Discrete-Time Logit Analysis of Exit from 3-Digit Industries:  
One and Two Year Lags  
Single-Segment Firms Followed by ≥ 1 Analyst

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>All Segments</td>
<td>Entered After 1978</td>
</tr>
<tr>
<td></td>
<td>B (S.E.)</td>
<td>B (S.E.)</td>
</tr>
<tr>
<td>Coverage Mismatch</td>
<td>-0.00 (.11)</td>
<td>0.12 (.13)</td>
</tr>
<tr>
<td>Sales</td>
<td>-0.45 (.08)***</td>
<td>-0.29 (.10)***</td>
</tr>
<tr>
<td>Market Share</td>
<td>0.21 (.39)</td>
<td>0.12 (.43)</td>
</tr>
<tr>
<td>Profitability</td>
<td>-1.23 (.15)***</td>
<td>-1.16 (.16)***</td>
</tr>
<tr>
<td>Average Industry Profitability</td>
<td>-0.11 (.10)</td>
<td>-0.10 (.10)</td>
</tr>
<tr>
<td>Age</td>
<td>-0.03 (.01)**</td>
<td>-0.00 (.04)</td>
</tr>
<tr>
<td>Age Squared</td>
<td>0.01 (.00)</td>
<td>0.02 (.01)</td>
</tr>
<tr>
<td>Constant</td>
<td>-2.69 (.05)***</td>
<td>-2.80 (.07)***</td>
</tr>
<tr>
<td>N (segment-years)(^b)</td>
<td>15,819</td>
<td>11,165</td>
</tr>
<tr>
<td>Model (\chi^2) (df)</td>
<td>146.89 (5)</td>
<td>82.12 (7)</td>
</tr>
<tr>
<td>-2 * Log-Likelihood</td>
<td>6321.12</td>
<td>4920.35</td>
</tr>
</tbody>
</table>

*** p ≤ .01  
** p ≤ .05  
* p ≤ .10  

\(^a\) In millions  
\(^b\) Firms who did not divest any business lines during this period are excluded.
Figure 1:
Mean Number of 3-Digit SIC Industries:
All Public Firms, 1978-1995

N= 3763 3752 3843 3865 4079 4258 4253 4512 4727 4735 4627 4576 4775 5080 5590 6118 5956 5428
Figure 3: Causes of Industry Exit

Figure 2:
Discrepancy Between Sum of Segment Numbers and Aggregate Firm Numbers:
EBIT, Assets, and Sales, 1985-1994
**Exhibit 1:**
**Executives Sound Off on Pressures for Divestiture**

J.L. Jackson of Indresco:

“We’re not going to get out of some business so we can make some analyst happy, so he can compare us with just the steel business or just the refractories business.”

_Dallas Morning News March 14, 1995_

Keith Bailey of Williams Co.:

“The new Williams Cos., free of its fiber-optic network, may be easier for researchers to follow.”

_Tulsa World, August 28, 1994_

Arthur H. Stromberg of URS:

“. . . I realized that analysts are like the rest of us. Give them something easy to understand, and they will go with it. (Before the spin-off,) We had made it tough for them to figure us out.”

_Forbes, August 1, 1983_

Archie W. Dunham of the Conoco division of DuPont (on pressures for a divestiture):

“The analysts, for the most part, are pure chemical analysts. They are trained to understand the chemical industry, not the petroleum industry.”

_The Wilmington News Journal, August 27, 1996_

Dale P. Kramer of ShopKo:

“The retail analysts don’t want to understand this (its participation in both discount retailing and prescription management). You’ve got to get the health care analysts.”

_Milwaukee Journal Sentinel, July 21, 1996_