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ABSTRACT

A sample of firms that focus by divesting at least one segment allows us to investigate the characteristics of segments divested as well as the nature of focusing firms. We find that firms are more likely to divest segments unrelated to the core activities of the firm and that the probability that a segment is divested is inversely related to its relative size within the firm. In fact, a segment's relative size is the variable that has the most explanatory power in predicting which segment a firm divests. We argue that this is consistent with the importance of asset market liquidity as a determinant of the divestiture decision. Financial constraints play an important role in determining which firms focus, which segments these firms divest, and in the market's reaction to divestiture announcements. Focusing firms perform less well and invest significantly less than heir non-focusing counterparts.

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1. Introduction

Over the last 20 years, the stock market has discounted diversified firms.[1] At the same time, many diversified firms have become more focused by divesting assets.[2] Some firms become more focused by divesting an asset in an industry that is unrelated to their core industry and other firms divest assets in their core industry. Studies by John and Ofek (1995) and Daley, Mehrota and Sivakumar (1997), among others, show that shareholders gain when firms become more focused by divesting non-core assets but not when they divest core assets. Divesting a major asset is one of the most important decisions that the internal capital market of diversified firms makes. Despite these studies, however, we have only limited knowledge about why firms choose to divest a particular asset and how the characteristics of the asset divested affect shareholder wealth. We investigate these issues using a sample of 168 firms that focus by divesting one or more segments over the 1978-94 period.

Our sample enables us to evaluate the economic importance of three possible explanations for focusing. Each has implications for the segments that firms divest:

1) **The portfolio model of focusing.** A firm could focus simply because it has one or several segments that could be better managed outside the firm. With this view of the diversified firm, managers pick winners and divest losers as if they were portfolio managers.[3] The portfolio model implies that a segment is divested if it underperforms its industry and does not have offsetting synergies. If unrelated diversification has fewer synergies than related diversification, this model predicts that for a given level of

[1] See Lang and Stulz (1994), Berger and Ofek (1995), and Servaes (1996) for estimates of the diversification discount.
[2] See Liebeskind and Opler (1992) for evidence.
[3] See Stein (1997) for a model where the management of a diversified firm picks winners. Note that a segment could be valuable to the firm at a point in time and cease to be so later. For a model of diversification and divestitures that emphasizes this, see Matsusaka (1997). Kaplan and Weisbach (1992) consider divestitures of acquisitions. Weisbach (1995) points out that divestitures are more likely as management changes.

segment performance relative to its industry, a segment unrelated to the core activities of the firm is more likely to be divested.

2) **The financing hypothesis of focusing.** Lang, Poulsen and Stulz (1994) present a financing hypothesis of asset sales. They emphasize that management values firm size and is reluctant to sell assets. It does so only when management cannot pursue its goals without raising funds and alternate financing sources are too expensive. With the financing hypothesis, divesting firms are financially constrained. Because of illiquidity in the market for corporate assets, firms may fail in divesting assets. As emphasized by Shleifer and Vishny (1992), liquidity in the market for corporate assets falls with asset size. Consequently, firms are more likely to succeed in divesting small segments. Further, they want divestitures to generate cash or, if they cannot divest segments to generate cash, they want to divest those segments that have large cash requirements because they require significant investment. While Lang, Poulsen, and Stulz (1994) do not address internal capital markets explicitly, the view that management values benefits from control and that these benefits increase with firm size implies that firms are more likely to divest unrelated segments for two reasons. First, managers acquire unrelated segments when the alternative use of cash flow generated by core activities is to return it to the firm's owners. When the firm faces financial constraints, management has a better use for the cash parked in unrelated segments, so that unrelated segments are the first ones converted into cash when the firm has to divest segments. Second, management wants to protect its position. The Shleifer and Vishny (1989) model of managerial entrenchment predicts that management wants to remain associated with the segments whose value depends more on management's specific capital.[4] These segments are the core segments.

[4] Boot (1992) can also be viewed as predicting that small segments are more likely to be divested. In his model, managers are reluctant to divest assets because doing so is viewed as evidence that they failed. The adverse impact on reputation of selling an asset should be inversely related to its size to the extent that if a divestiture is interpreted by the market as a managerial failure, failure on a smaller scale is less damaging to management's reputation.

3) **The inefficient internal capital markets hypothesis of focusing.** Recent papers have argued theoretically and empirically that internal capital market inefficiencies contribute to the diversification discount. Lamont (1997) and Shin and Stulz (1998) show that a segment's investment can fall because of poor performance of the firm even though the segment's investment opportunities are unchanged. They show further that as a firm contracts investment because of poor performance, it does so with little regard for the investment opportunities of segments. Meyer, Milgrom, and Roberts (1992) develop a model of asset sales where having poorly performing segments is costly because of rent-seeking activities. Rajan, Servaes and Zingales (1999) show that diversity in investment opportunities is costly. Scharfstein and Stein (1999) argue that internal capital markets inefficiencies lead to overinvestment in small segments. Scharfstein (1997) provides evidence supportive of this. If firms focus because doing so reduces internal capital markets inefficiencies, these models would imply that focusing firms have greater diversity of investment opportunities and greater overinvestment in small segments than diversified firms that do not focus.

It is important to note that these three possible explanations for why firms focus and what determines the choice of assets to be divested are not mutually exclusive. For instance, a firm's internal capital markets could be so inefficient as to make it financially constrained and lead it to invest in industries where it does not have a comparative advantage. We are more interested in the relative importance of each hypothesis in the focusing decision. When we investigate which firms focus and which segments get divested, we find little evidence in support of the portfolio model of focusing, strong evidence in favor of the financing hypothesis of focusing, and almost no evidence supporting the inefficient internal capital market hypothesis of focusing. Our analysis of the stock-price reaction to divestitures is supportive of this conclusion. Contrary to the inefficient internal capital markets hypothesis, we find that firms do not divest segments in a way that reduces the diversity of investment opportunities the most, that the divested segments do not

overinvest, and that firms with greater diversity of investment opportunities are not more likely to focus. In support of the financing hypothesis, we show that the firms in our sample are firms that invest substantially less and have significantly lower cash flow than comparable diversified firms that do not focus. The probability that a core segment is divested is about one third less than the probability that a non-core segment is divested. Firms in our sample are more likely to divest segments with poor cash flow performance. However, the portfolio model of focusing predicts that firms divest segments because they perform poorly relative to their industry. This does not seem to be the case. In our sample, the level of a segment's cash flow, not its cash flow relative to its industry appears to be important.

Strikingly, the segment most likely to be divested is the smallest segment of the firm. A segment's size relative to the size of its firm explains two and a half times as much of the divestiture decision as does its performance or whether it is a segment unrelated to the core activities of the firm. In 66 out of 127 divested segments (representing 106 firms), the smallest segment is divested. In contrast, only seven firms divest the largest segment. In 21 firms, the largest segment is the segment with the worst cash flow performance. Yet, only one of these 21 segments is divested which seems strongly inconsistent with the portfolio model of focusing. In 27 firms, the smallest segment is the best performing segment in the firm, yet more than half of these 27 segments are divested. Since only 48 divested segments out of 127 (representing 106 firms) have the worst performance within the firm, the probability that the worst-performing segment is divested is almost a third less than the probability that the smallest segment is divested.

We view our evidence on the role of a segment's relative size in the divestiture decision as strongly supportive of the financing hypothesis. With that hypothesis, firms divest assets to relax financing constraints. The market for corporate assets determines which segments a firm ends up divesting because the firm has to relax these constraints in the short run. Because of the inverse relation between segment size and liquidity, firms are more likely to divest smaller segments. The liquidity of asset markets is less relevant for the other two hypotheses. With the portfolio model

of focusing, a firm will divest a segment when the present value of its cash flows is higher outside the firm than inside. The liquidity of the market for an asset only affects the timing of the sale, but the firm can wait if the market for the asset it wants to sell lacks liquidity. The same reasoning applies for the inefficient internal capital markets model of focusing.

The paper proceeds as follows. In section 2, after introducing our sample, we investigate how segments divested differ from segments retained. In section 3, we compare the firms in our sample to other firms that do not divest. In section 4, we study the determinants of the stock-price reaction to the segment divestiture announcement. Section 5 concludes.

2. A comparison of divested and retained segments

2.1. The sample

To investigate how firms focus, we start with a sample of firms that decrease the number of reported industry segments in the period 1978-1994. SFAS No. 14 requires that firms report information for segments that represent 10 percent or more of consolidated sales for fiscal years ending after December 15, 1977. The Business Information file of Compustat collects this information. We use the Compustat Full-Coverage Industry Segment File (CISF) database, which includes the Research Tapes, to identify these firms.[5] We exclude firms that have either a Compustat SIC or an Industry Segment Identification code (SID) between 6000 and 6999 (Financial Services Industry), 4900 and 4999 (Regulated Utilities). We also exclude American Depository Receipts.

We want to consider firms that focused in an economically significant way and we want these firms to be large to insure that the data we need is available consistently. We therefore include only firms that have total assets in excess of $100 million. We further only consider firms that decrease the number of segments for the first time. As reported by Hyland (1997), firms sometimes change their number of segments without changing their activities. We therefore

[5] The Full-Coverage File consists of all companies which file 10-K's with the Securities and Exchange Commission.

investigate each firm using LEXIS NEXIS to make sure that the decrease in the number of segments corresponds to an actual transaction where a segment is divested.[6] We ignore all firms that decrease the number of segments but where no transaction can be identified. This avoids firms with reporting changes rather than focusing changes. A case where the firm decides to consolidate the reporting of two segments into one results in a decrease in the number of segments for a firm but does not correspond to an increase in focus for that firm. These criteria result in an initial sample of 168 firms with total assets in excess of $100 million. The 168 firms constitute 208 divested and 466 retained segments.

Table 1 presents descriptive statistics on the final sample of 168 firms. The distribution of focusing years, *t*, is shown in panel A of Table 1. The highest number of focusing events occurred in 1981 with 21 cases. Three years (1990, 1992, 1994) tie for the lowest number of focusing events (5 cases). Except for the concentration of events in the early and mid-eighties, the events are generally uniformly distributed over the sample period.

Panel B of Table 1 reports the decrease in the number of segments in year (0) relative to year (-1). In our sample, 142 firms decreased the number of segments by one, 22 firms by two, and four firms by three segments. The Herfindahl index based on sales is often used as a measure of the degree of diversification of a firm. Panel C shows the distribution of the change in the sales-based Herfindahl index (see the appendix for the computation procedure) for years (-1) and year (0). In the year before divestiture, the majority of firms (67 percent) have a change in the Herfindahl index of less than five percent in absolute value. In the focusing year, more than 100 firms have an increase in the Herfindahl index of at least 15 percent.

2.2. Univariate comparison of segments divested with segments retained

We first consider whether the divested segments are related (core segments) or unrelated (non-core segments) to the firm's core activities. We then investigate how the size, performance, and investment policies of divested segments compare to their retained counterparts.

[6] In LEXIS NEXIS the following sources are used: PR Newswire, The Financial Times, Reuters Financial Service, The New York Times, The Chicago Tribune, Business Wire, and The Wall Street Journal.

2.2.1. Core versus non-core segments

The financing hypothesis predicts that firms are more likely to divest small non-core segments. The portfolio model of focusing predicts that given a segment's industry-adjusted cash flow, a non-core segment is more likely to be divested. The inefficient capital markets model of focusing predicts that segments that contribute more to capital market inefficiencies are more likely to be divested. One would expect a higher probability for such segments to be unrelated segments. Further, whether a firm divests a core asset or non-core asset has received a great deal of attention in the literature. We therefore provide evidence on this issue first. Panel A of Table 2 reports the industry breakdown for the sample based on the firm's overall 2-digit Compustat SIC. Using SIC codes makes it possible to assess relatedness only to a limited extent. This is because SIC codes do not make it possible to observe vertical integration. Nevertheless, the evidence we uncover is instructive. The majority of firms (78 percent) are in the manufacturing industry (2-digit SIC range 20-39). To judge the importance of the sale of non-core segments, we compare the SIC code for both the parent firm and the segment being divested. Panel B shows the results for seven broad industrial classifications. Numbers in parentheses along the diagonal represent cases where the divested segment has the same category as that of its parent. The majority of segments divested have parent firms in manufacturing. In fact, 124 of the 208 segments in our sample involve manufacturing firms divesting a manufacturing segment. Additional details on the manufacturing portion of the sample are provided in panel C. Panel D reveals that at the 2-digit level there are 53 divested segments that are in the parent's primary 2-digit classification. In 24 cases the parent and divested segment share the same 3-digit SIC. There are 18 cases where the divested segment has the same 4-digit SIC as the parent's primary classification. The results reveal that 69.7 percent of the divestitures in our sample involve firms spinning off segments outside their primary 2-digit SIC classification. For comparison, panel E reports the industrial classification of the remaining segments in comparison to the parent's primary SIC code. At each level of industrial classification, firms are more likely to be retaining core segments than non-core

segments. A useful way to look at this data is the following. A core segment has a probability of 0.23 to be divested; in contrast, a non-core segment has a probability of 0.36 to be divested. In other words, a non-core segment has a probability of being divested which is about one half higher than a core segment.

2.2.2. Segment financial characteristics and size

Our analysis now shifts to a comparison of the financial characteristics of divested and retained segments. We obtain from the CISF database the following data items for segments: (a) sales, (b) operating profits, (c) depreciation, depletion and amortization, (d) capital expenditures, and (e) identifiable assets. For comparisons to be meaningful, we have to make sure that the characteristics of the segments do not change over the analysis period. Since we want to compare both growth and level variables before the year of the sale, we need to restrict our sample to firms where the composition of the retained and divested segments has not changed during the three years prior to the sale. In the following, we always consider variables in year (-1), the year before the divestiture, and normalize them by sales in year (-2). Alternate normalizations do not affect our results. This reduces the sample from the 168 firms that match on Compustat to 106 firms, representing 419 segments, of which 127 are divested and 292 retained in the year of the divestiture.

Remember that the portfolio model of focusing discussed earlier implies that the firm sells segments that perform poorly relative to their industry. Therefore, we first investigate how divested and retained segments compare to their industry. Table 3 provides this evidence. Throughout the table, a segment's industry is defined by its two-digit SIC code. As is common with accounting data, we focus our discussion on the medians. The segments retained have significantly higher cash flow to sales than their industry. In contrast, the industry-adjusted cash flow performance of segments divested is negative and significantly lower than for the segments retained. This evidence is consistent with the simple focusing model. At the same time, however, it has to be interpreted carefully. It is difficult to distinguish whether a firm pays attention to the cash flow of a segment or to its cash flow relative to its industry because the two variables are

highly correlated. We will return to this issue later. Finally, our evidence has an important implication for the impact of focusing on corporate performance. Given our evidence, aggregate firm performance improves as the firm focuses, but this is because the firm that focuses retains the better performing segments. It does not provide evidence that focusing makes existing activities more efficient. Based on our evidence, it therefore seems difficult to evaluate the impact of focusing on corporate performance without evaluating the performance of individual segments.

Table 3 also provides interesting evidence on capital expenditures. Divested segments invest less than their industry and less than retained segments, but retained segments invest less than their industry as well. Therefore, this table does not support the view that diversified firms that focus have been overinvesting in the divested segments or in general. However, the fact that divesting firms invest less than the median firm in their industry is consistent with firms acting as if they have limited resources. Strikingly, the focusing firms invest less in divested segments compared to their industry relative to amounts invested in retained segments. Not only do divested segments invest less than their industry, but their capital expenditures are also growing less than those of their industry. Table 3 provides evidence of an important difference in size between segments retained and segments divested. The segments of diversified firms are significantly larger than the median firm in the industry. However, segments retained are significantly larger relative to their industry than the segments divested.

While the portfolio model of focusing emphasizes the importance of industry-adjusted segment characteristics, the financing hypothesis stresses the segment characteristics that determine how a segment affects the firm's financial resources. With the financing hypothesis, a firm will value more a segment that has high cash flow but underperforms its industry than a segment that has low cash flow but outperforms its industry. Consequently, we also have to consider segment characteristics that are not industry-adjusted. These data are provided in Table 4. We find clear evidence in Table 4 that divested segments are significantly smaller than retained segments. This is true whether we use sales or assets and whether we look at the year before the divestiture or two years before the divestiture. The sales of the divested segment relative to the

sales of all segments are not shrinking over time, indicating that the divested segment is not shrinking within the firm before it is divested.

As expected given our discussion of industry-adjusted segment cash flows, segments sold have significantly lower cash flow than segments kept. This is true for the year before the divestiture as well as two years before the divestiture. In an effort to understand the investment opportunity set for the divested and non-divested segments, we also calculate the median Tobin's *q* for their industries.[7] The industry *q*s of the divested segments are not significantly different from the industry *q*s of the retained segments. Remember, however, that about a fifth of our sample involves divesting segments in the same 2-digit industry as the parent. When we look at divested segments that are not related to the firm's core, we find that *q*'s are significantly lower for retained segments.

Rajan, Servaes, and Zingales (1999) argue that diversity in investment opportunities is costly. A measure of diversity in investment opportunities that they use is a weighted coefficient of variation of segment *q*s (see the appendix for the computation details). The internal capital markets inefficiencies hypothesis of focusing predicts that firms would divest segments that contribute the most to their diversity of investment opportunities. To test this, we compute the impact of the divestiture of any segment on their measure of diversity. Table 4 shows that the firm's choice of segment divested does not decrease diversity significantly more than if it had divested the retained segment with the median impact of diversity.

Although we do not report the results in tables, we evaluated the characteristics of divested segments for subsamples of core and non-core segments. We do not find support for the prediction of the portfolio model of focusing that divested non-core segments have higher industry-adjusted cash flow than core segments. In our sample, there is no significant difference between the mean or median of industry-adjusted cash flows for core and non-core divestitures. The mean industry-adjusted cash flow of divested non-core segments is lower than for divested

[7] The Tobin's q is computed as the ratio of the book value of assets plus the market value of equity minus the book value of equity to the book value of assets.

core segments and significantly negative, but the medians are about the same. Surprisingly, the divested non-core segments have significantly lower lagged sales growth than the core segments divested. Combined with our evidence that non-core segments have lower q's, this is consistent with the view that firms divest segments that have poorer growth opportunities.

In a variation of the portfolio model of focusing, it could be that firms divest the worst performing segment within the firm irrespective of whether this segment underperforms its industry. This could be viewed as an incentive model of divestitures. Table 5 looks at within-firm rankings of segments divested. We present both raw and industry-adjusted rankings. For each firm we calculate the rank of the divested segment with respect to the measure used. With size, for example, we rank all segments within a firm according to their sales and find the rank of the divested segment. We do the same for cash flow to sales, the segment's q, the ratio of capital expenditures to total assets, and the growth of capital expenditures.

Our results indicate that firms almost never divest the largest segment. This means that headquarters management always chooses to keep the largest segment for itself. For the whole sample, we have only seven cases where the firm divests the segment with the largest sales. In contrast, firms are less reluctant to sell the best performing segment. We have 21 (19) divestitures of segments that have the best cash flow (industry-adjusted) performance within the firm. Less than half the firms divest their worst performing segment, since in 48 of 105 firms, the segment with the lowest cash flow to sales ratio within the firm is divested and in 49 of 105 firms the segment with the lowest industry-adjusted cash flow within the firm is divested. Looking at the ranks of segments divested for *q*, capital expenditures and capital expenditure growth panels, it is quite clear that segments with better investment opportunities are not protected from divestiture.

2.3. Multivariate analysis of divested and retained segments

The analysis so far shows that the larger core segments are more likely to be retained. Cash flow is also negatively correlated with divestiture, but it does not appear as important. We now refine our analysis to take into account the potential correlations among segment characteristics.

To do that, we investigate multivariate regressions where we attempt to understand which characteristics make it more likely that a segment is divested. Remember that the portfolio model of focusing predicts that lower industry-adjusted performance makes it more likely that a segment is divested. The financing hypothesis predicts that firms divest segments with poor cash flow and requiring high capital expenditures. The internal capital market inefficiencies theory of focusing predicts that firms divest the segments that contribute the most to the diversity of their investment opportunities.

Table 6 reports the results of logistic regressions. Our dependent variable is a dichotomous variable, which takes on a value of one for a divested division and zero otherwise. For each logistic regression, the table reports coefficients, *p*-values, and marginal coefficients (slopes), evaluated at the mean. Unless otherwise specified, cash flows and capital expenditures are measured at the segment level in year -1 and deflated using sales of the segment in year -2. Sensitivity tests using assets to normalize cash flows and capital expenditures produce similar results.

Regression (1) shows the impact of segment cash flow, relative size, and capital expenditures on the probability of segment divestiture. The probability of divestiture is negatively related to the segment's cash flow and its relative size. A non-core segment is more likely to be divested. In separate regressions not reproduced here, we find that a segment's probability of divestiture is significantly related to its cash flow and relative size. Surprisingly, the pseudo-r-square is 3.0 percent for the regression with cash flow, 4.1 percent for the regression with industry-adjusted cash flow, and 11.9 percent for the regression with relative size. Interestingly, whether a segment is a core segment or not does not explain much either, since the pseudo-r-square of a regression with only a dummy variable for whether a segment is core segment or not is 4.9 percent. A regression with relative segment size and this relatedness dummy variable has a pseudo-r-square of 12.6 percent, which is only slightly higher than the regression with segment relative size alone. This indicates that a segment's relative size is a more important determinant of the divestiture decision than its performance or whether it is a core segment or not.

Regression (2) adds the change in the Rajan, Servaes and Zingales (1999) diversity measure; it does not contribute to the probability that the segment will be divested. Regression (3) reveals that the segment's investment opportunities as measured by Tobin's q do not matter; whether a segment is a core segment or not affects the probability of divestiture significantly after controlling for segment growth opportunities.

We next control for industry performance and investment. We would like to know whether performance relative to the industry affects the probability of divestiture. If industry-adjusted cash flow matters, we expect that if we add the industry's median cash flow to sales, it would have a positive significant coefficient. This would imply that it becomes more likely that a segment will be sold as its industry performs better. The same argument applies for investment. In regression (4), we find that the industry cash flow has an insignificant positive coefficient in contrast to segment cash flow, which retains its significant negative coefficient. This suggests that it is raw cash flow and not industry-adjusted cash flow that is important. To the extent that industries where investment is high are industries with good investment opportunities, the positive coefficient for industry capital expenditures suggests that good investment opportunities make a divestiture more likely rather than less likely.

3. Comparison of focusing firms to firms that do not focus

Section 2 shows that segment size matters more than segment performance for the divestiture decision, which we view as inconsistent with the portfolio model of focusing but consistent with the financing hypothesis. We also saw that the segments of focusing firms invest less than their industry and that this is even more so for the divested segments. Consequently, if internal capital market inefficiencies lead to overinvestment, these inefficiencies cannot explain why firms focus. Our evidence does not imply, however, that overinvestment is not a problem for diversified firms in general; rather, it shows that this is not the problem that focusing firms attempt to resolve. It does suggest, however, that firms that focus face financial constraints that prevent them from investing as much as the competitors of segments. Our evidence is therefore supportive of the

financing hypothesis. It does not follow from this that the divestitures will all take place for cash since divesting any segment that consumes firm resources relaxes the firm's financial constraints. In some cases, a firm might not be able to divest a segment for cash at an acceptable price and hence resorts to the solution of spinning off the segment without receiving cash. This would still eliminate the demands of that segment on the firm's resources. Nevertheless, we find that 96 of 133 non-core divestitures generate a cash inflow and 19 of 31 core divestitures do so as well. Overall, the probability that a firm gets a cash inflow from divesting a segment is 0.7.

To find out whether focusing firms face capital constraints, we have to compare firms in our sample to firms that have the same number of segments, are of similar size, and do not divest segments during the sample year. To find these comparison firms, we construct a portfolio consisting of a minimum of five firms in the same annual sales decile[8] as the focusing firm, with the same number of segments as the sample firm in year (-1), and require that the comparison firms did not divest segments during year (0). We report results using the mean value of each variable from firms in the matching portfolio, but obtain similar results when we use the median value. For this comparison, we start with the 168 firms for which the necessary Compustat data is available and compare as many sample and benchmark pairs as the data permit. Table 7 reports both means and medians. When we focus on pairwise median differences, we find that the selling firms' assets, sales, and cash flow grow less than the firms that do not focus. Further, focusing firms have a lower cash flow to sales, lower *q*, and a lower coverage ratio than the comparison firms. This evidence shows that the divesting firms perform less well than firms that do not divest.

The evidence of Table 7 is generally supportive of the view that firms focus because of financial and external pressures. One obvious source of outside pressure for the firms in our sample is that they are very poor diversifiers. Using the diversification discount computed by Berger and Ofek (1995), we find that the focusing firms in our sample have an extremely large

[8] Size deciles are based on annual sales deciles of all firms listed on Compustat.

diversification discount. The diversification discount of the firms that focus is large relative to both our comparison firms and to the sample average in the Berger and Ofek (1995) study, which is approximately 10 percent. Such a diversification discount could be expected to bring pressure on management from investors and from the market for corporate control. At the same time, however, we find that only slightly more than half of the focusing firms reduce their discount over the three years surrounding the divestiture and that neither the mean discount nor the median discount changes significantly over that period for the focusing firms. In other words, using the diversification discount as a yardstick, there is no clear evidence that firms that divest become more successful diversifiers. Since we choose comparison firms based on having the same number of segments as the focusing firms, it is perhaps only mildly surprising that the focusing firms do not have significantly greater diversity in investment opportunities than the benchmark firms.

We have reported that focusing firms invest significantly less than firms that do not focus. This result is not affected by the divestiture since we look at investment the year before the divestiture. The capital expenditures of the focusing firms are one-third lower than the capital expenditures for the non-focusing firms. This is consistent with the argument that focusing firms are financially constrained relative to firms that do not focus. A probable cause for this is that cash flow for focusing firms is substantially lower than for non-focusing firms. Using medians, the cash flow to sales ratio for focusing firms is more than a quarter less than the cash flow to sales ratio for non-focusing firms. Thus, compared to non-focusing firms, focusing firms are more likely to be financially constrained.

Comparing firms that focus by divesting non-core segments with firms that focus by divesting core segments leads to a sharp contrast shown in Table 8. Firms that focus by divesting non-core segments perform more poorly than firms that do not focus or firms that focus by divesting core segments. In particular, the firms that divest non-core segments have significantly lower median ratios of cash flow to sales and median capital expenditures to sales. In fact, the firms that divest core segments seem to perform at least as well as the firms that do not focus.

This suggests that the financing hypothesis seems much less applicable to the firms that divest core segments.

Table 9 reports six logistic regressions that attempt to establish how these variables affect the likelihood that a firm focuses. The first regression uses as explanatory variables firm cash flow, capital expenditures, *q* and leverage. In this regression, all variables have significant coefficients. Firms with higher cash flow and firms that invest more are less likely to be in our sample of focusing firms. Also, firms with higher *q* and less debt are more likely to focus. These results are supportive of the financing hypothesis except for the coefficient on Tobin's *q*. This coefficient indicates that after controlling for cash flow and capital expenditures, firms with higher *q*'s are more likely to focus. In regression (2), we replace debt by the coverage ratio. It has a negative coefficient as expected. In regression (3), we add the Rajan, Servaes and Zingales (1997) diversity measure. This measure has no significant effect on the probability of focusing. Regression (4) replaces the measure of diversity by the diversification discount. The diversification discount does not have a significant coefficient either. Regressions (5) and (6) add growth measures to regression (1). Only sales growth is significant in regression (5), while cash flow is no longer significant. In regression (6), we remove cash flow growth. In this case, the results are similar to those of regression (1) and neither sales growth nor capital expenditures growth are significant.

These regressions show that firms that have lower cash flow, coverage ratios and capital expenditures are more likely to divest segments. In other words, performance seems crucial in determining whether a firm is in our sample or not. This is fully consistent with the view that firms focus because they face financial constraints and/or pressure from the market for corporate control. Our main focus here has been on the degree to which firms are financially constrained, so that we have ignored the extent to which the agency costs of managerial discretion that underpin the financing hypothesis of divestitures vary across firms. We note, however, earlier work by Denis, Denis and Sarin (1997), Berger and Ofek (1998) and Palia (1998) shows that corporate governance variables can affect a firm's degree of diversification as well as its focusing decision.

4. Abnormal returns and focusing models

In section 2, we saw that firms sell segments in a way that is inconsistent with the portfolio model of focusing. In section 3, we saw that firms that focus underinvest relative to firms that do not, which is consistent with the financing hypothesis of focusing. In this section, we examine the prediction of the financing hypothesis of focusing for the stock-price reaction to the divestiture decision.

With the financing hypothesis of focusing, the firm is willing to reduce its price to some extent to sell the asset quickly. However, it will not sell below some reservation price. A successful asset divesture therefore means that the firm found a buyer willing to pay more than the reservation price. An unsuccessful asset divestiture implies a fall in firm value since no buyer was found. We have only data for successful divestitures, so that the abnormal return associated with such sales should be positive on average as long as management puts the funds obtained to good uses. Since firms prefer to divest non-core segments, a successful divestiture of a core segment means that no purchaser was found for non-core segments; this is bad news about the value of the firm's non-core segments. Hence, the abnormal return for non-core segment divestitures is higher than the abnormal return for core segment divestitures. Similarly, a successful divestiture that generates cash has a greater abnormal return than one that does not because management prefers divestitures that generate cash.

A firm that is financially constrained benefits more from a divestiture for a given reservation price. However, a financially constrained firm is likely to have a lower reservation price – the fire sale effect - which implies a lower abnormal return. A negative relation between the abnormal return and a measure of the degree to which the firm is financially constrained would indicate that the firm has a lower reservation price. Liquidity is more limited for larger segments, which makes a divestiture of a larger segment more unexpected. Further, selling larger segments generates more resources for the firm. Both effects increase the abnormal return associated with the divestiture for larger segments.

From our search in LEXIS NEXIS for the 168 firms in the main sample, 105 firms have an announcement date.[9] First consider the abnormal returns for the focusing announcements. The results for days –5 to +5 are reported in Table 10 for the whole sample. To facilitate comparison with earlier papers and to test the hypothesis of change in diversification strategy, we also divide up the sample into divestitures of core segments and divestitures of non-core segments. It is important to note that our announcement date is the first date that suggests a firm will divest one or more segments. Despite the fact that we focus on segment divestitures and that our sample includes both spinoffs and assets sales, our results are similar to those of earlier studies. We find a significant positive announcement return for the event day as well as for the three days surrounding the event. Our three-day abnormal return (1.09 percent) is slightly less than that found by John and Ofek (1995) (1.5 percent) in their study of asset sales. As in previous studies, the positive announcement return is wholly due to the divestiture of segments outside the core of the firm. In John and Ofek (1995), the dummy variable for a core divestiture indicates an abnormal return difference between core and non-core divestitures of 2.38 percent. We find here that the difference is 2.07 percent. For the core segments divested, we find a negative insignificant abnormal return over a short event window and a negative significant abnormal return over the (–5,+5) event window.

The evidence in Table 10 is consistent with the financing hypothesis. With the portfolio model of focusing, firms do not have to sell assets to generate funds. This makes it hard to explain the poor reaction to core asset sales. The most plausible explanation would be that firms divest core assets which are overvalued in their current use by the market, so that a divestiture indicates that the firm's other core assets are worth less in their current use. It is unclear, however, why divested core assets would be overvalued by the market in their current use, while divested non-core assets would be systematically undervalued. Similarly, it is hard to square this evidence with the inefficient internal capital markets model of focusing. With that model, firms divest

[9] While we have a maximum of 105 data points in the event-study analysis, only 62 observations can be used when segment data is included in the analysis. This is a result of the consistent history requirement we impose on the segment data (see section 2.2.2. for more details).

assets when the internal capital market inefficiencies justify doing so. Presumably, if firms divest core assets with that model, it is because doing so decreases internal capital market inefficiencies more than divesting non-core assets, which makes it hard to understand why divestitures of core assets would have a significantly lower stock-price reaction.

In Table 11 we use multivariate regressions to investigate whether the cross-sectional distribution of abnormal returns is consistent with the prediction of the financing hypothesis. Unfortunately, data requirements for our regressions make the sample substantially smaller. For all regressions, the CARs and the accounting variables are trimmed at the 1 percent and 99 percent level and we use White-adjusted standard errors to compute the *p*-values whenever homoscedasticity is rejected. For regression (1), we regress the abnormal returns on a dummy variable that takes a value of one if the divestiture involves a non-core segment, a dummy variable that takes a value of one if the divestiture generates cash, the logarithm of the firm's sales, and the logarithm of the segment's sales. We find the expected significant positive coefficient on segment size. The dummy variable for whether the divestiture involves a non-core segment is also positive and significant. The dummy variable for divestitures that generate cash is positive, but not significant. Whether a segment is a core segment or not explains about 1 percent of the cross-sectional variation in abnormal returns. In contrast, regression (1) has an adjusted R-square of 15.18 percent, indicating that the relative size of the segment has considerable explanatory power. The median firm in our sample has a proportional decrease in debt to total assets from the year before the segment divestiture to the year after. In regression (2), we use as an additional explanatory variable the proportional change in debt to total assets from the year before the segment divestiture to the year after. As in Lang, Poulsen, and Stulz (1994), firms that decrease debt have higher abnormal returns. The coefficient on the proportional increase in debt is significantly negative.

For regression (3), we investigate whether abnormal returns are related to a proxy for the extent to which a firm is financially constrained. Because of our emphasis on the lower investment of focusing firms, we choose as a proxy for the degree to which a firm is financially

constrained the difference between a firm's investment and the investment of its benchmark firm. We find that the less a firm invests relative to its industry, the lower the abnormal return associated with the sale. We interpret this as evidence that firms that are more financially constrained have a lower reservation price for assets.

In Section 2, we showed that segment characteristics affect which segment a firm divests. Consequently, some segments are more likely to be divested than others, which affects the market's reaction to the announcement of a divestiture. This means that adding segment characteristics should allow us to explain more of the abnormal return. If this is the case, the regressions without segment characteristics might be misspecified. We investigate the impact on abnormal returns of segment cash flow and segment investment in the next four regressions of Table 12. Interestingly, as soon as we add these segment characteristics, divestitures that generate cash have a significantly higher abnormal return as expected. In these four regressions, the only added segment characteristic that is significant is the segment's cash flow. Surprisingly, the abnormal return is higher when a segment with a higher cash flow is sold. We checked whether this coefficient could be explained by outliers, but this is clearly not the case. Based on the result of Section 2, divestitures of high cash flow segments are unexpected. It may well be that, if such segments are divested, they are divested at a much higher premium relative to their value within the firm. This could reflect greater growth opportunities that the financially constrained firms could not exploit. Further work should investigate this issue further. It is clear from our regressions that segment characteristics are an important determinant of the market's reaction to the divestiture decision; they explain substantially more of the stock-price reaction to divestiture announcements.

In regressions not reported in Table 11, we investigated whether the abnormal return is related to variables that relate to the inefficiency of internal capital markets. In particular, we know from Lang and Stulz (1994) that the impact of diversification on the diversification discount is sharpest when a firm goes from one segment to two segments. This suggests that the benefit from reducing the number of segments should be strongest when a firm goes from two

segments to one. Nevertheless, a dummy variable that takes a value of one for firms with more than two segments is insignificant when added to regression (1). We also added the following variables individually to regression (1) the diversification discount, the firm's measure of diversity of investment opportunities, the change in the firm's measure of diversity of investment opportunities, and the segment's investment opportunities - measured by the segment's industry *q* - are all insignificant. Thus, none of the variables one would associate with the internal capital market inefficiencies hypothesis of focusing seem to have any impact on the abnormal return.

5. Conclusions

In spite of a substantial literature documenting the existence of a diversification discount and a growing literature addressing the divestiture decision, we are still at the beginning stages of understanding why and how firms focus. In this paper, we use segment level data to better understand this decision. We find that focusing firms are much more likely to divest their smallest segment than any other segment. The largest segment is extremely unlikely to be divested, even if it is the worst performing segment of the firm.

This greater probability of divestiture of the smallest segment is inconsistent with a simple model of corporate focusing where firms divest segments that underperform their industry. Strikingly, overinvestment is not an issue for focusing firms. In our sample, focusing firms invest significantly less than firms that do not focus. Further, focusing firms are less profitable and are growing less than firms with an equal number of segments that do not focus. We view this to be consistent with the prediction of the financing hypothesis of focusing. That is, management divests segments to relax financial constraints that prevent it from pursuing its objectives. It would rather sell segments that have the least impact on its value to the firm, which in general means that it would rather sell non-core segments. It is not enough, however, for a firm to want to sell a segment. A successful sale also requires a buyer paying a reasonable price. As emphasized by Shleifer and Vishny (1992), asset markets are illiquid and this illiquidity grows with asset size. This illiquidity makes it harder for firms to divest large segments and can explain both why firms

are more likely to divest small segments and why the abnormal return for sales of large segments is higher than for sales of small segments.

Appendix: Measures of Diversification

Throughout the paper we use various measures to capture the extent of firm diversification, focusing, and excess value associated with diversification. The simplest measure uses the number of segments and the change in the number of segments during the focusing year. Other measures are described in more detail below.

A.1. Berger and Ofek (1995) measure of the diversification discount

We follow the methodology of Berger and Ofek (1995) to calculate the firm's diversification discount due to its multi-segment character. This measure is calculated as the percentage difference between a firm's total value and the sum of imputed values for its segments as stand-alone entities. From the Compustat Industry Segment (CIS) database, we collect all non-financial (SIC codes outside the 6000-6999 range) single-segment firms during the 1979-94 period that satisfy the following criteria. The firm's total sales, as reported by Compustat, must be within a plus and minus one percent range of the total of the firm's segment sales, as reported in the CIS database. The market value of common equity (Compustat data items 199×25), the book value of debt (Compustat data items 5+34), the carrying value of preferred stock (Compustat item 130), and sales (Compustat data item 12) need to be available from the Compustat database. Finally, firm total sales must be at least $20 million.

Following Berger and Ofek (1995) we calculate the diversification discount as $DISCOUNT = \ln(V/I(V))$, where $I(V) = \sum_{i=1}^{n} SALES_i \times \left[Ind_i (V/SALES)_{mf}\right]$, and

V	= firm's total capital (market value of equity plus book value of debt),
$I(V)$	= imputed value of the sum of a firm's segments as stand-alone firms,
$SALES_i$	= segment i's sales,
$Ind_i(V/SALES)_{mf}$	= ratio of the sum of the market value of equity and the book value of debt over the firm's total sales, for the median single-segment firm in segment i's industry,
$DISCOUNT$	= the firm's discount due to diversification,
n	= number of segments in segment i's firm.

Values for the variable *DISCOUNT* that are smaller (larger) than –1.386 (+1.386), are considered outliers and hence eliminated from the sample. Industry medians for the value of $Ind_i(V/SALES)_{mf}$ are based on 4-digit SIC codes and a minimum of five firms is required to define an industry. Whenever the number of firms within an industry is less than five, we use the broader 3-digit SIC codes, and, finally, if necessary, 2-digit SIC codes.

A.2. Change in the sales-based Herfindahl index

The sales-based Herfindahl index for firm *j* in year *t*, H_t^j, is defined as $H_t^j = \sum_{i=1}^{n} \left(S_{i,t}^j\right)^2 \Big/ \left(\sum_{i=1}^{n} S_{i,t}^j\right)^2$, where $S_{i,t}^j$ denotes sales for the segment *i* in year *t* of firm *j*, and *n* the number of segments. The change in the Herfindahl index is calculated as $\Delta H^j = \left(H_t^j / H_{t-1}^j\right) - 1$, where H_t^j (H_{t-1}^j) is the Herfindahl index for firm *j* in the year after (before) the decrease segments. The value for the Herfindahl is always in between 1 (completely focused) and 1/*n* (completely diversified). Whereas an increase in the Herfindahl index is usually interpreted as an increase in focus, a decrease in the number of segments does not necessarily have to coincide with an increase in the Herfindahl index.

A.3. Change in the Rajan, Servaes and Zingales (1999) measure of diversification

Rajan, Servaes, and Zingales (1999) use the coefficient of variation of the weighted segment's *q*, *CVQ*, which is calculated as, $CVQ = \sqrt{\sum_{i=1}^{n} (SALES_i / \sum_{i=1}^{n} SALES_i) \times (q_i - \overline{q})^2} \Big/ \overline{q}$, where subscript *i* refers to segment *i* of the diversified firm, *n* to the total number of segments in the diversified firm, *SALES* to the segment sales, *q* is the median level of *q* for all Compustat firms in the same 2-digit SIC code as the segment's 2-digit SIC code, and $\overline{q}$ the sales-weighted average *q* across the *n* segments of the diversified firm.[10]

[10] Rajan, Servaes, and Zingales (1999) use asset-weighted *q*s rather than sales-weighted *q*s. While segment sales reflect external sales only, and hence have a tendency to underreport the value of total sales, Scharfstein (1997) on the other hand, argues that management has higher discretion in reporting assets than sales, increasing the likelihood of introducing noise in the assets measures. Our results are qualitatively and statistically robust to the use of either assets or sales in the *CVQ* measure.

For firms with three or more segments, we evaluate for each segment how the value of *CVQ* would change when this segment would have been divested. In doing so, we can compare the implicit change in the *CVQ* measure between actually divested segments and retained segments.

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Table 1
Sample Breakdown

Our sample consists of all firms identified by Compustat's Business Information file as reporting a decrease in the number of segments over the period 1979-94. We exclude American Depository Receipts and firms that have either a Compustat SIC or an Industry Segment Identification code (SID) between 6000 and 6999 (Financial Services Industry), 4900 and 4999 (Regulated Utilities). We also exclude firms smaller than $100 million in size and firms where we could not confirm, via Lexis-Nexis, a transaction corresponding to the decrease in segments. Panel B presents the number of firms in the sample with a decrease of one, two, or three segments, respectively. Panel C shows the frequency of firms with a given change in the sales-based Herfindahl index prior to the focusing year and in the focusing year.

Panel A: *Number of focusing firms per year in final sample*

Focus Year	*n*	%
79	9	5.4
80	11	6.5
81	21	12.5
82	12	7.1
83	9	5.4
84	18	10.7
85	14	8.3
86	14	8.3
87	11	6.5
88	10	6
89	9	5.4
90	5	3
91	9	5.4
92	5	3
93	6	3.6
94	5	3
Total	168	100%

Panel B: *Decrease in Reported Segments*

Decrease in Segments	*n*	%
1	142	84.5
2	22	13.1
3	4	2.4
Total	168	100%

Panel C: *Changes in Herfindahl Index*

% Change in Herfindahl Index	*n* (year prior to focusing)	*n* (year of focusing)
<-25	4	.
-25<H<-5	22	3
-5<H<+5	113	15
+5<H<15	21	41
+15<H<+25	7	32
+25<H<+35	.	27
+35<H<+45	1	15
+45<H<+90	.	27
H>+90	.	8
Total	168	168

Table 2

Frequencies of Firm and Divested Segment Industry Classification

Panel A presents the frequency of firms in the sample by major industry grouping. In Panels B and C cells represent frequencies of the overall firm-level industry classification (Rows) and the spun-off segment's industry classification by major industry grouping (Panel B) and a more detailed breakdown for manufacturing firms (2-digit industry codes 20-39) (Panel C). Panel D (E) shows the relatedness between the divested (non-divested) segments and the firm based on 2-, 3- and 4-digit SIC codes.

Panel A: *Two-Digit Major Industry Distribution of Sample Firms*

(2-digit SIC) Industry Title	*n*	%
(10-14) Mining	4	2.4
(20-39) Manufacturing	131	78.0
(40-49) Transportation, Communication, Electric, Gas, and Sanitary Services	9	5.4
(50-51) Wholesale Trade	13	7.7
(52-59) Retail Trade	6	3.6
(70-89) Services	5	3.0
Total	168	100%

Table 2 - *continued*
Frequencies of Firm and Divested Segment Industry Classification

Panel B: *Major Industry Group Classification*

	Spun-off Segment Industry Classification (2-digit SIC code range)							
Firm Industry Classification	(10-14)	(15-17)	(20-39)	(40-49)	(50-51)	(52-59)	(70-89)	Total
(10-14) Mining	(4)	0	1	0	0	0	0	5
(15-17) Construction	0	(0)	0	0	0	0	0	0
(20-39) Manufacturing	15	2	(124)	4	6	3	7	161
(40-49)Transportation,Communication, Electric, Gas, and Sanitary Services	1	0	3	(4)	0	0	2	10
(50-51) Wholesale Trade	1	0	6	2	(7)	0	3	19
(52-59) Retail Trade	0	0	0	0	0	(6)	1	7
(70-89) Services	1	0	2	1	0	0	(2)	6
Total	22	2	136	11	13	9	15	208

Panel C: *Detailed Industry Classification for Manufacturing Firms*

	Spun-off Segment Industry Classification (2-digit SIC code range)											
Firm 2-digit SIC	20	22-23	26-27	28-30	33	34	35	36	37	38	21,24-25, 32,39	Total
20	(4)	0	0	3	0	0	0	0	0	0	1	8
22-23	1	(1)	0	0	0	0	1	0	0	0	0	3
26-27	1	0	(7)	0	0	0	0	0	0	0	2	10
28-31	1	0	0	(22)	2	0	1	1	1	6	3	37
33	0	0	0	2	(3)	1	1	1	1	0	0	9
34	0	0	0	1	0	(1)	0	0	1	1	2	6
35	0	1	2	0	2	1	(11)	1	0	5	1	24
36	0	0	0	3	1	0	2	(1)	0	0	0	7
37	0	0	0	0	0	3	1	0	(1)	0	0	5
38	0	0	1	2	0	1	0	1	0	(1)	0	6
21,24,25,32,39	1	0	1	0	0	1	1	1	0	0	(4)	9
Total	8	2	11	33	8	8	18	6	4	13	13	124

Table 2 - *continued*
Frequencies of Firm and Divested Industry Classification

SIC code level of detail	Number of spun-off segments with same (different) SIC classification as firm	% (%)
Panel D: *Relatedness of divested segments and Firm Industry*		
4-digit	18 (190)	8.7 (91.3)
3-digit	24 (184)	11.5 (88.5)
2-digit	63 (145)	30.3 (69.7)
Panel E: *Relatedness of non-divested segments and Firm Industry*		
4-digit	110 (356)	23.6 (76.4)
3-digit	170 (296)	36.5 (63.5)
2-digit	213 (253)	54.3 (45.7)

Table 3

Univariate Analysis for Industry-Adjusted Segment Performance

Means [medians] of the non-divested and divested firm segments for variable combinations at the segment level available from Compustat. Cash flows are defined as operating profits plus depreciation and net capital expenditures as gross capital expenditures minus depreciation. Industry-adjustments are based on the difference between the variable and the median value of all Compustat firms with the same 2-digit SIC code in the fiscal year before the focusing. The *t* subscript refers to the year relative to the focusing year *t*. Ratios are truncated at minus and plus one, sales and asset growth levels at zero and 200 percent, and cash flow and capital expenditures growth at minus and plus two hundred percent. Asset and sales numbers are in $ millions. Statistical significance of the difference in means [medians] is denoted with ***,**, and * for 1, 5 and 10 percent rejection levels respectively.

	Divested Segments			Retained Segments			Difference (Divested - Retained)	
	n	industry adjusted mean [median]	*p*-value	*n*	industry adjusted mean [median]	*p*-value	Industry adjusted mean [median]	*p*-value
Cash Flow$_{t-1}$ / Sales$_{t-2}$	122	-0.0185	*0.124*	290	0.0344***	*<0.001*	-0.0529***	*<0.001*
		[-0.0187]**	*0.034*		[0.0267]***	*<0.001*	[-0.0454]***	*<0.001*
Net Cap. Exp$_{t-1}$ / Sales$_{t-2}$	120	-0.0062	*0.398*	289	0.0037	*0.505*	-0.0099	*0.281*
		[-0.0242]***	*<0.001*		[-0.0165]***	*<0.001*	[-0.0076]***	*0.010*
(Cap. Exp$_{t-1}$/Cap. Exp$_{t-2}$)-1	115	-0.1826***	*<0.001*	276	0.0112	*0.755*	-0.1938***	*<0.001*
		[-0.2466]***	*<0.001*		[-0.0822]	*0.216*	[-0.1644]**	*0.022*
ln (Sales)$_{t-1}$	121	0.5536***	*<0.001*	290	1.2966***	*<0.001*	-0.7430***	*<0.001*
		[0.7067]***	*<0.001*		[1.2188]***	*<0.001*	[-0.5121]***	*0.002*
(Sales$_{t-1}$/Sales$_{t-2}$)-1	121	-0.0883***	*<0.001*	289	-0.0190	*0.108*	-0.0694***	*0.002*
		[-0.0576]***	*<0.001*		[-0.0223]***	*0.001*	[-0.0352]**	*0.013*

Table 4

Univariate Analysis for Divested versus Retained Segment Performance

Means (*medians*) of the non-divested and divested firm segment's performance measures at the segment level available from Compustat. Cash flow is defined as operating profits plus depreciation, net capital expenditures as gross capital expenditures minus depreciation. Tsales denotes the aggregated sales for the firm. Segment median industry *q* is calculated as the book value of total assets net of the book value of equity plus the market value of equity divided by the book value of total assets of all Compustat firms with the same 2-digit SIC code in the fiscal year before the focusing. The ΔCoefficient of Variation in *q* is denoted in percent change. The *t* subscript refers to the year relative to the focusing year *t*. Ratios are truncated at minus and plus one, growth variables at -100 and +200 percent. Asset and sales numbers are in $ millions. Statistical significance of the difference in means [medians] is denoted with ***,**, and * for 1, 5 and 10 percent rejection levels respectively.

	Mean [Median]			
	Divested Segment	Retained Segment	Difference	*p*-value
	Size Measures			
ln (Sales)$_{t-1}$	4.486	5.532	-1.045***	*0.000*
	[4.621]	[5.445]	[-0.824]***	*0.000*
ln (Assets)$_{t-1}$	4.098	5.100	-1.002***	*0.000*
	[4.240]	[5.155]	[-0.915]***	*0.000*
(Sales$_{t-1}$ / Sales$_{t-2}$)-1	0.009	0.083	-0.074***	*0.007*
	[0.031]	[0.057]	[-0.026]*	*0.069*
(Sales$_{t-2}$ / Sales$_{t-3}$)-1	0.037	0.049	-0.012	*0.688*
	[0.002]	[0.038]	[-0.036]	*0.316*
(Sales$_{t-1}$ / Tsales$_{t-2}$)-1	0.136	0.304	-0.168***	*0.000*
	[0.097]	[0.232]	[-0.135]***	*0.000*
(Sales$_{t-2}$ / Tsales$_{t-3}$)-1	0.146	0.300	-0.154***	*0.000*
	[0.107]	[0.233]	[-0.126]***	*0.000*
((Sales/Tsales)$_{t-1}$/ (Sales/Tsales)$_{t-2}$)-1	-0.051	0.017	-0.068***	*0.002*
	[-0.030	0.002]	[-0.032]**	*0.025*
((Sales/Tsales)$_{t-2}$/ (Sales/Tsales)$_{t-3}$)-1	-0.002	0.004	-0.006	*0.801*
	[-0.031	-0.008]	[-0.023]	*0.287*

Table 4 – *continued*
Univariate Analysis for Divested versus Retained Segment Performance

	Mean [Median]			
	Divested Segment	Retained Segment	Difference	*p*-value
Cash Flow Measures				
Cash Flow$_{t-1}$ / Sales$_{t-2}$	0.088	0.139	-0.051***	*0.000*
	[0.072]	[0.121]	[-0.049]***	*0.001*
Cash Flow$_{t-2}$ / Sales$_{t-3}$	0.086	0.133	-0.047***	*0.006*
	[0.100]	[0.128]	[-0.028]***	*0.007*
Capital Expenditure Measures				
Net Cap. Exp$_{t-1}$ / Sales$_{t-2}$	0.062	0.064	-0.002	*0.845*
	[0.028]	[0.040]	[-0.012]**	*0.018*
Net Cap. Exp$_{t-2}$ / Sales$_{t-3}$	0.068	0.068	0.000	*0.989*
	[0.031]	[0.040]	[-0.009]**	*0.047*
(Cap. Exp$_{t-1}$/Cap. Exp$_{t-2}$)-1	-0.069	0.118	-0.187***	*0.003*
	[-0.146]	[0.019]	[-0.165]***	*0.009*
(Cap. Exp$_{t-2}$/Cap. Exp$_{t-3}$)-1	0.153	0.089	0.064	*0.407*
	[-0.012]	[-0.019]	[0.007]	*0.670*
Investment Opportunity Measures				
Segment Median Industry *q*	1.267	1.294	-0.027	*0.457*
	[1.190]	[1.269]	[-0.079]	*0.150*
Segment Median Industry *q*[a]	1.226	1.294	-0.068*	*0.061*
	[1.157]	[1.269]	[-0.112]**	*0.046*
Segment Median Industry *q*[b]	1.226	1.272	-0.046	*0.291*
	[1.157]	[1.187]	[-0.030]	*0.308*
ΔCoefficient of Variation in *q* (percent)	-0.158	-0.177	0.019	*0.820*
	[-0.141]	[-0.107]	[-0.034]	*0.324*

[a] For non-core divested segments versus all retained segments.
[b] For non-core divested segments versus non-core retained segments.

Table 5

Relative Ranking of Within Firm and Industry-Adjusted Performance of Divested Divisions

Cells denote the number of divested segments within a ranking for different performance (industry-adjusted performance in parentheses). The Number of Divisions denote the total number of divisions within a firm and the rank denotes the relative magnitude, from low to high, of respectively the value of the divisions cash flow (operating profits plus depreciation) in the year prior to the divestiture (–1) normalized by the firm's total sales in year (–2), the natural log of the division's sales in year (–1), segments industry median *q*, the net capital expenditures in year (–1) normalized by the firm's total sales in year (–2), and the division's growth of capital expenditures in year (–1) relative to year (–2). The final row denotes the total number of divested segments, *n*, for each firm. Ties are assigned to the higher rank.

	Number of Divisions within a Firm											
	2		3		4		5		6		7	
Rank	*Cash Flow$_{t-1}$/Sales$_{t-2}$*											
1 (low)	8	(10)	17	(13)	14	(14)	5	(9)	3	(3)	1	(1)
2	6	(4)	7	(7)	9	(9)	8	(5)	9	(8)	2	(1)
3			6	(9)	8	(8)	4	(5)	1	(2)	0	(0)
4					6	(4)	3	(2)	3	(3)	1	(2)
5							3	(2)	1	(1)	0	(0)
6									0	(0)	0	(0)
7 (high)											0	(0)
	ln(Sales)$_{t-1}$											
1 (low)	13	(11)	21	(15)	20	(16)	6	(5)	6	(7)	0	(0)
2	1	(3)	7	(10)	11	(10)	8	(5)	4	(1)	2	(0)
3			2	(4)	5	(6)	4	(2)	2	(1)	1	(1)
4					1	(3)	4	(6)	1	(3)	1	(2)
5							1	(4)	2	(4)	0	(0)
6									2	(1)	0	(1)
7 (high)											0	(0)
	segment *q*											
1 (low)	8	.	13	.	14	.	3	.	4	.	0	.
2	6	.	5	.	6	.	7	.	5	.	0	.
3			7	.	10	.	5	.	2	.	2	.
4					4	.	4	.	4	.	1	.
5							5	.	1	.	1	.
6									0	.	0	.
7 (high)											0	.
n	14		31		37		24		17		4	

Table 5 – *continued*

Relative Ranking of Within Firm and Industry-Adjusted Performance of Divested Divisions

Cells denote the number of divested segments within a ranking for different performance (industry-adjusted performance in parentheses). The Number of Divisions denote the total number of divisions within a firm and the rank denotes the relative magnitude, from low to high, of respectively the value of the divisions cash flow (operating profits plus depreciation) in the year prior to the divestiture (–1) normalized by the firm's total sales in year (–2), the natural log of the division's sales in year (–1), segments industry median *q*, the net capital expenditures in year (–1) normalized by the firm's total sales in year (–2), and the division's growth of capital expenditures in year (–1) relative to year (–2). The final row denotes the total number of divested segment, *n*, for each multi-segment firm. Ties are assigned to the higher rank.

	Number of Divisions											
	2		3		4		5		6		7	
Rank	*Cap. Exp$_{t-1}$/Total Sales$_{t-2}$*											
1 (low)	6	(9)	12	(12)	8	(10)	6	(6)	2	(5)	1	(1)
2	8	(5)	8	(7)	7	(9)	7	(5)	1	(3)	0	(1)
3			10	(9)	8	(8)	0	(8)	4	(3)	1	(1)
4					12	(7)	2	(2)	2	(3)	0	(0)
5							8	(2)	5	(3)	0	(0)
6									3	(0)	0	(1)
7 (high)											2	(0)
	(*Cap. Exp$_{t-1}$/Cap. Exp$_{t-2}$)-1*											
1 (low)	11	(8)	11	(13)	10	(14)	5	(6)	4	(5)	2	(1)
2	3	(6)	8	(4)	10	(6)	6	(3)	4	(3)	1	(0)
3			10	(8)	7	(8)	7	(6)	2	(2)	0	(1)
4					9	(5)	3	(4)	4	(4)	0	(0)
5							3	(4)	3	(2)	0	(1)
6									0	(0)	1	(1)
7 (high)											0	(0)
n	14		31		37		24		17		4	

Table 6
Segment Logistic Regression Results

Logistic regressions with a binary dependent variable that takes on the value one for a divested segment and zero for a retained segment. Cells denote respectively the coefficient, *p*-value (*in italics*) and the slope (defined as $\partial E[y]/\partial \mathbf{x}$, for the binary model $y_{(0,1)}=\beta'\mathbf{x}+\varepsilon$, evaluated at the mean of $\mathbf{x}$), the pseudo-R^2, and the value of −2 times the log likelihood. Accounting numbers are based on Compustat segment data (CF is cash flow; CPX is capital expenditures), and the numerator in the ratios is measured in year (−1) and the denominator in year (−2) relative to the event year. The Non-Core Dummy takes on a value of one when the 2-digit segment SIC code is different from the 2-digit firm SIC code. The change in the Coefficient of Variation in *q* is measured for each segment, as an implicit relative change in the coefficient of variation in *q* in year (−1) for the firm, and the firm minus the segment. Segment *q* is the industry median value of *q* of all Compustat firms with the same two-digit SIC code as the segment in a particular year. Statistical significance is denoted with ***,**, and * for 1, 5 and 10 percent rejection levels respectively.

Model	Intercept	CF/ Sales	Ind. Median CF/ Sales	CPX/ Sales	Ind. Median CPX/ Sales	ln (Sales)	Seg. Sales/ Firm Sales	Non-Core Dummy	ΔCoeff. of Var. in *q* (%)	Segment *q*
(1)	0.457*	-2.718**		-0.172			-5.666***			
	0.053	*0.018*		*0.901*			*<0.001*			
		-0.477		-0.030			-0.994			
	Pseudo-R^2:	12.90%			-2 log Likelihood:	58.927				
(2)	0.447*	-2.518**		-0.212			-5.637***		0.060	
	0.061	*0.027*		*0.878*			*<0.001*		*0.732*	
		-0.444		-0.037			-0.993		0.011	
	Pseudo-R^2:	12.69%			-2 log Likelihood:	56.874				
(3)	0.189	-2.750**		0.014			-5.086***	0.536*		-0.162
	0.770	*0.018*		*0.992*			*<0.001*	*0.061*		*0.697*
		-0.477		0.002			-0.882	0.093		-0.028
	Pseudo-R^2:	13.79%			-2 log Likelihood:	63.012				
(4)	-0.2309	-3.176***	0.337	-0.644	9.064		-4.983***	0.496*		-0.231
	0.730	*0.009*	*0.907*	*0.669*	*0.150*		*<0.001*	*0.086*		*0.576*
		-0.550	0.058	-0.111	1.569		-0.863	0.086		-0.040
	Pseudo-R^2:	14.44%			-2 log Likelihood:	65.998				
(5)	-0.468	-2.963**	-0.195	-0.665	8.816		-4.987***	0.516*	0.082	
	0.297	*0.016*	*0.946*	*0.657*	*0.161*		*<0.001*	*0.072*	*0.642*	
		-0.516	-0.034	-0.116	1.535		-0.868	0.090	0.014	
	Pseudo-R^2:	14.12%			-2 log Likelihood:	63.288				

Table 7
Firm Performance

Sample means [medians] of firm performance variables and its benchmark value, where each benchmark value is calculated as the mean value of the performance measure for a portfolio, consisting of a minimum of five firms in the same year as the sample firm, the same number of segments, not selling segments in the event year, and in the same annual sales decile. Cash Flow is defined as operating income before depreciation (Depr). The firm's *q* is defined as the sum of the book value of assets and the market value of equity net of the book value of equity over the book value of assets. Debt is defined as long term debt plus debt in current liabilities and assets as debt plus the market value of equity. The coverage ratio is defined as interest expense plus income before extraordinary items divided by interest expense. The coefficient of variation in *q* is reported times hundred. The diversification discount is calculated as in Berger and Ofek (1995) (see Appendix). Statistical significance (*p*-values) of the mean (median) difference is based on a two-sided paired sample *t*-test (Wilcoxon signed-rank-test) under the null hypothesis of mean [median] difference of zero. Statistical significance is denoted with ***,**, and * for 1, 5 and 10 percent rejection levels respectively.

	Sample	Benchmark	Difference	*p*-value	*n*
$(Assets_{t-1}/Assets_{t-2})-1$	0.097	0.117	-0.019	*0.243*	156
	[0.074]	[0.106]	[-0.048]***	*0.002*	
$Cash\ Flow_{t-1}/Sales_{t-2}$	0.123	0.149	-0.026***	*0.000*	156
	[0.111]	[0.151]	[-0.033]***	*0.000*	
$Net\ Income_{t-1}/Sales_{t-2}$	0.032	0.046	-0.014**	*0.014*	156
	[0.038]	[0.046]	[-0.008]***	*0.006*	
$(Sales_{t-1}/Sales_{t-2})-1$	0.074	0.100	-0.026**	*0.045*	156
	[0.066]	[0.103]	[-0.033]**	*0.014*	
$Cap.\ Exp_{t-1}/Sales_{t-2}$	0.066	0.096	-0.030***	*0.000*	154
	[0.049]	[0.085]	[-0.036]***	*0.000*	
$(Cap.\ Exp_{t-1}/Cap.\ Exp_{t-2})-1$	0.134	0.168	-0.034	*0.356*	155
	[0.100]	[0.168]	[-0.060]	*0.191*	
q	1.269	1.228	0.042	*0.383*	146
	[1.100]	[1.239]	[-0.123]*	*0.070*	
$Debt_{t-1}/Assets_{t-1}$	0.329	0.359	-0.030	*0.105*	149
	[0.299]	[0.351]	[-0.067]**	*0.017*	
Coverage Ratio	3.867	10.927	-7.060	*0.109*	158
	[2.935]	[4.748]	[-2.239]***	*0.000*	
Coefficient of Variation in *q*	83.407	85.713	-2.306	*0.459*	121
	[81.147]	[86.775]	[-3.022]	*0.395*	
Diversification discount	-0.212	-0.103	-0.109**	*0.033*	92
	[-0.246]	[-0.109]	[-0.137]**	*0.021*	

Table 8

Firm Performance for Core and Non-Core Segment Divestitures

Sample means [medians] of firm performance variables and its benchmark value for core and non-core divestitures sub-groups, where each benchmark value is calculated as the mean value of the performance measure for a portfolio, consisting of a minimum of five firms in the same year as the sample firm, the same number of segments, not selling segments in the event year, and in the same annual sales decile. Core segment divestitures refers to cases where all divested segments have identical 2-digit SIC codes as the firm's 2-digit SIC code. Non-core segment divestitures where at least one of the 2-digit SIC codes of the divested segments is different from the overall 2-digit firm SIC code. Cash Flow is defined as operating income before depreciation (Depr). The firm's *q* is defined as the sum of the book value of assets and the market value of equity net of the book value of equity over the book value of assets. Debt is defined as long term debt plus debt in current liabilities and assets as debt plus the market value of equity. The coverage ratio is defined as interest expense plus income before extraordinary items divided by interest expense. The coefficient of variation in *q* is reported times 100. Excess Value is calculated as in Berger and Ofek (1995) (see Appendix). Statistical significance (*p*-values) of the mean (median) difference is denoted with ***,**, and * for 1, 5 and 10 percent rejection levels respectively.

	Non-Core Divestitures					Core Divestitures					Non-Core-Core	
Variable	*n*	Sample	Benchmark	Difference	*p*-value	*n*	Sample	Benchmark	Difference	*p*-value	Difference	*p*-value
		(1)	(2)	(1–2)	(1–2)		(3)	(4)	(3–4)	(3–4)	(1–3)	(1–3)
$(Assets_{t-1}/Assets_{t-2})$-1	125	0.095	0.117	-0.022	*0.249*	31	0.108	0.114	-0.007	*0.814*	-0.013	*0.698*
		[0.074]	[0.109]	[-0.060]***	*0.001*		[0.076]	[0.101]	[-0.029]	*0.565*	[-0.002]	*0.842*
$Cash\ Flow_{t-1}/Sales_{t-2}$	125	0.112	0.148	-0.036***	*0.000*	31	0.166	0.154	0.012	*0.536*	-0.053***	*0.010*
		[0.108]	[0.151]	[-0.036]***	*0.000*		[0.154]	[0.150]	[-0.006]	*0.954*	[-0.046]***	*0.009*
$Net\ Income_{t-1}/Sales_{t-2}$	125	0.029	0.047	-0.018***	*0.005*	31	0.042	0.043	0.000	*0.986*	-0.013	*0.366*
		[0.036]	[0.047]	[-0.013]***	*0.001*		[0.052]	[0.043]	[0.007]	*0.565*	[-0.017]**	*0.028*
$(Cash\ Flow_{t-1}/Cash\ Flow_{t-2})$-1	119	0.228	0.120	0.108	*0.438*	30	-0.012	0.135	-0.147***	*0.009*	0.240	*0.108*
		[0.060]	[0.136]	[-0.055]**	*0.030*		[0.050]	[0.121]	[-0.080]**	*0.011*	[0.010]	*0.967*
$(Sales_{t-1}/Sales_{t-2})$-1	125	0.064	0.097	-0.033**	*0.024*	31	0.115	0.114	0.002	*0.947*	-0.051*	*0.093*
		[0.060]	[0.103]	[-0.033]**	*0.018*		[0.087]	[0.099]	[-0.030]	*0.408*	[-0.027]	*0.162*
$Cap.\ Exp_{t-1}/Sales_{t-2}$	123	0.063	0.091	-0.028***	*0.000*	31	0.079	0.114	-0.036	*0.139*	-0.016	*0.247*
		[0.047]	[0.083]	[-0.037]***	*0.000*		[0.062]	[0.090]	[-0.031]**	*0.046*	[-0.015]	*0.161*

Table 8 – *continued*

Firm Performance for Core and Non-Core Segment Divestitures

Sample means [medians] of firm performance variables and its benchmark value for core and non-core divestitures sub-groups, where each benchmark value is calculated as the mean value of the performance measure for a portfolio, consisting of a minimum of five firms in the same year as the sample firm, the same number of segments, not selling segments in the event year, and in the same annual sales decile. Core segment divestitures refers to cases where all divested segments have identical 2-digit SIC codes as the firm's 2-digit SIC code. Non-core segment divestitures where at least one of the 2-digit SIC codes of the divested segments is different from the overall 2-digit firm SIC code. Cash Flow is defined as operating income before depreciation (Depr). The firm's *q* is defined as the sum of the book value of assets and the market value of equity net of the book value of equity over the book value of assets. Debt is defined as long term debt plus debt in current liabilities and assets as debt plus the market value of equity. The coverage ratio is defined as interest expense plus income before extraordinary items divided by interest expense. The coefficient of variation in *q* is reported times 100. Excess Value is calculated as in Berger and Ofek (1995) (see Appendix). Statistical significance (*p*-values) of the mean (median) difference is denoted with ***,**, and * for 1 percent, 5 percent and 10 percent rejection levels respectively.

	Non-Core Divestitures					Core Divestitures					Non-Core-Core	
Variable	*n*	Sample (1)	Benchmark (2)	Difference (1-2)	*p*-value (1-2)	*n*	Sample (3)	Benchmark (4)	Difference (3-4)	*p*-value (3-4)	Difference (1-3)	*p*-value (1-3)
(Cap. Exp_{t-1} /Cap. Exp_{t-2})-1	124	0.093	0.165	-0.071*	*0.083*	31	0.296	0.181	0.115	*0.158*	-0.203**	*0.034*
		[0.061]	[0.190]	[-0.085]*	*0.053*		[0.213]	[0.136]	[-0.036]	*0.355*	[-0.152]	*0.150*
ln $(Sales)_{t-1}$	127	6.828	6.937	-0.109***	*0.003*	31	6.799	6.672	0.127	*0.180*	0.028	*0.918*
		[6.868]	[6.664]	[-0.079]**	*0.014*		[6.306]	[6.516]	[0.056]	*0.316*	[0.562]*	*0.072*
q	118	1.204	1.219	-0.015	*0.714*	28	1.547	1.262	0.286	*0.104*	-0.343*	*0.072*
		[1.089]	[1.236]	[-0.129]**	*0.015*		[1.249]	[1.270]	[0.010]	*0.372*	[-0.161]	*0.402*
$Debt_{t-1}/Assets_{t-1}$	126	0.270	0.272	-0.002	*0.882*	31	0.235	0.289	-0.054*	*0.081*	0.034	*0.316*
		[0.241]	[0.274]	[-0.017]	*0.207*		[0.220]	[0.286]	[-0.091]**	*0.020*	[0.021]	*0.337*
Coverage Ratio	127	3.389	12.170	-8.781	*0.109*	31	5.823	5.836	-0.012	*0.992*	-2.434**	*0.048*
		[2.801]	[4.912]	[-2.556]***	*0.000*		[4.170]	[4.242]	[-1.285]	*0.592*	[-1.368]	*0.318*
Coefficient of Variation in *q*	99	85.253	86.221	-0.968	*0.783*	22	75.099	83.427	-8.328	*0.215*	10.154	*0.207*
		[81.147]	[86.775]	[-3.022]	*0.647*		[82.335]	[84.849]	[-2.261]	*0.302*	[-1.188]	*0.966*
Excess Value	73	-0.258	-0.114	-0.144**	*0.012*	19	-0.036	-0.061	0.025	*0.828*	-0.222*	*0.059*
		[-0.285]	[-0.119]	[-0.205]**	*0.011*		[-0.109]	[-0.056]	[-0.010]	*0.953*	[-0.176]*	*0.073*

Table 9
Firm Logistic Regression Results

Logistic regressions with a binary dependent variable that takes on the value one for a divested segment and zero for a retained segment. Cells denote respectively the coefficient, *p*-value and the slope (defined as $\P E[y]/\P \mathbf{x}$, for the binary model $y_{(0,1)}=\beta'\mathbf{x}+\varepsilon$, evaluated at the mean of **x),** the pseudo-R^2, and the value of −2 times the log likelihood. Cash Flow is defined as operating income before depreciation (Depr). The firm's *q* is defined as the sum of the book value of assets and the market value of equity net of the book value of equity over the book value of assets. Debt is defined as long term debt plus debt in current liabilities and assets as debt plus the market value of equity. The coverage ratio is defined as interest expense plus income before extraordinary items divided by interest expense. The coefficient of variation in *q* is reported times 100. Excess Value is calculated as in Berger and Ofek (1995) (see Appendix). Accounting numbers are based on the firm-level data, and the numerator in the ratios is measured in year (−1) and the denominator in year (−2). Statistical significance is denoted with ***,**, and * for 1, 5 and 10 percent rejection levels respectively.

	Independent Variables										
Model	Intercept	Firm Cash Flow/ Sales	Firm Cap. Exp/ Sales	Firm *q*	Firm Debt/Assets	Firm Coverage Ratio	Coefficient of Variation in *q*	Excess Value	Sales Growth	Cash Flow Growth	Capital Expenditures Growth
(1)	1.592***	-10.396***	-5.902*	0.875**	-3.045**						
	0.009	*0.001*	*0.061*	*0.028*	*0.023*						
		-2.599	-1.475	0.219	-0.761						
	Pseudo-R^2:	8.63%			-2 log Likelihood:	34.234					
(2)	0.617	-7.772**	-6.528**	1.101***		-0.078**					
	0.167	*0.017*	*0.042*	*0.005*		*0.017*					
		-1.928	-1.620	0.273		-0.019					
	Pseudo-R^2:	9.67%			-2 log Likelihood:	38.604					
(3)	1.180	2.415	-18.253***	0.280	-1.475		-0.001				
	0.185	*0.597*	*0.003*	*0.603*	*0.312*		*0.848*				
		0.602	-4.549	0.070	-0.368		0.000				
	Pseudo-R^2:	7.27%			-2 log Likelihood:	21.757					

Table 9 - *continued*
Firm Logistic Regression Results

Logistic regressions with a binary dependent variable that takes on the value one for a divested segment and zero for a retained segment. Cells denote respectively the coefficient, *p*-value, and the slope (defined as $\P E[y]/\P \mathbf{x}$, for the binary model $y_{(0,1)}=\boldsymbol{\beta}'\mathbf{x}+\varepsilon$, evaluated at the mean of **x**), the pseudo-R^2, and the value of –2 times the log likelihood. Cash Flow is defined as operating income before depreciation (Depr). The firm's *q* is defined as the sum of the book value of assets and the market value of equity net of the book value of equity over the book value of assets. Debt is defined as long term debt plus debt in current liabilities and assets as debt plus the market value of equity. The coverage ratio is defined as interest expense plus income before extraordinary items divided by interest expense. The coefficient of variation in *q* is reported times 100. Excess Value is calculated as in Berger and Ofek (1995) (see Appendix). Accounting numbers are based on the firm-level data, and the numerator in the ratios is measured in year (–1) and the denominator in year (–2). Statistical significance is denoted with ***,**, and * for 1, 5 and 10 percent rejection levels respectively.

	Independent Variables										
Model	Intercept	Firm Cash Flow/ Sales	Firm Cap. Exp/ Sales	Firm *q*	Firm Debt/Assets	Firm Coverage Ratio	Coefficient of Variation in *q*	Excess Value	Sales Growth	Cash Flow Growth	Capital Expenditures Growth
(4)	1.729*	1.511	-26.231***	0.271	-1.560			-0.681			
	0.090	*0.777*	*0.000*	*0.603*	*0.429*			*0.253*			
		0.375	-6.515	0.067	-0.387			-0.169			
	Pseudo-R^2:	14.67%			-2 log Likelihood:	35.384					
(5)	1.748***	-5.524	-11.138**	0.665	-3.331**				-2.734*	0.259	0.758
	0.006	*0.183*	*0.020*	*0.121*	*0.019*				*0.076*	*0.157*	*0.123*
		-1.380	-2.782	0.166	-0.832				-0.683	0.065	0.189
	Pseudo-R^2:	10.27%			-2 log Likelihood:	39.280					
(6)	1.590***	-9.978***	-7.425**	0.871**	-2.828**				-0.950		0.635
	0.010	*0.004*	*0.030*	*0.032*	*0.037*				*0.473*		*0.181*
		-2.494	-1.856	0.218	-0.707				-0.237		0.159
	Pseudo-R^2:	9.16%			-2 log Likelihood:	30.185					

Table 10
Market-adjusted Announcement Returns

The market-adjusted abnormal return (AR) is calculated using the CRSP equally weighted index as the benchmark return starting five days before the announcement day to five days after the announcement day and cumulated for the periods (–1,+1) and (–5,+5). The sample consists of all firms in the sample where Lexis Nexis reports an announcement day for a specific focusing event. Core segment refers to cases where all divested segments have identical 2-digit SIC codes as the firm's 2-digit SIC code. Non-core segments refers to cases where at least one of the 2-digit SIC codes of the divested segments is different from the overall 2-digit firm SIC code. Statistical significance of the difference of the abnormal returns and the difference in means is denoted with ***,**, and * for 1, 5 and 10 percent rejection levels respectively.

	All Firms (*n*=105)		Core Segments (*n*=21)		Non-Core segments (*n*=84)		Difference (Core-Non-Core)	
Day	AR (%)	*p*-value	AR (%)	*p*-value	AR (%)	*p*-value	AR (%)	*p*-value
-5	-0.011	*0.954*	0.736*	*0.054*	-0.189	*0.385*	0.924*	*0.055*
-4	0.018	*0.924*	0.122	*0.797*	-0.007	*0.971*	0.129	*0.783*
-3	0.006	*0.968*	-0.411	*0.069*	0.105	*0.569*	-0.516*	*0.073*
-2	0.173	*0.469*	-0.366	*0.175*	0.301	*0.297*	-0.667*	*0.089*
-1	0.352	*0.163*	-0.020	*0.976*	0.440	*0.110*	-0.460	*0.472*
0	0.605*	*0.077*	-0.421	*0.231*	0.789**	*0.034*	-1.210**	*0.018*
+1	0.192	*0.510*	-0.153	*0.725*	0.269	*0.434*	-0.423	*0.446*
+2	0.070	*0.811*	-0.003	*0.994*	0.087	*0.804*	-0.090	*0.866*
+3	-0.319	*0.167*	-0.657	*0.136*	-0.239	*0.370*	-0.417	*0.478*
+4	-0.066	*0.781*	-0.219	*0.633*	-0.030	*0.912*	-0.188	*0.756*
+5	0.178	*0.391*	0.026	*0.898*	0.213	*0.397*	-0.188	*0.556*
(-1,+1)	1.090**	*0.015*	-0.586	*0.453*	1.484***	*0.004*	-2.070*	*0.065*
(-5,+5)	1.136	*0.131*	-1.358*	*0.077*	1.723*	*0.058*	-3.081***	*0.009*

Table 11
Cross-sectional Regressions of (-1,+1) Cumulative Abnormal Returns

For each cross-sectional regression model, with (−1,+1) cumulative abnormal returns, the table reports the coefficients, the White (1981) heteroscedasticity consistent *p*-values (in *italics*), the number of observations (*n*) and the adjusted R-squared $\bar{R}^2$. The Non-Core is a dummy variable that takes on a value of one when the 2-digit segment SIC code is different from the 2-digit firm SIC code. Firm Sales and Segment Sales are denoted as the natural logarithm of these variables. Firm *q* is defined as the sum of the book value of assets and the market value of equity net of the book value of equity over the book value of assets. The change debt denotes the percentage change in the debt-to-assets ratio in the period starting one year before to one year after the event. Cash Flow (CF) is defined as operating income before depreciation normalized by year (−1) sales and CPX is capital expenditures normalized by year (−1) sales. Excess Firm CPX/Sales is defined as the firm's CPX minus the mean CPX of a portfolio of benchmark firms, based on size, number of segments, and non-focusing. Industry-adjustments of segment cash flow (ICF) and capital expenditures (ICPX) are based on subtracting the median value of all Compustat firms in the same 2-digit SIC code within a year from the sample observation. Cash Event is a dummy variable that takes on a value of one if the focusing event is associated with a cash inflow for the parent firm (*e.g.*, asset sales) and zero for events that do not generate a cash inflow for the parent firm (*e.g.*, spinoffs). Statistical significance is denoted with ***, **, and * for 1, 5 and 10 percent rejection levels respectively.

	Model (1)	Model (2)	Model (3)	Model (4)	Model (5)	Model (6)	Model (7)
Intercept	0.057**	0.044	0.044**	0.053	0.058*	0.062**	0.059**
	0.047	*0.132*	*0.139*	*0.061*	*0.061*	*0.028*	*0.043*
Non-Core	0.020*	0.022*	0.027**	0.029**	0.027**	0.030***	0.028**
	0.083	*0.068*	*0.028*	*0.005*	*0.028*	*0.004*	*0.023*
Firm Sales	-0.019***	-0.016**	-0.016**	-0.024**	-0.023***	-0.022***	-0.022***
	0.002	*0.012*	*0.013*	*0.001*	*0.001*	*0.002*	*0.001*
Segment Sales	0.012**	0.011*	0.010**	0.012**	0.014**	0.011*	0.008
	0.030	*0.051*	*0.082*	*0.043*	*0.019*	*0.075*	*0.911*
Change in debt/assets		-0.010*					
		0.091					
Excess Firm CPX/Sales			0.070*	0.044	0.000	0.075*	0.008
			0.056	*0.147*	*0.998*	*0.081*	*0.911*
Segment CF/Sales				0.131**			
				0.017			
Segment CPX/Sales					0.121		
					0.155		
Segment ICF/Sales						0.098*	
						0.081	
Segment ICPX/Sales							0.124
							0.258
Cash Event	0.012	0.009	0.012	0.028***	0.020***	0.026***	0.022*
	0.262	*0.407*	*0.273*	*0.001*	*0.078*	*0.002*	*0.064*
$\bar{R}^2$(%)	15.18	15.22	15.06	37.60	20.49	35.43	19.39
n	64	60	58	53	60	53	60