

# **Managerial actions in response to a market downturn: Valuation effects of name changes in the dot.com decline**

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We investigate stock price reactions to Internet related name changes in a market downturn. In contrast to the Internet boom period, during which there was a surge of dot.com additions, in the bust period, there is a dramatic reduction in the pace of dot.com additions accompanied by a rapid increase in dot.com name *deletions*. Following the Internet “crash” of mid-2000, investors react positively to name changes for firms that *remove* dot.com from their name. This dot.com deletion effect produces cumulative abnormal returns on the order of 64 percent for the sixty days surrounding the announcement day. Our results add support to a growing body of literature that documents that investors are potentially influenced by cosmetic effects and that managers rationally time corporate actions to take advantage of these biases.

Keywords: Name changes; Valuation effects; Inefficient markets; Internet firms; Dot.com bubble

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# 1. Introduction

A growing body of literature argues that markets are inefficient and that investors in financial markets do not always behave rationally. In addition, it argues that managers understand these stock market inefficiencies, and take advantage of them through corporate actions. Examples of such corporate actions include security issuance decisions (Baker and Wurgler, 2000, Baker and Wurgler, 2002, Baker, Greenwood, and Wurgler, 2003), dividend issuance decisions (Baker and Wurgler, 2003A), and mergers (Shleifer and Vishny, 2003).<sup>1</sup>

However, evidence in favor of managerial timing is limited almost entirely to periods of positive investor sentiment. For example, the academic literature has argued that initial public offerings (IPOs) of equity and seasoned equity (SEOs) financing decisions are timed to take advantage of high market valuations<sup>2</sup> or investor optimism about the firm's future.<sup>3</sup> Similarly, Shleifer and Vishny (2003) argue that merger activity is driven by stock market overvaluations and managers' rational responses to these inefficiencies. If investors are irrational when the market rises, we should also expect them to behave irrationally in periods when the market declines. Not finding evidence of similar irrationality during market downturns would cast doubt on current models of investor behavior in the behavioral finance literature, since these models do not predict

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<sup>1</sup> Similarly, Graham and Harvey (2001) provide survey evidence that managers react to mispricing.

<sup>2</sup> See for example, Loughran, Ritter and Rydquist (1994) and Pagano, Panetta and Zingales (1998) for IPOs. Marsh (1982), Asquith and Mullins (1986), Korajczyk, Lucas, and McDonald (1991), Jung, Kim, and Stulz (1996), and Hovakimian, Opler and Titman (2001) among others, present evidence for SEOs.

<sup>3</sup> See Ritter (1991), Loughran and Ritter (1995), Brav and Gompers (1997), Rajan and Servaes (1997) and Teoh, Welch and Wong (1998a) for IPOs. See Speiss and Affleck-Graves (1995) and Teoh, Welch and Wong (1998b), among others, for SEOs.

this type of asymmetry.

However, testing investor irrationality and managerial timing in periods of negative investor sentiment is not straightforward. In periods of positive sentiment, firms can undertake positive actions such as equity issues to take advantage of investor sentiment. In periods of negative sentiment, they can only choose not to initiate an equity issue, while repurchasing shares may be subject to cash constraints. Dittmar (2000) documents that share repurchase activity dropped to lows in the early 1980s and between 1989-1992, both periods coinciding with downturns in the economy. Consequently, tests of managerial timing and investor irrationality during periods of negative investor sentiment are contaminated by cash flow constraints.

In this paper, we study the valuation effects of cosmetic name changes in the Internet sector, before and after the end of the dot.com “bubble” in 2000, corporate actions that are unlikely to be affected by cash flow constraints. Specifically, we examine a sample of 183 firms that added a dot.com and 67 firms that deleted a dot.com from their names in the dot.com boom period (pre mid-2000) and in the dot.com bust period (post mid-2000).

We find evidence that managers reduce the number of dot.com additions, and increase the number of dot.com name deletions, as sentiment in the Internet sector (as measured by an Internet index) swings from very positive to extremely negative after the dramatic decline in Internet valuations during 2000. Anecdotal evidence in the popular press is consistent with the notion that managers deliberately time firm name changes to exploit investor sentiment. For example, according to *Associated Press*:

*Now that dot-com fever has turned into a plague, companies left and right are changing their names to disassociate themselves with the stigma of failure. Eden Prairie-based IntraNet Solutions renamed itself Stellent Inc. on Wednesday, and Internet.com became INT Media*

*Group in May. Industry officials say thriving dot-coms are trying to avoid being lumped in with the rotting corpses of failed dot-coms such as pets.com, garden.com, furniture.com and living.com. “Companies are distancing themselves from that smell,” said Bridget Levin of Minneapolis-based Nametag International Inc. IntraNet Solutions said its name change was intended to reflect its expanded business. But Alan Meckler, chairman and CEO of Internet.com, was more pointed: “It’s window dressing for the financial community,” he said. It retains its coveted Internet.com domain name. “For those in the know, our customers, nothing ever changed.” (Associated Press News Wire, August 30, 2001)<sup>4</sup>*

We first examine whether the market reacts to dot.com deletions in the dot.com bust period in the same way that they reacted to dot.com additions as documented by Cooper, Dimitrov and Rau (2001) [hereafter referred to as CDR].<sup>5</sup> We find that the stock market reacts positively to announcements of dot.com deletions after the Internet sector collapse of mid-2000. Also, consistent with CDR, we find (on a new sample of dot.com additions relative to the CDR sample), that the market continues to react positively to additions during the last year of the Internet sector’s dramatic price run up from 1999-2000. To put this name change effect into perspective, the average addition firm in our sample has a capitalization of \$365 million five days prior to the name change

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<sup>4</sup> Mr. Meckler, always conscious of his firm’s stock price, as a good CEO should be (he owns 53 percent of the shares), changed his firm’s name twice; first by adding a dot.com (from Mecklermedia to Internet.com Corp in 1998), and then later by deleting the dot.com (from Internet.com to INTMedia Group Inc. in April, 2001). His firm’s stock price jumped by 54 percent, increasing from approximately \$3 per share to \$4.50 on the news of the deletion (Bryan-Low, 2001).

<sup>5</sup> CDR examine stock price reactions to the announcement of dotcom name additions during the run-up of Internet firm stock prices from 1998-1999. The name change produces cumulative abnormal returns on the order of 74 percent for the ten days surrounding the announcement day.

announcement. For the 183 addition firms, the name change effect translates into a raw (market adjusted) total increase in shareholder wealth of approximately \$31 billion (\$26 billion). Similarly, for the 67 firms in our deletion sample, the total increase in shareholder wealth on a raw return basis (market adjusted basis) is approximately \$2.2 billion (\$5.5 billion). Clearly, the effect is smaller for the deletions than for the additions, but still appears to us to be economically significant.

We next examine whether these price reactions are related to the type of name change. Specifically, we classify our sample into two types of name changes. First, we observe instances where a firm merely adds to or drops a dot.com from its name. As an example, Infospace.com changed its name to Infospace. We refer to these name changes as “minor” name changes. Second, we observe instances where a firm not only adds to or drops dot.com from its name but also changes its name altogether. An example of such a “major” name change is USLab.com changing its name to Fly Networks, Inc. The cumulative abnormal returns following a major name change addition in the Internet boom periods are significantly greater than the returns exhibited by firms undertaking minor name change additions over the same period. Similar return differentials are observed for major versus minor name change deletions in the post-2000 period.

To examine whether the name change valuation effects are driven by the name change signaling changing firm growth opportunities, we explicitly classify our sample firms into firms that do and do not change their business model concurrent with the name change. Out of our sample of 67 deletion firms, only six appear to have changed their business model from Internet to non-Internet, suggesting that our results are not driven by changes in shifts in the company investment and involvement in the Internet sector in the months surrounding the announcement of the name change. In fact, these six firms earn statistically insignificant abnormal returns around the name change, in contrast to firms that do not change their business model and earn statistically significant 60-day

abnormal returns of 97.99% (for non-Internet firms who remain non-Internet firms) and 41.22% (for Internet firms who remain Internet firms).

Reports of this kind of name change behavior on the glamour side are not new. For example, Gordon (2001) reports evidence of name changes during the incredible growth in stock prices for firms in the railroad and mining industries in the 1850s; the automobile industry in the 1910s, airplane firms in the late 1920s; the high-tech industry in the 1960s; bio-genetic firms in the 1980s. In all these growth periods, investors appeared extremely interested in “getting a piece of the action,” often times at the expense of due diligence. For example, during the airplane “craze,” investors rushed to purchase shares of Seaboard Airlines, which turned out to be a renamed railroad stock. However, the evidence of firms systematically changing their names away from the out-of-favor industry, and the associated effects on shareholder wealth that we document, is to the best of our knowledge, a new and previously undocumented effect.

Our results suggest that managers do in fact attempt to time corporate events to take advantage of both positive and negative investor sentiment. Our evidence is not only consistent with market irrationality, it is consistent with the notion that managers rationally take advantage of that irrationality. Evidence in the prior literature (see for example Baker, Greenwood, and Wurgler, 2003) cannot definitively distinguish between the hypothesis that managers rationally time the market and the hypothesis that managers try in vain to time the market. Our evidence has broader implications for corporate finance in the sense that it supports the view that there is another important dimension to managers’ decisions regarding financial policies. In other words, managers consider not only what is “optimal” in the sense of traditional models, but also what is the current market sentiment about that policy. In this way, our findings complement those in the prior literature and imply that managers may omit some actions that might otherwise appear to be optimal

because the market views them as negative.

The remainder of the paper is organized as follows. In section 2, we discuss the data sources and the methodology employed. Section 3 discusses our empirical results and Section 4 presents our conclusions.

## 2. Data and Methodology

Our sample consists of all publicly traded companies on the NYSE, Amex, Nasdaq, and the OTC Bulletin Board (OTCBB) that changed their names between January 1, 1998 and August 31, 2001. For additions (deletions), the new (old) name has to be either a dot.com name (e.g., Wareforce.com), a dot.net name (e.g., Docplus.net Corporation), or has to include the word “Internet” (e.g., Internet Solutions for Business Inc.), “web” (e.g., Home.web Inc.) or “online” (e.g., Online Hearing Dot Com Inc). We refer to all these changes as dot.com name changes. The Appendix reports the sources we use to search for news announcements of dot.com additions and deletions. These sources include Bloomberg, Dow Jones, SEC filings, and various web sites.

In Table 1, we report the initial number of firms in the sample and the number remaining after screening our sample for possible confounding events (such as mergers, acquisitions, spinoffs, or divestitures) in a –10 to +10 day window around the event date, uncertain event dates, and a lack of data. To control for potential problems due to microstructure issues, we also use a price filter to exclude firms that have a mean daily price per share of under \$0.50 in the 61 day event window surrounding the name change announcement.<sup>6</sup> These screens result in a relatively clean initial

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<sup>6</sup> After the price filter, the average (median) price per share for the deletion sample over the 61 day event window is \$7.53 (\$2.05).

sample of 67 deletions and 183 additions. Because of the difficulty in obtaining exact announcement dates, the announcement day (day zero) is defined based on the first available information of the name change, which is either an announcement date or an effective trading date. We use the Amex Inter@ctive Index as the relevant benchmark for price comparison.<sup>7</sup>

To examine the effects of name changes on shareholder wealth as a function of positive and negative investor sentiment, we require an empirical proxy to measure the degree of investor optimism and pessimism towards Internet stocks. The level of the Amex Inter@ctive Index appears to be a good proxy for the level of sentiment or mispricing, in the Internet sector, as it is highly correlated with sentiment proxies. For example, Baker and Wurgler (2003B) create an annual sentiment index, orthogonalized to business cycles, composed of six variables, including closed-end fund discounts, turnover, and number of IPOs. According to their index, investor sentiment reached a decade-long high in 2000 and then suffered a dramatic decline in 2001, closely following the dramatic run-up and subsequent decline in Internet stock prices. Thus their index suggests sentiment shifted sometime during the year 2000. Since our name changes occur on a daily basis, we require a more specific shift-in-sentiment date. From our Figure 1, while the Inter@ctive Index first peaked in February-March 2000 and collapsed in April-May 2000, it recovered to another (lower) peak in August 2000 before collapsing a second time till the end of the sample period. Thus, while it appears to be straightforward to determine the annual break point in sentiment, it is not as straightforward to determine when sentiment in the Internet sector peaked within the year 2000.

Consequently, to separate our sample into periods of “hot” versus “cold” markets (and presumably, positive and negative investor sentiment), we adopt a conservative approach. We

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<sup>7</sup> We compare this index with a number of other Internet indices such as the Bloomberg US Internet Index, the



report results using February 1, 2000 as the earliest plausible cutoff date and we also report results using September 1, 2000 as an alternative cutoff date. Finally, since the number of dotcom deletions peaks in April 2001, we report results for deletions after this date.<sup>8</sup>

Stock prices (adjusted for stock splits), firm capitalization, and other data for individual firms are collected from Bloomberg. We compute cumulative abnormal returns relative to the Amex Inter@ctive Index for event firms over various event windows as in Brown and Warner (1985). T-statistics are calculated using the crude dependence method with a holdout period  $t = -30$  to  $t = -16$ .

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Street.com Net Index, and the DJ Internet Commerce Index. All these indices are highly correlated.

<sup>8</sup> To further reinforce a link between sentiment and the level of the Internet index, we obtain monthly sentiment proxies from Jeff Wurgler. These monthly variables are related to the annual sentiment variables used in Baker and Wurgler (2003B). The monthly sentiment proxies are the initial one-day return on IPOs (IPORET), Number of IPOs (IPONUM), and the average of the daily dividend premium in a month (MDIVPREM), where the dividend premium is the log of the average market to book of dividend payers divided by the average market to book of non-dividend payers. We estimate the average values of these three sentiment variables before and after the “hot” and “cold” cutoff dates in our paper. For the cutoff date of February 1, 2000, all three variables exhibit marked differences in positive and negative sentiment values pre/post cutoff. For example, from the beginning of our sample in January 1998 to February 2000, IPORET, IPONUM, and MDIVPREM average 51.45%, 34.56, and -0.41, respectively, numbers consistent with high levels of investor sentiment. After the first “crash” of the Internet index in early 2000 until the end of our sample, the average sentiment decreased, with the three variables averaging 32.15%, 23, and -0.18, respectively. After August/September 2000, the sentiment further decreased, with averages of 17.21%, 10.58, and -0.10, respectively. From the peak in dotcom deletions in April 2001 to the end of our sample, the sentiment remains low, as the three variables average 13.92%, 7.6, and -0.13, respectively.

### 3. Results

#### *3.1 The Pattern in Internet Name Changes*

Table 2 reports the distribution of name changes for both dot.com additions and deletions. The table shows that most additions occur when returns to the Internet sector are increasing (Q1 1998 to Q2 2000) and the majority of deletions occur when returns to the sector are decreasing (Q3 2000 to Q3 2001). One question that our figure raises is why the volume of dot.com additions peaked in May 1999, while the index itself peaked for the final time in August 2000. One possible explanation is that managers believed (and, as it turns out, correctly) that the sector was overvalued and thus they consequently scaled back on dot.com additions to their names. Though we leave this an open question, it is interesting that our cycle of dot.com additions during the June 1998 to August 2000 period corresponds closely with the volume of Internet IPOs during the same period, as documented by Schultz and Zaman (2001).

Table 2 also indicates that there are no dot.com deletions prior to Q2 1999 (the peak in dot.com addition activity in our sample). As the Inter@ctive week index increases, the level of additions increases. In early to mid-2000, as the index levels fall, the volume of dot.com deletions increases as the volume of dot.com additions declines. Dot.com deletions peak in April 2001. Table 2 also indicates that dot.com additions and deletions are primarily major name changes. 136 of the 151 additions (90%) in the pre-February 2000 period are major name changes while 39 of the 61 deletions (64%) in the post-February 2000 period are major name changes.

In Panel B of Table 2, we test whether the timing and type of name changes can be predicted by investor sentiment, as proxied by the Internet index and prior name change activity. Specifically, for each type of name change (all additions and deletions, and combinations of major and minor name

changes), we regress the monthly number of name changes on the six month holding period return to the Interactive week index (lagged one month), and the six month moving average of the number of name changes (also lagged one month) in the same category as the dependent variable. Using the entire data sample (between January 1, 1998 and August 31, 2001), we find that the coefficient on the lagged index return is positive and significant for the additions and negative and significant for the deletions, suggesting that managers time their name change activity depending on the perceived positive (negative) sentiment levels of the market. At least for the additions sample, the timing decision is also related to the prior level of name changes, as we see a positive and significant loading on the lagged number of name changes. For both additions and deletions, the timing decision is more strongly linked to the two lagged sentiment variables for major name changes (recall that major name changes were defined as a firm not only adding or dropping a dot.com from its name but also changing its name altogether) than for minor name changes. To formally test whether the coefficients on the lagged market and the lagged number of name changes respectively, are statistically different across major and minor name change categories, we estimate a seemingly unrelated regression (SUR) model for both additions and deletions (not reported in the tables). Each SUR model estimates jointly two equations, where each equation is the same form as the OLS regressions in Panel B for the major and minor name changes. For both deletions and additions, the results from the SUR models strongly reject the equality of the coefficients on the lagged market and the lagged number of previous name changes across major and minor name changes; Wald tests (similar results are obtained with Likelihood ratio tests and Lagrange multiplier tests) reject the null of equal coefficients at a less than 1% significance level for both additions and deletions.

### *3.2 Value Changes Surrounding Dot.Com Deletions*

Table 3 reports cumulative abnormal returns (CARs) relative to the AMEX Inter@ctive Week Internet Index across various event windows for firms deleting a dot.com from their name. Panel A reports CARs across different event windows for the six firms deleting a dot.com from their names over the pre-February 2000 period. Not surprisingly, we find no evidence of a significant market reaction to this event during the “hot” Internet period. In contrast, after February 2000, the market reacts very positively to dot.com deletions. For example, in Panel B of Table 3, the CAR over the –2 to +2 window is 12.6 percent and statistically significant. We see similar results over longer windows; for the –30 to +30 period, the CAR is 64% (t-statistic = 3.12) for dot.com deletions. The abnormal returns we report are not an artifact of the decline in the index. Specifically, the cumulative raw returns to post-February 2000 deletions are 47.5% (t-statistic=2.43) over the -30 to +30 period.

February 2000 is the earliest plausible cutoff date in our sample based on the level of the Inter@ctive index over the sample period. However, as discussed earlier, it is not entirely clear that all investors believed that the Internet sector had turned cold as of this date. We therefore examine the value changes to dotcom deletions using later cutoff dates. Consistent with the hypothesis that the level of negative sentiment strengthened over the period, firms earn higher returns when we use later cutoff dates. In Panel C, we report CARs using a cutoff date of September 1, 2000. The CAR over the –2 to +2 window is 17 percent (t-statistic=2.93). Over the -30 to +30 period, the CAR is 70.2% (t-statistic = 3.47). Dotcom deletions peak in April 2001 (see Figure 1). In Panel D, we report CARs to dot.com deletions after April 1, 2001. Twenty five firms delete the dot.com from their names in this period. Consistent with decreasing sentiment towards the Internet sector after

mid-2000, the CAR over the -2 to +2 window increase to 33.4 percent (t-statistic=4.33). Over the -30 to +30 period, the CAR is 77.5% (t-statistic = 2.87).<sup>9 10</sup>

We also compute abnormal returns using a control group of firms. We calculate CARs relative to a price-matched control group of firms selected from Internet firms that did not change their name over the sample period. Specifically, we identify, using the Nasdaq, OTCBB, and AMEX websites, Bloomberg company profiles, and firm websites, all Internet firms that did not change their names over this period. For each of the 67 firms in our dot.com deletion sample, we then match the closest firm in the Internet non-name change sample on price over a two-week window around the event

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<sup>9</sup> During the sample period, the returns to the S&P500 dominated the returns to any of the Internet indices. For example, over the 18 months following February 2000, the S&P 500 declined by about 20% while the Amex Inter@ctive Index declined by about 60%. A concern with our results might be that they are due to a survivorship effect – in contrast with a declining Internet index, any surviving firm might seem to earn significant abnormal returns, whether it is viewed as a dotcom firm or not. We therefore reproduce our event study results using the S&P500 as our proxy for the market portfolio. Our results are qualitatively unchanged, though the magnitude of the abnormal returns declines. For example, using the S&P 500, abnormal returns for dot.com deletion firms in the -2 to +2 day window is 10.9% (in contrast to 12.6% using the Amex Inter@ctive index). This 1.7% difference in abnormal returns is consistent with the 18 month spread of 60% between the S&P500 index and the Amex Inter@ctive Index.

<sup>10</sup> Boehmer, Musemici and Poulsen (1991) document that conventional t-statistics are misspecified when there is event induced variance. To check if we have event-induced variance in our sample, we compute daily cross-sectional variances to the abnormal returns over the -30 to +30 day window to see if there is a spike around day 0 or a sustained increase following day zero. There does not seem to be a major shift in cross-sectional variance from the period we use now to compute the t-statistics to any other window in the -30 to +30 day period. We also use three different windows during the event period to compute the standard errors (-30 to -11, -10 to +10, and +11 to +30). Our results are qualitatively similar.

date for the dot.com sample firm. We refer to this control group as the “Internet control group.” The abnormal return for each firm in our dot.com sample is then calculated as the difference between the returns it earns and the returns earned by its price-matched control firm (results not reported). Consistent with the CARs estimated using the AMEX Inter@ctive Week Internet Index, we find no significant run up in prices for dot.com deletions prior to February 2000, but large, statistically significant CARs associated with name change deletions after February 2000. For example, CARs over the 0 to +1 period, and the -30 to +30 period are 10.6% (t-statistic=2.58) and 53% (t-statistic=2.32) respectively.<sup>11</sup>

### *3.3 Does the Type of Deletion Matter?*

We dichotomize our sample of additions and deletions into major and minor name changes. As discussed previously, the decline (increase) in the AMEX Inter@ctive Week Internet Index in the post-February (pre-February) 2000 period is larger when firms make major name changes through dot.com deletions (additions) relative to when they engage in minor name changes. Since these major name-change deletions result in dramatically different ticker symbols in most instances, it is

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<sup>11</sup> We also carry out a number of robustness checks. We examine returns to samples that exclude outliers on the basis of the abnormal returns earned, and on the basis of an “extra-clean” sample constructed so as to screen out other confounding events (such as firms with new private investment news, ticker changes, changes in exchange listings, earnings announcements and changes in analyst ratings) in addition to our basic screens (that exclude firms with mergers and acquisitions, financing news, and divestures). We compute market model returns instead of market-adjusted returns to examine if inadequate controls for risk drive our results. Finally, we compute capitalization weighted abnormal returns to examine if microstructure effects drive our results. Our results are qualitatively similar when we use these alternative methodologies.

possible that investors view the firm with a major name change as a potentially “new firm” that is not associated with the Internet sector. In contrast, the ticker symbol does not change, or changes only marginally, for minor name changes.<sup>12</sup> If investors are less likely to be deceived into believing that this is a new firm, we expect the cumulative abnormal return for these firms to be less positive than that for a major name change.

The results in Table 3 are consistent with our conjecture. For major name change deletions in the post-February 2000 period, the 0 to +1 event window CAR in Panel B is a significantly positive 13.8 percent and the corresponding CAR for minor name changes is an insignificant 0.2 percent. Across all event windows in Panel B, major name change firms consistently earn greater CARs than do minor name change firms. There is a statistical difference in the CARs between major and minor categories for the -30 to +30 window, and for the 0 to +1 window. The remaining windows, although having point estimates in the correct direction, are not significantly different across the two types of name changes. For the later cutoff dates in panels C and D, we find that the abnormal return point estimates for major name changes are always greater than for minor name changes (not reported in the tables). In addition, for panel C (D), the major name change returns are statistically greater than the minor changes in 3 (5) of the event windows. We find qualitatively similar returns based on control-group adjusted returns.

### *3.4 Changing growth opportunities?*

One explanation for the dramatic abnormal returns that we document to dot.com deletions is a

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<sup>12</sup> For example, *perfumania.com* (ticker PF) changed its name to Envision Development Corporation (ticker EDV).

This major name change deletion results in a dramatically different ticker symbol. In contrast, *click2learn.com*

growth opportunity story. As investor perception of growth opportunities in the Internet sector increased in the 1997-1999 period, more firms entered the sector, and changed their names accordingly. As growth opportunities faded after mid-2000, firms exited the industry and again changed their names accordingly. If the name change suggests a change in the business model of the firm, this might be a signal for investors of potential cash flow changes in the firm. Our elimination of confounding events in the -10 to +10 day period may not capture this effect.<sup>13</sup>

We examine the growth opportunity hypothesis in more detail by examining the extent to which the sample firms are indeed Internet firms (before and after the name change) and how much of the firm's business is derived from the Internet. In the two-month period around the name change, we use company news releases, company home pages, published company profiles, SEC filings, and other contemporaneous news releases, to select any firms in our sample that identify a change in strategic focus as one of the reasons for the name change. We classify our firms into two major categories of "Internet" or "non-Internet" firms. We then subdivide the abnormal returns into four groups based on a firm's pre and post business category. Thus we examine returns across "Internet to Internet," "Internet to non-Internet," "non-Internet to Internet," and "non-Internet to non-Internet" classifications. For example, on April 25, 2001, ZapWorld.com announced a name change to Zap. Before and after the name change the firm's underlying business model does not appear to change; the firm is primarily engaged in making electric bicycle power kits, electric bicycles and tricycles, as well as electric scooters and motorcycles. Thus we classify this firm as "non-Internet to non-Internet." The *Dow Jones News Service* had this to say about Zap's name change:

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(ticker CLKS) changing to click2learn Inc leaves the ticker symbol unchanged.

<sup>13</sup> Note however that the name change is essentially cheap talk. Hence it would be costless for any firm that did not wish to change its business model to change its name and imitate a firm that did wish to change its business model.



*The board (of Zap) noted that because of recent developments with Internet companies, and the need to have a corporate name that's more closely associated with the products it sells, its in the best interest of shareholders to disassociate from "dot.com" companies in view of the negative image that people may have for these companies. (Dow Jones News Service April 25, 2001)*

This type of statement appears to be typical for the "non-Internet to non-Internet" name changes; the firms were apparently all too eager to be perceived as an Internet company while dot.com market valuations were rapidly increasing, but not willing to be associated with the Internet sector once it became perceived as "toxic." In our sample of dot.com deletions, we have 33 "Internet to Internet," 24 "non-Internet to non-Internet," and 6 "Internet to non-Internet" firms (we were not able to classify four of the firms). In addition, there were no occurrences of "non-Internet to Internet" dot.com deletions.

Recalling that all of these firms started out with a dot.com suffix on their name before the deletion, it is interesting to speculate on how the market should react to different categories of name change firms and whether or not the reaction is "rational." We might expect that if investors are informationally constrained on the actual operating practices of some of these firms (which may be the case since these are relatively small firms with little analyst coverage), then we would see a positive abnormal return to firms whose core business was and is still not Internet related before and after the name change. For these "non-internet to non-internet" firms, the cosmetic name change may serve as a piece of salient news, simply bringing these firms back to investors' attention. This would be consistent with Klubanoff, Lamont and Wizman (1998), who find that the stock price reaction to closed-end country mutual funds is higher when salient news on the country is reported on the front page of the *New York Times*. Thus, positive abnormal returns to "non-

Internet to non-Internet” firms would be consistent with a rational investor response if investors are informationally constrained. However, note that a positive abnormal return after the dot.com deletion may imply that the market wrongly believed that the firm was an Internet company *prior* to the name change.

Next, consider “Internet to Internet” name changes. If these cosmetic name changes bring previously obscured valid information about the firm to the attention of investors (if investors are informationally constrained on these firms before the name changes), we might expect zero abnormal returns or even negative returns, as the market learns that these firms are truly Internet firms. However, if the dot.com deletion succeeds in deceiving investors into believing that the firm is no longer a dot.com firm, resulting in positive abnormal returns, this would not appear to be consistent with rational investor behavior. Finally, for “Internet to non-Internet” name changes, (which may be the only name changes that are non-cosmetic in the sense that they may signal a potential change in the cash flows), it is not clear whether a positive or negative abnormal return can be attributed to any degree of investor irrationality; it may simply be the case that if investors are informationally constrained, and the name change serves to illuminate a company’s underlying change in cash flows, that positive (negative) abnormal returns would be associated with investors’ evaluating the net present values of future cash flows to the new business model as positive (negative).

When we separate the deletions into the above categories, we see no evidence of significant abnormal returns prior to February 2000. Post February 2000, the 23 “non-Internet to non-Internet” firms earn 97.99% (t-statistic = 2.92), the 7 “Internet to non-Internet” firms earn statistically insignificant returns, and the 30 “Internet to Internet” firms earn 41.2% (t-statistic = 1.79) over the 60-day window surrounding the event. For the alternative cutoff date of September 2000, the 17

“non-Internet to non-Internet” firms earn 98.3% (t-statistic = 4.41), the 6 “Internet to non-Internet” firms earn statistically insignificant returns, and the 24 “Internet to Internet” firms earn 49.8% (t-statistic = 2.49) over the 60-day window surrounding the event. Thus, as discussed above, the positive return results for the “non-Internet to non-Internet” firms may be consistent with investor rationality if investors are informationally constrained (although it is still a gross violation of semi-strong market efficiency), and the results to the “Internet to non-internet” do not provide us with a clean test of rationality. However, the “Internet to Internet” results show that investors are deceived by Internet firms attempting to look like non-internet firms, thus suggesting some degree of investor irrationality.

### *3.5 Out-of-sample abnormal returns for name change additions*

Finally, we test whether the results for dot.com additions obtained by CDR persist in an out-of-sample period. We indeed find that the market reacts favorably to name change additions using a hold-out period from the CDR paper. Specifically, we analyze a sample of 43 firms that add a dot.com to their names in the period from August 1999 to February 2000. Table 4 reports cumulative abnormal returns for these firms. Panel A duplicates the CDR results in the pre-August 1999 period. Our sample is larger than theirs though our results are qualitatively similar. Panel B reports results for the post CDR period from August 1999 to February 2000. Similar to our results in panel A and to CDR, firms adding a dot.com to their names in this period earn significant positive cumulative abnormal returns over all event windows.

Panel C reports CARs for dot.com additions during the post-February 2000 period. Consistent with the hypothesis that investor sentiment slowly changed over the February – September period,

firms announcing dot.com additions over this period, continued to earn significant positive abnormal returns in the period around the announcement. Finally, Panel D reports CARs for dot.com additions in the post-September 2000 periods. We can identify only five firms of this type and all these firms undertook major name changes. Unlike the results for the pre-February 2000 period, we find no statistically significant price reaction to the announcement of a dot.com addition over any of the event windows.

We repeat our classification of dot.com additions into major vs. minor name changes and report the results in Table 4. In the January 1998 to August 1999 period (Panel A), the major name change firms earn statistically greater returns than the minor name change firms in four out of the six event windows. In the August 1999-February 2000 period (Panel B), we observe the same pattern, but with less statistical significance across major/minor name changes. For example, abnormal returns following a major name change addition average a significantly positive 22.9 percent over the  $-2$  to  $+2$  event window. The corresponding CAR for a minor name change is an insignificant 10.5 percent. The differences across major and minor additions are not significant over any of the pre-event windows, but are significant over the  $+2$  to  $+15$  day window. For the entire 61-day window, the point estimates are consistent (major name changes earn approximately 28% more than minor), but the difference is not statistically significant.

## 4. Conclusions

In this paper, we examine the valuation effects of a dot.com name change, a natural experiment to test investor rationality in a period of negative market sentiment. We find that firms that change their name to a dot.com name during the pre-February 2000 Internet boom period and firms that

remove the dot.com from their name during the post-February 2000 Internet bust period, experience large gains in shareholder wealth associated with the name change.

This name change does not appear to signal a change in growth opportunities for the firm. Firms classified as Internet companies, both before and after the name change announcement, experience large increases in shareholder wealth simply by removing dot.com from their names. Moreover, the gains in shareholder wealth are greater for major name changes than for minor changes, suggesting that the investors are deceived by companies seeking to be disassociated from their past in order to appear to be more (less) like the current glamour (out-of-favor) industry.

Our paper thus contributes to the literature by providing evidence of investor irrationality in periods of negative sentiment, in a manner consistent with results from periods of positive investor sentiment in the Internet sector. Our results suggest that there is another important dimension to managers' decisions regarding financial policies in that they consider not only what is "optimal" in the sense of traditional models, but also what is the current market sentiment about that policy.

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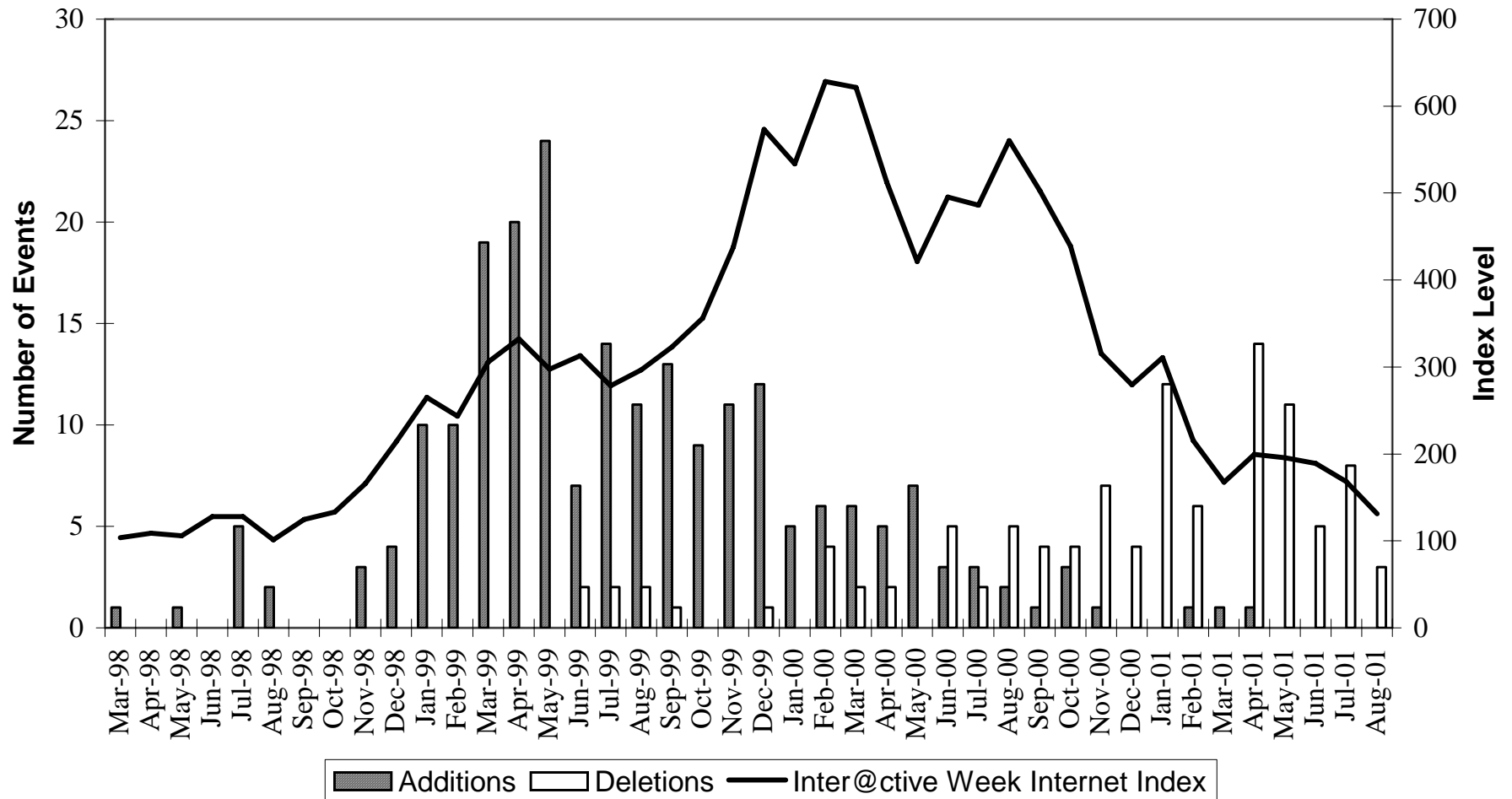
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**Figure 1 Dot.com additions and deletions over time**

This figure plots the [Inter@ctive](#) week Index level against the number of firms that added or deleted a dot.com from their names over the 1998-2001 period.



## Appendix

This appendix reports the data sources used in the paper

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Nasdaq OTC Board	<a href="http://www.otcbb.com">www.otcbb.com</a>
Nasdaq listings	<a href="http://www.nasdaqtrader.com">www.nasdaqtrader.com</a>
AMEX listings	<a href="http://www.amextrader.com">www.amextrader.com</a>
Company Profiles	Bloomberg Dow Jones Publications Library
Company News	Dow Jones Publications Library Bloomberg
Stock Splits	Bloomberg
SEC Filings	<a href="http://www.freeedgar.com">www.freeedgar.com</a> <a href="http://www.sec.gov/edgarhp.htm">www.sec.gov/edgarhp.htm</a>
Historical Prices	Bloomberg
Market Capitalization	Bloomberg DataStream
Volume, bid ask spreads	Bloomberg

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**Table 1**  
**Sample of Name Change Additions and Deletions**

This table describes the sample of companies that add or delete a dot.com from their names between June 1998 and August 2001. We report the initial number of firms in the sample and the number remaining after all exclusions of firms. Firms are deleted due to confounding events (including mergers, acquisitions, spinoffs, or divestitures), uncertain event dates, lack of data, and after using a price filter (firms that have a mean daily price-per-share of under \$0.50 in the 61 day event window surrounding the name change announcement are removed). Because of the difficulty in obtaining exact announcement dates, the announcement day (day zero) is defined as the first available information on the name change, whether from an announcement or effective trading day. We also report name change additions and deletions broken down into pre- and post-February 2000 periods, and by major or minor categories. A “minor” name change is one for which a firm merely adds or drops a dot.com from its name. A “major” name change is one for which the firm not only adds or drops dot.com from its name but also changes its name completely.

	Additions	Deletions
<i>Initial number of firms in sample</i>	432	164
Excluded due to mergers and acquisitions, spinoffs, or divestitures in the -10 to +10 period	157	38
Excluded due to uncertain event date	25	14
Excluded due to data not available	45	15
Excluded due to price filter	22	30
<b>Total number of remaining firms</b>	<b>183</b>	<b>67</b>
	First of either effective or announcement dates	First of either effective or announcement dates
<i>Total remaining firms after all exclusions</i>	183	67
<i>Pre-February 2000</i>	151	6
<i>Post-February 2000</i>	32	61
<i>Major name change</i>	168	45
<i>Minor name change</i>	15	22

**Table 2**  
**Occurrences and Characteristics of Name Changes**

Panel A contains the distribution of announcement dates over time and across firm category types for dotcom additions and deletions. A “minor” name change is one for which a firm merely adds or drops a dot.com from its name. A “major” name change is one for which the firm not only adds or drops a dot.com from its name but also changes its name completely. Panel B reports an OLS time-series regression of the monthly number of name change firms on the six-month average of the Inter@ctive week Index, lagged one month, and the six-month average of the number of name change firms, lagged one month. T-statistics are reported in parentheses. T-statistics significant at the 5% level are bolded.

Panel A: Occurrences of announcement dates						
Date	Additions			Deletions		
	All Firms	Major name change	Minor Name Change	All Firms	Major name change	Minor Name Change
Q1 1998	1	1	0	0	0	0
Q2 1998	2	2	0	0	0	0
Q3 1998	4	4	0	0	0	0
Q4 1998	6	6	0	0	0	0
Q1 1999	32	29	3	0	0	0
Q2 1999	44	40	4	0	0	0
Q3 1999	31	29	2	4	4	0
Q4 1999	24	20	4	1	1	0
Q1 2000	17	15	2	5	4	1
Q2 2000	12	12	0	6	5	1
Q3 2000	6	6	0	6	4	2
Q4 2000	1	1	0	11	8	3
Q1 2001	2	2	0	9	5	4
Q2 2001	1	1	0	17	10	7
Q3 2001	0	0	0	8	4	4

Panel B: Time-Series Regression of the Monthly Number of Name Changes on Lagged Index Returns and Lagged Number of Name Changes

		Lagged Inter@ctive week Index 6 month return	Lagged number of name changes	Adjusted R <sup>2</sup>
Additions	All Firms	35.84 <b>(3.81)</b>	0.48 <b>(2.76)</b>	50.57%
	Major name change	33.37 <b>(3.99)</b>	0.48 <b>(2.83)</b>	51.50%
	Minor name change	4.34 <b>(2.31)</b>	-0.42 <b>(-0.85)</b>	16.80%
Deletions	All Firms	-16.89 <b>(-2.22)</b>	-0.08 <b>(-0.20)</b>	27.78%
	Major name change	-10.91 <b>(-2.31)</b>	-0.73 <b>(-1.28)</b>	17.80%
	Minor name change	-11.74 <b>(-1.37)</b>	-0.06 <b>(-0.06)</b>	5.53%

**Table 3**  
**Abnormal Returns to Name Change Deletions**

This table reports market-adjusted cumulative abnormal returns, expressed in percent, relative to the AMEX Inter@ctive Week Internet index. In Panels A through D, we report CARs for dot.com name change deletions at different points of time. Each cell reports the average CAR across all firms for the respective event windows. T-statistics are reported in parentheses. T-statistics significant at the 5% level are bolded. We report p-values for tests of the null hypothesis of equality of means across major and minor name changes. A “minor” name change is one for which a firm merely adds or drops a dot.com from its name. A “major” name change is one for which the firm not only adds or drops dot.com from its name but also changes its name completely.

Panel A: Deletions, Pre-February 2000						
	-15 to -2	0 to 1	-2 to +2	+2 to +15	+1 to +30	-30 to +30
All (N=6)	-3.6 (-0.19)	6.8 (0.95)	13.2 (1.17)	25.3 (1.33)	31.7 (1.14)	10.6 (0.27)
Panel B: Deletions, Post-February 2000						
	-15 to -2	0 to 1	-2 to +2	+2 to +15	+1 to +30	-30 to +30
All (N=61)	22.4 <b>(2.28)</b>	8.3 <b>(2.24)</b>	12.6 <b>(2.14)</b>	3.3 (0.33)	23.6 (1.64)	64.0 <b>(3.12)</b>
Major (N=39)	31.7 <b>(1.99)</b>	13.8 <b>(2.29)</b>	16.7 (1.75)	6.4 (0.40)	28.5 (1.22)	89.9 <b>(2.66)</b>
Minor (N=22)	10.8 (1.34)	0.2 (0.08)	6.6 (1.37)	-1.2 (-0.14)	16.7 (1.42)	31.0 (1.85)
Test of differences (one-sided)	0.06	0.05	0.17	0.22	0.21	0.01
Panel C: Deletions, Post-September 2000						
	-15 to -2	0 to 1	-2 to +2	+2 to +15	+1 to +30	-30 to +30
All (N=48)	21.6 <b>(2.23)</b>	10.2 <b>(2.79)</b>	17.0 <b>(2.93)</b>	9.5 (0.98)	28.5 <b>(2.01)</b>	70.2 <b>(3.47)</b>
Panel D: Deletions, Post-April 2001						
	-15 to -2	0 to 1	-2 to +2	+2 to +15	+1 to +30	-30 to +30
All (N=25)	26.5 <b>(2.05)</b>	19.7 <b>(4.02)</b>	33.4 <b>(4.33)</b>	10.0 (0.78)	39.4 <b>(2.08)</b>	77.5 <b>(2.87)</b>

**Table 4**  
**Out-of-Sample Abnormal Returns For Name Change Additions**

This table reports market-adjusted cumulative abnormal returns, expressed in percent, relative to the AMEX Inter@ctive Week Internet index. Panel A reproduces the results for the time period analyzed by Cooper, Dimitrov and Rau (2001). In Panels B through D, we report various event window CARs for dot.com additions from the subsequent time periods. Each cell reports the average CAR across all firms for the respective event windows. T-statistics are reported in parentheses. T-statistics significant at the 5% level are bolded. We report p-values for tests of the null hypothesis of equality of means across major and minor name changes. A “minor” name change is one for which a firm merely adds or drops a dot.com from its name. A “major” name change is one for which the firm not only adds or drops dot.com from its name but also changes its name completely.

Panel A: Additions, January 1998-August 1999						
	-15 to -2	0 to 1	-2 to +2	+2 to +15	+1 to +30	-30 to +30
All (N=108)	58.0 <b>(9.12)</b>	6.5 <b>(2.73)</b>	14.4 <b>(3.78)</b>	19.5 <b>(3.07)</b>	32.1 <b>(3.45)</b>	118.6 <b>(8.94)</b>
Major (N=100)	63.2 <b>(9.24)</b>	7.1 <b>(2.72)</b>	15.9 <b>(3.89)</b>	19.2 <b>(2.81)</b>	32.8 <b>(3.28)</b>	125.7 <b>(8.80)</b>
Minor (N=8)	18.5 (1.43)	2.1 (0.43)	2.3 (0.29)	23.5 (1.81)	26.5 (1.39)	63.0 <b>(2.33)</b>
Test of differences	0.01	0.02	0.03	0.37	0.39	0.01
Panel B: Additions, August 1999-February 2000						
	-15 to -2	0 to 1	-2 to +2	+2 to +15	+1 to +30	-30 to +30
All (N=43)	36.4 <b>(2.53)</b>	7.7 (1.42)	22.9 <b>(2.66)</b>	29.8 <b>(2.07)</b>	31.8 (1.51)	101.8 <b>(3.38)</b>
Major (N=36)	37.1 <b>(2.05)</b>	8.2 (1.20)	26.0 <b>(2.41)</b>	36.6 <b>(2.02)</b>	35.6 <b>(1.34)</b>	108.8 <b>(2.88)</b>
Minor (N=7)	32.8 <b>(2.15)</b>	5.4 (0.94)	10.5 (1.14)	1.8 (0.12)	15.4 (0.69)	68.7 <b>(2.15)</b>
Test of differences	0.44	0.41	0.12	0.07	0.25	0.24
Panel C: Additions, Post-February 2000						
	-15 to -2	0 to 1	-2 to +2	+2 to +15	+1 to +30	-30 to +30
All (N=32)	31.8 (1.54)	24.3 <b>(3.12)</b>	39.5 <b>(3.21)</b>	17.7 (0.86)	30.7 (1.02)	70.4 (1.63)
Panel D: Additions, Post-September 2000						
	-15 to -2	0 to 1	-2 to +2	+2 to +15	+1 to +30	-30 to +30
All (N=5)	12.8 (0.32)	7.7 (0.51)	10.5 (0.44)	22.5 (0.56)	10.9 (0.19)	40.7 (0.49)