

# Why Do Only Some Nasdaq Firms Switch to the NYSE?

## Evidence from Corporate Transactions

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### Abstract

Every year only a small fraction of Nasdaq firms that are eligible to move to the NYSE actually choose to move. This is surprising as prior literature documents significant gains to listing on NYSE. Gains in visibility and liquidity associated with a move to NYSE reduce the firm's cost of capital. Consequently, firms are more likely to move to NYSE when they are raising external financing or engaging in acquisition activity. We study a set of corporate transactions – issue of debt, equity and involvement in acquisitions – for a group of Nasdaq firms that chose to move to the NYSE and a size and industry-matched control group of firms that were eligible to move but chose to stay in Nasdaq over the period 1986 to 1998. We find that firms that move to the NYSE issue more debt and equity, and are more likely to merge with, or acquire assets of other firms following their move relative to their control firms. Our results suggest that the listing decision of a firm is often not isolated, but rather related, to other important corporate objectives of the firms. Moreover, we find no evidence of post-listing underperformance among firms that move as part of a broader corporate agenda.

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All errors remain our own.

## **Why Do Only Some Nasdaq Firms Switch to the NYSE? Evidence from Corporate Transactions**

The Nasdaq stock market emerged in the 1970s to provide small firms with access to capital markets. Most of these firms eventually moved on to the New York Stock Exchange (NYSE) following years of growth. This is not surprising given that many researchers in the past have documented tangible gains from a NYSE listing (see, for example, Kadlec and McConnell (1994) and Baker, Powell and Weaver (1999)). These gains to a NYSE listing involve gains in visibility and “prestige” leading to increases in market values of these firms’ shares. The gains to a NYSE listing also arise from increases in liquidity and potentially lower transaction costs.<sup>1</sup>

Despite these varied benefits that Nasdaq firms potentially derive from a NYSE listing, not all firms that are eligible to move choose to move. Based on the NYSE listing criteria, there were approximately 2,654 non-financial Nasdaq firms that satisfied the eligibility criteria of listing on NYSE from 1986 to 1998 but only 460 firms, or about one in six eligible firms, chose to actually move to the NYSE.<sup>2</sup> Further, firms that move wait for a few years after their first eligibility before they list at the NYSE. Why do some Nasdaq firms move to the NYSE when others who are eligible to move choose not to?

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<sup>1</sup>See Kadlec and McConnell (1994), Baker, Powell and Weaver (1999) and Baker and Johnson (1990) for gain in visibility following a move to the NYSE. See Merton (1987), Barry and Brown (1986) and Bhardwaj and Brooks (1992) for the effect of visibility on firm value. See Kadlec and McConnell (1994) and Christie and Huang (1993) for gains in liquidity. Cowan, Carter, Dark and Singh (1992) find that firms with unexpectedly high bid ask spreads tend to move from Nasdaq, presumably to lower transaction costs. See Christie and Schultz (1994), Huang and Stoll (1996a,b), Bessembinder and Kaufman (1997a,b) and LaPlante and Muscarella (1996) for an examination of differences in transactions costs across NYSE and Nasdaq.

<sup>2</sup>Because there were many firms that were eligible to move in more than one year, there were only 2,654 distinct firms among the 10,119 firms eligible to move from Nasdaq to the NYSE between 1986 and 1998. Among the firms that moved, there were 80 Nasdaq firms that did not satisfy the eligibility criteria that we use in our study (see Table 1).

One possibility could be that firms where such benefits are not apparent are more likely to stay in Nasdaq. Amihud and Mendelson (1986) argue that highly liquid firms in Nasdaq realize little gain in liquidity by moving to the NYSE. In similar vein, Reinganum (1990) shows that small firms have a liquidity advantage on the Nasdaq as compared to the NYSE. Aggarwal and Angel (1997) argue that higher spreads in Nasdaq give incentives to broker-dealers to market the stock that may be missing in a market like the NYSE where the nexus between brokers and dealers is weaker. Firms that depend on broker network for secondary market liquidity, therefore, choose not to list on the NYSE to exploit this marketing advantage.

Along with differences in firm characteristics differences in firm's corporate agenda and activities may also influence their decision to move to NYSE. Increase in visibility and "prestige" are among the gains from a NYSE listing (see Kadlec and McConnell (1994), Baker, Powell and Weaver (1999) and Baker and Johnson (1990)). Increase in visibility translates into lower cost of capital and higher market values for these firms (See Merton (1987), Barry and Brown (1986) and Bhardwaj and Brooks (1992)). Similarly, Amihud and Mendelson (1988) show that increased liquidity, arising from the move to NYSE, is associated with a lower cost of capital. As a lower cost of capital is especially attractive when firms are raising external financing or when they are engaged in acquisitions, firms are more likely to move to NYSE when their interactions with capital markets is high. Just like people are more likely to undertake home improvement projects to enhance the value of their house prior to putting the house for sale, firms might be more likely to capture the gains from a NYSE listing that reduce its cost of capital prior to major interactions with the capital markets.

In this paper, we examine this potential relation of NYSE listing with firm's capital market transactions for explanations of why only some firms choose to move to NYSE. We examine Nasdaq firms that choose to move to NYSE over the period 1986 to 1998 and a size and industry-matched control group of firms that were eligible to move in the same year but chose to stay in Nasdaq. We study a set of corporate transactions – issue of debt, equity and involvement in acquisition activities – for both the sample and control firms. We examine the corporate transactions of these firms for the two years before and the two years after the firm moves to NYSE.<sup>3</sup>

Consistent with prior studies, we find evidence of significant gains to a NYSE listing for sample firms. The average announcement return over [-2,2] day is estimated to be 2.74% and significant at the 1% level. We find important differences in the level and size of corporate transactions initiated by Nasdaq firms that moved to the NYSE and by firms that chose to stay in Nasdaq. Firms that move to the NYSE access capital markets more frequently, and usually through bigger issues, than firms that do not move even in the two years prior to the move. They have twice the number of debt issues and 50 percent more equity issues in the two years prior to the move than their control peers. Though there is a reduction in the number of such issuances over time in our sample, we find strong evidence that sample firms continue to raise more debt and equity than their control firms in the two years after the move to the NYSE.

Our evidence on acquisition activities – all transactions involving the purchase or sale of a firm or a part of its assets – present greater contrast between firms that move to the NYSE and firms that chose to remain in Nasdaq. Though there is an increase in the

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<sup>3</sup> Since acquisition programs need time to be put in place, we chose two years before and after the listing

number of acquisition activities that firms are involved in the two years after moving, the increase for sample firms is *twice* as much as the increase for the control firms, and 50 percent more than when they were in Nasdaq. When we consider only transactions where the firm was an acquirer, the results present even stronger evidence that the decision to move from Nasdaq to the NYSE is nested among broader corporate objectives that involve raising capital and undertaking acquisitions, a fact that has been largely ignored in the previous literature.

Our results suggest that firms choose to move to the NYSE when their interactions with capital markets are likely to be high. This is contrary to the results of prior studies that “managerial opportunism” drives the timing of a NYSE move. McConnell and Sanger (1987), Dharan and Ikenberry (1995), Webb (1999) and Lin (2002) document that firms have good performance in the years before the move but not in the years after the move to NYSE.

We do not find any evidence of ‘managerial opportunism’ among firms that move as part of a broader corporate agenda. There is no evidence of post-listing under performance for sample firms that undertake corporate transactions in the years after the move to NYSE. Firms that issue debt or have at least two or more asset purchases in the two years after the move have positive market-adjusted excess returns. This suggests that the need to finance immediate growth opportunities rather than opportunism drives the decision of when to list for firms with such opportunities.

As far as we know, this paper is the first to show that firms’ involvement in capital raising and acquisition activities is an important factor impacting their decision to

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change. We do not examine firm behavior in the year that they moved to the NYSE.

move to NYSE. Firms that move are more active in raising debt, equity and in acquiring assets of other firms even prior to their move. But they increase these activities significantly following their move to the NYSE suggesting that the listing decision is often taken by the firm, not in isolation, but rather as a part of other major corporate decisions.

The rest of the paper is organized as follows. Section 1 describes the empirical design and our data. Section 2 examines changes in corporate transactions for sample and control firms around the time they decide to leave Nasdaq. Section 3 examines excess returns of sample and control firms and relates them to their corporate activity and Section 4 concludes.

## **1 Empirical Design**

### **1.1 NYSE Listing Eligibility**

Panel A of Table 1 presents the objective listing criteria that the NYSE adopts towards domestic companies. During our sample period 1986-1998, the eligibility requirements were changed only once. We use a subset of these criteria based on firms' earnings, total assets and market value to determine eligibility for listing (see Panel B). It is important to note that a NYSE listing is not guaranteed for firms that satisfy our criteria as the exchange often uses other subjective criteria as well. Similarly, there could be special circumstances under which Nasdaq firms could move to the NYSE without satisfying these objective criteria. Given that such exceptions are rare, we limit our study to those Nasdaq firms that meet our objective NYSE listing criteria only.

Based on our criteria, there were 2,654 Nasdaq firms that were eligible to be listed on the NYSE over the period 1986 to 1998. We do not consider financial firms and firms that were deemed foreign by CRSP for this study. There were more Nasdaq firms that were eligible to move to the NYSE in the latter part of our sample (See Table 2). This is not surprising and reflects the rapid increase in the valuation of Nasdaq firms during that period. There were more than 1,000 Nasdaq firms that were eligible from the mid 1990s, which is twice the number of firms that were eligible in the mid 1980s. The average (median) size of eligible firms also more than doubled over our sample period from \$215 million dollars (\$107 million) in 1986 to \$520 million dollars (\$201 million) of total assets in 1998.

To examine whether there is any significant gains associated with a NYSE move we estimate the market reaction to the announcement of the listing on NYSE.<sup>4</sup> Abnormal returns were computed using a value-weighted CRSP market model. Consistent with prior literature, we find that the move to NYSE is associated with significant gains. As can be seen from Table 3b, the mean cumulative abnormal return (CAR) for the five day period from (-2,2) days is 2.74% and significant at the 1% level.

## **1.2 Sample and Control Firms**

From our eligible firms, we identify firms that moved from Nasdaq to the NYSE in each of the years 1986 to 1998. There were 460 Nasdaq firms that moved to the NYSE during this period. Firms that move are, on average, larger in size compared to

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<sup>4</sup> The listing dates were obtained through a search in Factiva ([www.factiva.com](http://www.factiva.com)), a search engine that scans trade and mainstream publications. Only sample firms for which we have clear announcements dates were included in this estimation.

firms that stay back. In recent years, firms that move are twice as large as firms that choose not to move to the NYSE. Moreover, firms wait twice as long to move after becoming eligible to move in comparison to earlier periods. Since we do not consider eligibility prior to our sample period, our estimate on the average years of eligibility before moving is likely to be conservative, especially in the earlier part of the sample.

The proportion of eligible firms that move dropped from the mid 1980s to early 1990s, indicating the growing importance of the Nasdaq stock market. However, we find evidence of more firms opting to move to the NYSE in the latter part of our sample. It is possible that more firms moved following government investigations on Nasdaq market practices or following enhanced marketing efforts by the NYSE.

We find that firms that choose to move to the NYSE are likely to operate in industries that are quite different from industries where most eligible firms operate (see table 3). Further, extant research has shown that firms with imminent gains in visibility and liquidity are likely to move to the NYSE. To ensure that the firm behavior we study is not driven by these factors, we create a control group that is matched on these criteria. We use size as a proxy for visibility and liquidity, in line with prior research, and therefore match on size in lieu of a match on visibility and liquidity.<sup>5</sup>

The control group consists of Nasdaq firms that were eligible to move but choose not to do so. Given that we study firm behavior around the time of their move, we require that the control firm should not have moved to the NYSE not only in the year in which the sample firm moved but also in the two years after. The control firm should have

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<sup>5</sup> Arbel and Strebel (1982, 1983) and Baker, Powell and Weaver (1999) document a positive correlation between firm size and visibility. Christie and Huang (1994) provide evidence of the relationship between size and liquidity.

total assets within 75 percent and 125 percent of the total assets of the sample firm and be in the same two-digit SIC. After removing non-financial firms, our matching procedure, without replacement, yielded 237 distinct pairs of sample and control firms.<sup>6</sup>

Table 4 reports characteristics for sample and control firms. We use three different proxies for size - total assets, sales and market value in the year prior to the move – and find no difference between sample and control firms. This indicates that our matching procedure has worked well to control for this important attribute. We also find little difference between the sample and control firms in age, i.e., the number of years for which the firm has been covered by CRSP database and leverage, the ratio of long term debt to total assets.

Both sample firms and their control firms grew in the years before the move. There was however, a marked difference in the rate of growth of these two groups. The median sample firm experienced an average growth rate in cash, sales and assets that was almost twice that of the median control firm over the two years prior to the move. Sample firms also had a higher Tobin's Q than their control firms.<sup>7</sup> Mean and median values of growth rates differ significantly indicating wide variation in these growth rates among individual firms. This difference in growth rates in the years prior to moving is consistent with evidence documented in other studies that suggest that firms move after a period of strong growth (See, for example, Dharan and Ikenberry (1995), McConnell and Sanger (1987) and Cowan, Carter, Dark and Singh (1992)).

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<sup>6</sup> We were able to obtain a higher matching percentage with a less restrictive band around the size of sample firms, but the matches were less meaningful.

<sup>7</sup> We measure Tobin's Q as  $(\text{Total Assets} + \text{Market Value of Equity} - \text{Book Value of Equity} + \text{Deferred Taxes}) / \text{Total Assets}$ .

Given that sample firms are growing faster than control firms, it is not surprising to see that they trade more actively despite being quite similar in their sales and total assets. The median sample firm has 50 percent more volume than the median control firm in our sample. Interestingly, these marked differences in growth and trading activity between sample and control firms are not reflected either in the analyst coverage, or in the institutional ownership of these two groups of firms prior to the year they move, or the year in which they were eligible to move but chose not to.<sup>8</sup> The median firm in our sample, whether it be a sample firm or a control firm, is covered by five analysts and has a little less than 40 percent institutional ownership during our sample period.

Our descriptive results suggest that Nasdaq firms that chose to move to the NYSE grow at a faster rate prior to their move than similar sized Nasdaq firms operating in the same industry that are eligible to but choose not to move to the NYSE. While a firm's growth prospects may not determine whether it chooses to list at the NYSE, it certainly could determine when it lists at the NYSE. Studies such as Dharan and Ikenberry (1995) have documented that Nasdaq firms move after a period of high growth before bad performance derails their chance of a NYSE listing.

## **2 Corporate Transactions**

To examine whether the decision to list is part of a broader corporate agenda, we examine *three* types of corporate transactions – issue of debt, issue of equity and the purchase or sale of the whole or part of a firm's assets including mergers (to be subsequently referred to as asset transactions) – surrounding the move to the NYSE for

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<sup>8</sup> Data on analyst coverage is obtained from I/B/E/S database while that on institutional ownership is

sample and control firms. Though firms could be involved in a variety of other transactions such as equity carve-outs and restructurings as well, we limit our focus to transactions that are central to a typical corporate strategy.

Our data on corporate transactions are from Securities and Data Corporation's database. We use the year of moving for the sample firm as the 'event year' for both the sample firm and its control firm. For each sample and control firm, we obtain data on all debt issues, equity issues, and purchases and sales of assets including mergers for the two years prior to and for the two years subsequent to its event year. We exclude transactions in the event year for our analyses.<sup>9</sup>

## **2.1 Univariate Analysis**

We first examine average changes in corporate activity of sample and control firms following their decision to move from Nasdaq. We examine changes both in the level and size of debt and equity issues but examine only changes in the level of asset sales or purchases around the event year for sample and control firms. Data on the value of asset transactions are mostly incomplete, especially when such transactions involve firms that are not publicly traded. To see if there are differences in assets sales and purchases, we also examine changes in the number of asset transactions where the firm was an acquirer.

For both sample and control firms, we present the mean change in corporate activity from two years before to two years after the event year and test for whether the change is significant. In addition, we present the mean difference between sample and

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obtained from Spectrum.

<sup>9</sup> Relaxing this restriction does not change our results qualitatively.

control firms in changes in corporate transactions, i.e.,  $((\text{Sample}_{\text{post}} - \text{Sample}_{\text{prior}}) - (\text{Control}_{\text{post}} - \text{Control}_{\text{prior}}))$ . We use both parametric (paired t-statistic) and non-parametric (Wilcoxon signed-rank statistic) inference procedures under three levels (99%, 95% and 90%) of confidence to determine the statistical magnitude of these differences.

Sample firms, on average, issued more debt and equity, and were involved in a greater number of transactions involving the sale or purchase of assets, including mergers, than control firms even before they moved to the NYSE (See Table 5). This complements our earlier finding that sample firms grew faster than control firms in the years before they moved. Asset purchases constituted more than 80 percent of all asset transactions for both sample and control firms suggesting that growth through acquisitions was popular with both sets of firms.

Both sample and control firms had fewer debt issues in the two years following the event year than in the two years before. Sample firms had 58 debt issues in the two years before but had only 52 debt issues in the two years after their move to the NYSE. Debt issues by control firms dropped from 24 to 16 during the same period. The gross proceeds from debt issues, however, increased from \$3,756 million to \$6,894 million for sample firms, while it dropped from \$2,363 million to \$1,450 million for control firms during the same period. The interesting question for this study is the difference across the sample and control firms. The median drop in debt issues for the sample firms is significantly less than the median drop in control firms, though the means are not different. Sample firms raise significantly more in debt proceeds than control firms.

The number of equity issues also dropped in the two years following the event relative to the two years before for both sample and control firms. Sample firms had 116 equity issues in the two years before but had only 53 equity issues in the two years after their move to the NYSE. Equity issues by control firms dropped from 82 to 24 during the same period. This drop in the number of equity issues after moving is significant for both sample and control firms. The gross proceeds from equity issues, decreased from \$5,804 million to \$4,645 million for sample firms, while it dropped from \$4,434 million to \$2,470 million for control firms during the same period. However, the difference between sample and control firms, in changes in the number of equity issues and proceeds from equity issues, is mostly not significant.

We find interesting patterns in the level of asset sales and purchases initiated by sample and control firms around their event year. While sample firms had a 51 percent increase (from 332 deals to 502 deals) in the number of asset transactions from two years before to two years after they move to the NYSE, control firms showed only a 26 percent increase (from 283 deals to 358 deals) over the same time period. As mentioned before, most of these deals involve asset purchases for both sample and control firms. The number of asset purchases increased by 47 percent (from 288 deals to 423 deals) for sample firms, but only by 18 percent (from 257 deals to 303 deals) for control firms, over the four-year period straddling the firm's event year. The increase in asset transactions following the move to the NYSE for a sample firm, be it an average firm or a median firm, is significantly greater than the increase for its corresponding control firm.

In summary, we find significant differences between sample and control firms in the changes in corporate transactions surrounding the event year. Sample firms do

significantly more asset transactions in the two years after moving than the control group. Sample firms also raise significantly more debt in the two years after moving than the control firms. There is little difference between sample and control firms in equity issuance. As we have not controlled for factors unrelated to the listing decision that are nevertheless important to the decision to initiate corporate transactions, we present a more detailed multivariate analysis below.

## **2.2 Multivariate Analysis**

We estimate six different OLS regression models of the change in the number and size of corporate transactions surrounding the decision of firms to list at the NYSE.<sup>10</sup> The dependent variables in these models are: Change in the number and proceeds of debt issues, change in the number and proceeds of equity issues, change in the number of asset transactions, and change in the number of asset purchases. All our dependent variables represent changes in the two years after over two years before the firm's event year.

Our main variable of interest is the sample dummy, which takes the value one if the firm is a sample firm and zero otherwise. We expect the coefficient of the sample dummy to be significant if the decision to list plays an important role in the change in corporate activity. We use several explanatory variables that control for other factors that might also explain changes in corporate transactions over time.

Firms often raise capital or acquire other firms to exploit their growth opportunities. We use three variables that best capture growth opportunities for a firm:

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<sup>10</sup> Though the dependent variable – change in the level and size of corporate transactions – could take the value zero, we believe OLS to be the most appropriate model for estimation. A tobit model is not appropriate as the data are not truncated at zero. Similarly, probit and logit models cannot be fitted as the dependent variable is not qualitative. The Poisson regression model for count data is also not appropriate on account of negative values.

cash and sales growth over the two years prior to the event year as well as its Tobin's Q in the year prior. The current financial strength of a firm also impacts whether the firm would seek additional capital or acquire other firms. We include the value of cash and equivalents as well as the number of equity issues and the gross proceeds from such issues in the year prior to moving to measure a firm's current financial strength. Firms are less likely to issue equity if they are high in cash. Similarly, large cash balances may prompt firms to seek acquisitions especially when opportunities to invest within the firm are limited. Such activities could be tempered if the firm had accessed the capital markets only recently.

The age of a firm could also have a bearing on a firm's need to initiate corporate transactions. Firms are more likely to access the capital market when they are young. Older firms with stable operations are more likely to be generating cash flows or have retained earnings to finance their investment and growth. Capital structure, especially leverage, could determine the choice of issuing debt or equity or undertake acquisitions using stock or cash. We define leverage as the ratio of long-term debt to total assets in the years prior to moving. Like most related studies, we control for firm size, as measured by the logarithm of total assets and market capitalization, as well.

Several studies have documented the role of visibility in facilitating corporate transactions such as equity issues (see Merton (1987), Barry and Brown (1986) and Bhardwaj and Brooks (1992)). To control for this, we include *three* variables that capture the pre-listing visibility enjoyed by the firm: Analyst coverage, the percentage of the firm held by institutional investors and the total number of institutional investors in the firm in

the year prior to the event year. We expect the sample dummy to reflect any benefits from the increase in visibility following the move to the NYSE.

Table 6 presents results of the multivariate analysis of changes in corporate transactions. The explanatory power of these models range from 73 percent for the change in the number of equity issues to six percent for the change in the number of asset transactions. The results for individual corporate transactions are discussed below.

### **2.2.1 Changes in Debt Issuances**

The coefficient of the sample dummy is positive and significant in both models of debt issuance (columns 2 and 3 in Table 6). Even though there is an overall decline in debt activity for both sample and control firms, it is clear that sample firms issue more debt, and raise more proceeds through debt issues, in the two years after they move to the NYSE than their control firms.

Surprisingly, there is little evidence that firms with high growth are more likely to issue debt. None of the coefficients of growth in cash, sales or Tobin's Q are significant. However, prior history of borrowing significantly impacts changes in debt policy. Firms that raise more debt in the period prior to moving to the NYSE are less likely to issue debt in the future. The coefficient of leverage is negative though not significant, suggesting that highly leveraged firms tend to issue less debt. The coefficient of the log of total assets is positive and significant implying that large firms issue more debt. There is little evidence that either age or prior visibility significantly impact debt issuance by firms.

### **2.2.2 Changes in Equity Issuances**

The coefficient of the sample dummy is positive and significant only in the model of the number but not of the size of equity issuances (columns 4 and 5 in Table 6).

Firms that move to the NYSE significantly increase the number of equity issues but not the gross proceeds from such issues in the two years after they move compared to their control firms. Like in the case of debt issues, sample firms are more active than control firms despite an overall reduction in equity issuances over time.

Pre-listing growth levels do not seem to be important to the change in equity activity of these firms. Firms that issued equity in the year prior to moving to the NYSE are less likely to issue equity again. Interestingly, the percentage of institutional ownership has a positive impact on the change in equity issuance over time while the number of institutional owners has a negative effect. However, pre-listing analyst coverage does not explain changes in equity activity like other variables such as age, leverage and size.

### **2.2.3 Changes in Asset Transactions**

The dependent variable, asset transactions, includes both purchase and sale of assets. Since most of asset transactions involve a purchase rather than a sale, our results for the change in asset purchases (column 7 of Table 6) are similar, but stronger, to those for the change in all asset transactions (column 6 of Table 6).

The coefficient of sample dummy is positive and significant for both models of assets transactions. Firms that move to the NYSE are significantly more likely to increase asset transactions, especially acquisitions, in comparison to control firms. High growth rates in firms and firm size appear to weakly enhance and diminish asset transactions respectively, though their coefficients remain statistically insignificant.

However, older firms and firms with large cash balances are more likely to increase asset transactions over time. Similarly, firms with higher pre-listing analyst coverage are likely to increase their asset transactions over time while institutional ownership has a smaller and mixed effect on the incidence of such transactions.

Our evidence on corporate transactions presents a contrast between firms that move to the NYSE and firms that chose to remain in Nasdaq, suggesting that the decision to move is often nested among broader corporate objectives, a fact that has been largely ignored in the previous literature.

### **3 Excess Returns and Corporate Transactions**

#### **3.1 Post-listing Underperformance**

McConnell and Sanger (1987) and Dharan and Ikenberry (1995) document that firms move to the NYSE after a period of good performance and underperform in the years subsequent to moving. Dharan and Ikenberry (1995) interpret this evidence as managerial timing, i.e., firms that find the initial criteria for listing on NYSE more restrictive, tend to apply for listing before a decline in performance. To examine whether the post-listing underperformance, as documented in these studies, could be attributed to the higher level of corporate transactions among Nasdaq firms that move to the NYSE, we study buy-and-hold market-adjusted excess returns for sample and control firms for the two years before and after the move to the NYSE.

We use different measures for the reference portfolio to estimate our two-year buy and hold excess returns (see Barber and Lyon (1997)). First, given the importance of size and book-to-market in explaining the cross section of stock returns, (Fama and French

(1992, 1993)) we use the return on matched size and book-to-market portfolios as the benchmark return.<sup>11</sup> We use Fama and French 25 (5x5) size and book to market portfolios of all NYSE/AMEX and Nasdaq firms.<sup>12</sup> Our measure of excess returns, Fama-French Size and BM-adjusted return, is given by  $\prod_{t=1}^{24} (1 + R_{it}) - \prod_{t=1}^{24} (1 + R_{FF25t})$  where  $R_{it}$  is the return in month t for firm i, and  $R_{FF25t}$  is the return in month t for the benchmark, i.e., the size and book-to-market matched portfolio.

Second, we use various market indices – the NYSE equal-weighted index, the NYSE value-weighted index, the Nasdaq equal-weighted index and the Nasdaq value-weighted index – as the reference benchmark portfolio. Our measure of excess returns is simply the difference between the two year buy and hold return of the firm and the two year buy and hold return of the respective market index.<sup>13</sup>

Panel A of Table 7 presents results on change in excess returns for sample and control firms in the two years after over the two years before the event year. Irrespective of the benchmarks we use, the average excess return for sample firms drops significantly from around 80 percent in the two years before the move to around –10 percent in the

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<sup>11</sup> Several recent papers use size and book-to-market adjusted returns to measure abnormal stock returns, for e.g., Brav and Gompers (1997). Several papers adjust returns only for size. We do not report size-adjusted returns as it ignores the importance of book-to-market and has been shown by Barber and Lyon (1997) to generate biased test statistics.

<sup>12</sup> The returns on these portfolios as well as the portfolio breakpoints were obtained from Professor French's website. The portfolios are constructed once a year at the end of June and are the intersection of 5 portfolios formed on size (market value of equity) and 5 portfolio formed on the ratio of book value of equity to market value of equity. The size breakpoints for year t are the NYSE market equity quintile at the end of June of year t. The book to market breakpoint are also based on NYSE quintiles calculated using book value of equity for fiscal year end t-1 and market equity at the end of June of year t. The portfolios for July of year t to June to year t+1 include all NYSE, AMEX and Nasdaq stocks, which are within the size and book to market breakpoints.

<sup>13</sup> Brav and Gompers (1997) point out that long run performance in event studies may be biased as event returns are correlated in calendar time. However, since we estimate abnormal returns for control firms, which have been given the same event year as sample firms this is less of a concern for us. Further we examine events over a very short period of time i.e., from 1991 to 1995.

two years after the move to the NYSE. The mean decline in excess return over the two periods is greatest when we use the Nasdaq value-weighted index (-115 percent), and the least when we use the NYSE equal-weighted index (-87 percent) as our benchmarks. Our evidence is consistent with earlier findings by McConnell and Sanger (1987) and Dharan and Ikenberry (1995) that firms move to the NYSE after a period of good performance and experience a decline following their move.

Interestingly, we see similar patterns for control firms as well – firms that chose to remain in Nasdaq. The mean decline in excess return for control firms over the two periods ranges from -19 percent (using Nasdaq equal-weighted index as the benchmark) to -52 percent (using Fama-French size and book-to-market reference portfolio as the benchmark). Clearly, the mean decline for control firms was lower because they had lower excess returns in the two years prior to their event year. The average excess return in the two years prior was around 50 percent for control firms as compared to around 80 percent for sample firms.

Given that we require 24 months of price data to estimate two-year buy and hold returns, both before and after the event year, only 111 sample firms and 140 control firms had sufficient data. Therefore only 89 matched pairs of sample and control firms could be used for a matched pair-wise comparison of sample and control firms. For these 89 pairs, we find that the mean decline in excess returns for the average sample firm was greater than that of its control firm by as much as 76 percent. The results for the median sample and control firm are similar. Our evidence suggests that post-listing underperformance by Nasdaq firms exists though it is mitigated in part by industry-related factors that may have nothing to do with their decision to list at the NYSE.

### 3.2 Post-listing Underperformance and Corporate Activity

Next we examine post-listing underperformance by debt, equity and asset transactions of firms in the two years after the event year. For this analysis we consider only asset purchases, as they constitute the majority of all asset transactions. We define a firm to be active if it had at least one transaction – a debt issue, an equity issue or an acquisition – following its decision to move to the NYSE. Since asset purchases are much more common than debt and equity issues, we present results separately for firms that had only one purchase and for firms that had more than one purchase. We present results for excess returns estimated using Fama-French Size and Book-to-Market reference portfolio.<sup>14</sup>

The results presented in Panel B, of Table 7, show that much of the underperformance of Nasdaq firms following their decision to list at the NYSE is localized in firms that had little or no corporate activity. Sample firms that had no debt issuance after their move to the NYSE underperformed their benchmark by 16 percent in the two years after their move, while those that had at least one debt issue actually beat their benchmark by 63 percent over the same period. This pattern was also visible, though less pronounced, for control firms (-7 percent for firms with no debt issue as compared to +7 percent for firms with at least one debt issue). The mean change across the two two-year periods straddling the event year was significantly negative only for sample and control firms with no debt issue.

We get similar results when we examine firms by their equity activity as well. Sample firms that had no post-listing equity issues underperform their benchmark by 13

percent in the two years after they move, while sample firms with at least one equity issue beat their benchmark by 30 percent. Control firms exhibit a similar pattern as well (-10 percent for firms with no equity issue as compared to +26 percent for firms with at least one equity issue). Like the case of debt, the mean change across the two periods was significantly negative only for sample and control firms with no equity issue.

Our results for asset purchases are qualitatively similar to earlier results by debt and equity issuances. In this case, we find evidence that both sample and control firms under-perform the benchmark in the two years after listing at the NYSE. The decline in performance from the two years prior to the two years after listing, is also significant for both sample and control firms. However, the significance levels drop for firms that do asset purchases. Though there is evidence of underperformance and decline in performance for all categories, irrespective of the number of asset purchases undertaken, the difference between the sample and control is significant only for the group that does no transactions. In other words, the decline in performance for sample firms is not different from control firms when there is one or more asset purchases in the years after listing.

In summary, we find that underperformance is not unique to Nasdaq firms that move to the NYSE but is also prevalent among other Nasdaq firms that operate in the same industry but choose not to move to the NYSE. Although the listing venue does exacerbate underperformance over time, industry-related factors play an equally decisive role in firm-level underperformance, a fact that has been largely ignored in the literature.

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<sup>14</sup> Using other benchmarks does not change our results qualitatively.

We find clear evidence that the post-listing underperformance is localized among firms that move from Nasdaq to the NYSE without a broader corporate agenda.

### **3.3 A Model of Excess Returns**

In this section, we present a multivariate analysis of the relation between post-listing underperformance and corporate activity. We estimate four different models to explain excess returns in the two years after listing at the NYSE. The four models differ in the type of corporate activity examined. Models 1, 2 and 3 examine the effect of debt, equity and acquisition activity respectively, while Model 4 examines the effect of all these activities together on excess returns. We use the level as well as the size of corporate activities.

As before, we use a sample dummy to capture relative differences between Nasdaq firms that move to the NYSE (dummy=1) and those that stay back in Nasdaq (dummy=0). A significant negative coefficient for the sample dummy implies that sample firms underperform in the years after listing at the NYSE. To examine the effect of corporate activity on post-listing excess returns, we include the interaction of the sample dummy with corporate activity dummies, that take the value of one when the the firm undertakes corporate activity in the two years after listing at the NYSE. A significant positive coefficient for the interaction of the dummies implies that sample firms that engage in corporate activities in the years after moving earn higher returns than sample firms that do not engage in these activities.

We find that sample firms underperform, by about 32 percent, relative to their control peers when they are not active in debt, equity or acquisition activities (see Table 8). This underperformance disappears when they raise debt. Sample firms, which issue

debt earn higher returns, about 72%, relative to sample firms that do not issue debt. In aggregate, there is no underperformance for sample firms that issue debt after listing at the NYSE.

Equity issues by sample firms do not have any effect on post-listing underperformance. As seen in Table 6, among the corporate activities examined, the evidence on the increase in equity issues in the two- year periods surrounding the event year is the weakest. It is therefore not surprising that we do not find evidence that equity issues impact post-listing underperformance of sample firms.

Lastly, sample firms that undertake two or more asset purchases earn significant positive excess returns, of about 40%, relative to sample firms that do undertake asset purchases. There is no evidence of post-listing underperformance for this group. Having only one acquisition reduces but does not eliminate a firm's underperformance.

## **4 Conclusion**

Though several Nasdaq firms are eligible to list at the NYSE only few firms choose to do so. This is surprising given well-documented benefits that Nasdaq firms derive from a NYSE listing. Further firms that move to the NYSE wait for a few years after they become eligible. In this paper, we present evidence that suggests that involvement in capital raising and acquisition activities may determine whether and when Nasdaq firms decide to move to the NYSE.

We study firms that moved from Nasdaq to the NYSE between 1986 and 1998 and a size and industry matched control group of Nasdaq firm that were eligible to list at the NYSE but chose not to move. We find that firms that move to the NYSE raised more

capital through issue of debt and equity and were involved in more acquisitions, especially asset purchases, than their control peers even while they were trading in Nasdaq. But more significantly, the increase in their propensity for these activities after their move to the NYSE was unmatched by their control peers, suggesting that the decision to whether and when to list is often taken in conjunction with these other corporate activities. Moreover, we find no post-listing underperformance among firms that are active in issuing debt or equity or in acquiring assets following their listing, suggesting that ‘managerial opportunism’ is a possible motive in only some but not all Nasdaq firms that list at the NYSE. By bringing to light the nesting of the listing decision among broader corporate objectives, a fact that has been largely ignored in the previous literature, our results provide a new perspective to why only some Nasdaq firms switch to the NYSE.

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## Table 1 NYSE Listing Requirements for Domestic firms

This table lists the requirements for listing on the NYSE. Panel A displays the NYSE listing requirements for the period 1986 to 1998. The listing requirements are from the NYSE fact book. Panel B lists the implementation of the requirement for the determination of eligibility to move to the NYSE for this study. The NYSE listing criteria also include requirements regarding corporate governance practices of firms, which have not been taken into account here. Also the NYSE over recent years has been seen to relax some of these criteria for some firms. As a result eligibility as estimated by the criteria here is only indicative and does not predict with certainty that the firms would be listed on the NYSE if they want to.

<u>Panel A: NYSE listing Requirements</u>		
	1986-1994	1995-1998
Pre-tax income latest year	\$ 2.5 million <sup>a</sup>	\$ 2.5 million <sup>a</sup>
Pre –tax income in the preceding two years	\$ 2.0 million <sup>a</sup>	\$ 2.0 million <sup>a</sup>
Net Tangible assets	\$ 40.0 million	\$ 40.0 million
Aggregate market value of publicly held shares	\$ 18.0 million <sup>b</sup>	\$ 40.0 million <sup>b</sup>
Shares publicly held	1.1 million	1.1 million
Number of holders of round lots (greater than 100 shares)	2,000	2,000
 <u>Panel B: Implementation of the Requirements for this study</u>		
EBIT in the year prior to the year of change	\$ 2.5 million <sup>a</sup>	\$ 2.5 million <sup>a</sup>
EBIT in the preceding two years	\$ 2.0 million <sup>a</sup>	\$ 2.0 million <sup>a</sup>
Total assets	\$ 40.0 million <sup>c</sup>	\$ 40.0 million <sup>c</sup>
Aggregate market value of firm	\$ 18.0 million <sup>b</sup>	\$ 40.0 million <sup>b</sup>
Number of shares outstanding	1.1 million	1.1 million

a. Or \$ 6.5 million for prior three years and \$ 4.5 million in the most recent year

b. Was \$ 18 million prior to January 2, 1996.

c. Also implemented tougher listing criteria where Net PPE was greater than or equal to 40 million. However as many firms which moved to the NYSE did have Net PPE less than 40 million we decided to interpret the requirement of Net Tangible assets being greater than \$ 40 million as being that of total assets being greater than or equal to \$40 million.

**Table 2**  
**Summary Information on Eligible and Sample Firms**

This table presents summary information on Nasdaq firms that are eligible to move to the NYSE and Nasdaq firms that did move to the NYSE between 1986 and 1998. We identify eligible firms based on the eligibility criteria listed in Table 1 but exclude financial and foreign incorporated firms. Firms may be eligible to move in more than one year. We report average years of eligibility before moving for sample firms only for the years 1988-1998 as the statistic would be more likely to be biased for years 1986 and 1987 for lack of eligibility information prior to the sample period.

Year	Eligible Firms (Nasdaq firms that are eligible to list at the NYSE)			Sample Firms (Nasdaq Firms that move to the NYSE)			% of eligible firms that move to NYSE	Average years of eligibility before moving
	Total Assets (in million dollars)			Total Assets (in million dollars)				
	N	Mean	Median	N	Mean	Median		
1986	362	215.88	106.65	21	179.62	130.80	5.8%	NA
1987	577	240.16	119.86	30	248.35	128.42	5.2	NA
1988	627	276.16	123.37	37	480.82	244.61	5.9	2.40
1989	571	259.94	129.57	26	566.39	296.40	4.6	2.93
1990	646	324.96	132.79	24	579.03	215.53	3.7	3.50
1991	645	329.23	133.60	28	380.04	350.94	4.3	3.95
1992	730	344.91	128.85	26	321.41	236.54	3.6	5.24
1993	854	342.28	132.11	28	1227.57	180.56	3.3	5.05
1994	1,017	318.90	138.42	26	663.04	401.54	2.6	5.57
1995	949	389.47	163.91	45	515.07	342.11	4.7	6.46
1996	1,039	551.00	172.58	48	732.49	421.46	4.6	5.68
1997	1,081	550.46	175.34	64	981.02	593.62	5.9	6.02
1998	1,021	521.73	201.71	57	1051.64	475.68	5.6	6.74
Total	10,119	385.30	146.24	460	672.41	312.11	4.5	5.20

**Table 3**  
**Industry Distribution of Sample and Eligible Firms**

This table displays the frequency distribution of Nasdaq firms that moved to the NYSE and eligible Nasdaq firms that chose not to move during the period 1986 to 1998 across industries using a 2-digit SIC code. We identify eligible firms based on the eligibility criteria listed in Table 1 but exclude financial firms. We report the top fifteen industry codes in which the sample firms operate. We also report the percentage of unique eligible firms – firms that were eligible to move to the NYSE at least once during the sample period – that operate in the same industry code.

Two-digit SIC Code	% of Sample Firms	% of Unique Eligible Firms
35	8.70	9.04
49	7.39	2.52
73	7.17	12.58
13	5.87	2.15
80	5.87	3.77
28	5.43	3.13
36	5.00	10.85
34	3.26	2.19
38	3.26	5.99
27	3.04	1.32
51	3.04	2.37
50	2.61	4.33
59	2.61	3.13
58	2.39	2.83
37	2.17	2.03
Others	32.17	31.77

**Table 3b**  
**Market Reaction to Listing Change**

This table displays cumulative abnormal returns around the announcement of a move to NYSE for sample firms. The abnormal returns were computed using a value-weighted CRSP market model after adjusting for market movements. The t statistic is reported in parenthesis below. \*\*\* represents significance at the 1% level.

Time interval around listing change announcement	Mean cumulative abnormal return (t-statistic)
-30 to -3	1.90% (1.66)
-2 to +2	2.74% (5.65***)
+2 to +30	-1.26% (-1.10)

**Table 4**  
**Cross-sectional Statistics of Control and Sample Firms**

This table presents summary cross-sectional statistics of our sample firms and control firms. Sample firms are Nasdaq firms that move to the NYSE between 1986 and 1998. Control firms are size and industry matched Nasdaq firms that were eligible to move to NYSE. Market capitalization, total assets, and sales are the respective values prior to the year of moving, in millions of dollars. Age is the number of years at time of moving since the firm was first covered by CRSP database. Leverage is the percentage of long-term debt to total assets in the year prior to moving to the NYSE. Growth rate in cash, total assets and sales is the average percentage growth rate for the two years prior to moving. Share volume, expressed in million of shares, closing share price, number of analysts, the number of institutional shareholders and the percentage of the firm held by institutions pertain to the year prior to moving. The "Difference" column displays difference in means and medians. The asterisk superscripts, \*, \*\*, \*\*\*, represent statistical significance at the 10%, 5%, and 1% level respectively for the T statistics testing difference in means and the Mann-Whitney Z statistics testing difference in medians.

	Mean			Median		
	Sample	Control	Difference	Sample	Control	Difference
Total assets	304	315	-10	160	179	-19
Sales	358	369	-11	214	208	6
Market Value	433	556	-123	220	200	19
Age	7.9	8.1	-.19	4	6	-2
Leverage	18.9	17.3	1.6	14.7	11.1	3.6*
Cash growth	1,305	209	1096	58	33	25**
Sales growth	44.9	421	376	28.8	17.6	11***
Assets growth	51.5	96.2	45.3***	31.3	18.2	13.1***
Tobin's Q	2.36	2.07	0.28**	1.89	1.58	0.31***
Share Volume	32,972	56,208	-23,236	12,565	8,716	3,850***
Closing price	22.1	20.7	1.37	19.75	18.25	1.5
Number of Analysts	6.1	6.4	-0.3	5	5	0
% of firm owned by Institutional investors	45.45	47.78	-2.33	37	34.5	2.5
Number of institutional investors	40.9	40.5	0.4	39.3	39.8	0.5

**Table 5**  
**Changes in Corporate Transactions in the Years Around the Move to the NYSE**

The table displays incidence of corporate activity for sample and control firms in the two years before and the two years after they move to the NYSE or were eligible to move but chose not to. Control firms consist of size and industry matched Nasdaq firm that was eligible to move to NYSE but chose not do so. Column 4 and 7, titled 'Mean change' is the difference in the cross-sectional average of the number of corporate transactions in the two years before and two years after the move or after they were eligible to move. Column 8, titled 'Mean Difference ...' represents the difference in the mean changes between sample and control firms. All data for corporate activities are from the SDC database. The t-statistic is computed using a two-tailed paired t-test. The Wilcoxon signed-rank statistic tests for differences in the medians between sample and control firms. The asterisk superscripts, \*,\*\*,\*\*\*, represent statistical significance at the 10%, 5%, and 1% level respectively.

	Sample Firms			Control Firms			Mean Difference Between Sample and Control Firms	T- Statistic	Wilcoxon Signed-rank Statistic	Number of pairs
	2 years before	2 years after	Mean change	2 years before	2 years after	Mean change				
Number of debt issues	58	52	-0.025	24	16	-0.034	0.01	0.11	7.94***	237
Gross proceeds of debt issues (millions of \$)	3,756	6,894	13.2	2,363	1,450	-3.9	17.1	2.6***	7.8***	237
Number of equity issues	116	53	-0.27***	82	24	-0.24***	-0.02	0.33	2.48**	237
Gross proceeds of equity issues (millions of \$)	5,804	4,645	-4.9	4,434	2,472	-8.3*	3.4	0.5	0.02	237
Number of transactions involving sale or purchase of assets/firm (including mergers)	332	502	0.72***	283	358	0.32	0.40	1.68*	2.36**	237
Number of transactions involving purchase of assets/firm only	288	423	0.57**	257	303	0.19	0.38	1.82*	2.71***	237

**Table 6**  
**Cross-sectional Regressions of Changes in Corporate Transactions**

This table presents results of cross-sectional regressions of the change in corporate transactions in the two years after the move to the NYSE over the two years before the move. The dependent variable in columns 2 (3) is the change in the number (proceeds) of debt issues, in columns 4 (5) is the change in the number (proceeds) of equity issues, in column 6 is the change in the number of asset transactions and column 7 is the change in the number of asset transactions where the firms was an acquirer. Sample dummy takes the value one, if the firm is a sample firm, and zero, if it is a control firm. Age is the number of years since the firm first appeared on CRSP at the time of moving. Leverage is the ratio of long-term debt to total assets. Proceeds from prior issues represent the proceeds raised from prior debt (for columns 2 and 3) and equity (for columns 4 and 5) issues. Sales and cash growth is the mean growth for the two years prior to the move. Number of analysts, number of institutional owners and the percentage owned by institutions is measured one year prior to the move. T statistics are in parenthesis. The asterisk superscripts, \*, \*\*, \*\*\*, represent statistical significance at the 10%, 5%, and 1% level respectively.

	Number of debt issues	Proceeds from debt issues	Number of equity issues	Proceeds from equity issues	Number of asset transactions	Number of asset transactions, where firm was an acquirer
Intercept	-0.29* (-1.70)	-61.22** (-2.41)	-0.12 (-0.62)	-84.85*** (-3.01)	0.07 (0.06)	0.55 (0.53)
<b>Sample dummy</b>	<b>0.09** (2.20)</b>	<b>15.30*** (2.67)</b>	<b>0.11*** (2.55)</b>	<b>6.40 (1.03)</b>	<b>0.47* (1.81)</b>	<b>0.49** (2.01)</b>
Tobin's Q	0.02 (1.05)	3.35 (1.35)	0.01 (0.76)	5.86*** (2.19)	0.21* (1.83)	0.15 (1.44)
Cash growth (*1000)	0.00 (-0.54)	-0.20 (-0.66)	0.00 (-0.26)	0.01 (0.03)	0.00 (-0.07)	0.00 (0.00)
Sales growth (*1000)	0.00 (-0.17)	-0.10 (-0.17)	0.00 (-0.27)	-0.15 (-0.21)	0.01 (0.24)	0.01 (0.36)
Cash *1000	0.16 (0.55)	10.50 (0.25)	0.22 (0.75)	0.40 (0.01)	3.06* (1.67)	3.68** (2.16)
Proceeds from prior issues	0.00*** (-4.53)	-1.36*** (-13.79)	0.00 (-0.45)	-1.05*** (-11.40)		
Number of prior issues	-0.40*** (-12.34)	78.04*** (16.51)	-0.97*** (-20.38)	3.11 (0.43)		
Age (years)	0.00 (0.26)	-0.45 (-1.03)	0.00 (-1.00)	-0.54 (-1.06)	0.03* (1.71)	0.03* (1.85)
Market Capitalization (*1000)	-0.02 (-0.60)	-2.38 (-0.46)	0.01 (0.23)	8.75 (1.57)	-0.12 (-0.49)	-0.21 (-0.96)
Leverage	-0.11 (-0.85)	-28.13 (-1.49)	0.22 (1.62)	12.49 (0.62)	-0.45 (-0.53)	-0.88 (-1.11)
Log of Total Assets	0.08** (2.20)	13.29*** (2.65)	0.03 (0.83)	16.25*** (2.94)	-0.19 (-0.83)	-0.23 (-1.11)
Number of analysts	0.00 (-0.39)	-0.28 (-0.33)	0.01 (1.17)	0.87 (0.94)	0.09** (2.21)	0.05 (1.49)
% held by Institutions (*1000)	-0.05 (-0.41)	7.69 (0.42)	0.23* (1.79)	64.86*** (3.31)	0.85 (1.04)	0.33 (0.44)
No. of institutional owners	0.00 (-0.72)	-0.14 (-0.67)	0.00* (-1.90)	-0.75*** (-3.26)	-0.01 (-1.09)	-0.01 (-0.64)
R-square	0.84	0.50	0.73	0.45	0.06	0.06
No. of Observations	398	398	398	398	398	398

**Table 7**  
**Changes in Excess Returns in the Years Around the Move to the NYSE**

This table reports excess returns of sample and control firms in the two years before and after they move or were eligible to move to the NYSE but chose not to. Control firms are size and industry matched Nasdaq firms that were eligible to move. Excess return is defined as the two-year buy and hold return of the firm over the buy-and-hold benchmark return for the same period. Panel A reports results for all firms, while Panels B reports results classified by the level of post-listing debt, equity and asset transaction activity. We use five different benchmarks – return on a matched Fama-French size and Book to Market portfolio, returns on the NYSE equally-weighted and value-weighted indices, and returns on the Nasdaq equal weighted and value-weighted indices. Panel B report results using only the Fama-French size and book-to-market adjusted return. Columns 4 and 7, in Panel A, titled ‘Mean change’ and column 5, in Panel B, titled “Mean Change” are the differences in the cross-sectional average of the excess returns in the two years before and two years after the move or after they were eligible to move. Column 8, in Panel A, titled ‘Mean Difference ...’, represents the difference in the mean changes between sample and control firms. All data for corporate activities are from the SDC database. For Panel A, the t-statistic is computed using a two-tailed paired t-test and the Wilcoxon signed-rank statistic tests for differences in the medians between sample and control firms. For Panel B, the t statistic, in column 6, is for the test of difference in the mean change of excess returns between the sample and control firms. The asterisk superscripts, \*, \*\*, \*\*\*, represent statistical significance at the 10%, 5%, and 1% level.

Panel A: All Firms

Benchmark	Sample Firms			Control Firms			Mean Difference	T-Statistic	Wilcoxon Signed-rank statistic	Number of pairs
	2 years before	2 years after	Mean change	2 years before	2 years after	Mean Change				
Fama-French size and BM	0.87	-0.09	-0.99 <sup>***</sup>	0.50	-0.06	-0.52 <sup>**</sup>	-0.76	2.28 <sup>**</sup>	2.9 <sup>***</sup>	89
NYSE Equal Weighted Index	0.87	-0.01	-0.87 <sup>***</sup>	0.52	0.01	-0.44 <sup>**</sup>				
NYSE Value Weighted Index	0.83	-0.11	-0.93 <sup>***</sup>	0.47	-0.10	-0.50 <sup>**</sup>				
Nasdaq Equal Weighted Index	0.80	-0.11	-0.96 <sup>***</sup>	0.44	-0.09	-0.19				
Nasdaq Value Weighted Index	0.77	-0.28	-1.15 <sup>***</sup>	0.42	-0.29	0.50 <sup>**</sup>				
Number of observations	125	201	111	140	226	140	-0.75	2.25 <sup>**</sup>	3 <sup>***</sup>	89

**Table 7 (Continued)**

Panel B: By Corporate Transactions

Group		Fama-French Size and BM		Mean	T-statistic	Number of Firms	
		adjusted Returns				Change	2 years before
		2 years before	2 years after				2 years before
<u>Number of debt issues in the two years after the move</u>							
Zero	Sample	0.95	-0.16	-1.10***	2.44**	141	177
	Control	0.43	-0.07	-0.51**		175	220
One or more	Sample	0.70	0.63	-0.08	0.79	20	30
	Control	0.60	0.07	-0.53		11	15
<u>Number of equity issues in the two years after the move</u>							
Zero	Sample	0.81	-0.13	-0.94**	1.51	135	165
	Control	0.44	-0.10	-0.54**		172	211
One or more	Sample	1.47	0.30	-1.17*	1.25	26	42
	Control	0.44	0.26	-0.18		14	24
<u>Number of asset transaction where the firm was an acquirer</u>							
Zero	Sample	0.73	-0.35	-1.08***	2.46**	68	86
	Control	0.33	-0.12	-0.45**		92	117
One	Sample	1.22	-0.05	-1.27**	0.69	37	48
	Control	0.58	-0.15	-0.73*		44	53
Two or more	Sample	0.94	0.33	-0.62*	0.26	56	73
	Control	0.53	0.10	-0.43*		50	65

**Table 8**  
**Model of Post-Listing Excess Returns**

The table presents results of a simple OLS model of post-listing excess returns of sample and control firms. Excess return are two year buy and hold returns of the firm after the move to NYSE over the buy-and-hold returns of the matched Fama-French size and book-to-market portfolio for the same period. Models 1, 2 and 3 include explanatory variables that use information separately on debt, equity and acquisition activity respectively. Model 4 includes information on all of these activities together. All data for corporate activities are from the SDC database. Sample dummy takes the value 1 if it is a sample firm and zero otherwise. The interaction dummies represent the interaction of the sample dummy with dummies that take the value of 1 if the firm had at least one post-listing debt issuance (debt issuance dummy), if the firm had at least one post-listing equity issuance (equity issuance dummy), if the firm had only one post-listing asset purchase (one-asset purchase dummy), and if the firm had more than one post-listing asset purchase (two-asset purchase dummy). The t statistics are reported in parenthesis below. The asterisk superscripts, \*, \*\*, \*\*\*, represent statistical significance at the 10%, 5%, and 1% level.

Variable	Model 1	Model 2	Model 3	Model 4
Intercept	-0.03 (-0.42)	-0.10 (-1.26)	-0.09 (-1.10)	-0.10 (-1.12)
Sample dummy	-0.12 (-1.06)	-0.03 (-0.22)	-0.26* (-1.67)	-0.32** (-2.01)
Number of debt issuances two years after	-1.27*** (-4.65)			-1.31*** (-4.78)
Proceeds from debt issuances two years after (in million \$)	0.01*** (4.44)			0.01*** (4.57)
Number of equity issuances two years after		0.42 (1.47)		0.55** (1.98)
Proceeds from equity issuances two years after (in million \$)		0.00 (-0.27)		0.00 (-1.13)
Number of asset purchases two years after			0.02 (0.87)	0.02 (0.74)
<b><u>Interaction dummies</u></b>				
Sample dummy x debt issuance dummy	0.94*** (3.46)			0.72*** (2.57)
Sample dummy x equity issuance dummy		-0.03 (-0.08)		-0.19 (-0.56)
Sample dummy x one-asset purchase dummy			0.28 (1.30)	0.21 (0.97)
Sample dummy x two-asset purchase dummy			0.57** (2.46)	0.40* (1.75)
R-square	0.07	0.02	0.03	0.10
Number of firms	442	442	442	442