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Qingxiong Ma  
*Southern Illinois University Carbondale*

C. Ranganathan  
*University of Illinois, Chicago*

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# DO WEB MERGERS CREATE VALUE? AN EXAMINATION OF MERGERS AND ACQUISITIONS OF INTERNET FIRMS

**Qingxiong Ma**

Southern Illinois University, Carbondale  
cgqm@siu.edu

**C. Ranganathan**

University of Illinois, Chicago  
ranga@uic.edu

## Abstract

*While there is an increasing number of mergers and acquisitions (M&A) involving internet firms, there is little research that has examined this phenomenon. The nature and the extent of the impact of such mergers and acquisitions on the firms involved in such deals is ambiguous. This research examines the value created by merger and acquisition activities involving internet firms using an event study methodology. We examine the stock market reactions to 84 M&A deals in 1999. The results indicate a significant and positive wealth creation for the shareholders of acquiring firms. The implications of the results and ideas for future research are discussed.*

## Introduction

*"Last Year's Web Mergers Up 700% Over 1998", (Business Wire, Jan 14, 2000)*

*"Web Mergers Heat Up—Combinations Are Increasing as Internet Firms Scramble to Add Bulk" (Wall Street Journal, March 14, 2000)*

*"California Dealin'; 'Dot-Com' Doldrums Spurring Consolidations; With some of their funding possibilities shrinking, mergers of privately held Internet companies are increasing at a rapid pace." (LA Times, July 24, 2000)*

The above statements point to an increasing trend of mergers and acquisitions (M&A) in the Internet industry. The statistics on mergers and acquisitions among internet-based firms is astonishing: New Media Resources, a consulting firm, reported that web mergers and acquisitions grew by over 22% just from the first half of 1998 to 1999. The firm reported the total value of 56 deals in the first six months of 1998 to be at \$1.6 billion. According to the reports of *webmergers.com*, a firm exclusively focusing on M&A activities on the web, \$47 billion was spent on 450 web M&A activities in 1998. This figure is expected to grow over a quarter-trillion by 2001. Another report by *MergerStat* found 818 internet merger and acquisition deals in the first six months of 2000, valuing over \$20 billion from 210 disclosed deals.

While a lot has been written about Internet firms in business press, empirical research on these firms have rather been limited. Researchers have written about the business models underlying the net firms, documented the experiences of these firms as case studies, and have proposed frameworks for managing these firms. However, there is very little empirical research on the business growth initiatives entailing these firms. This lacuna is quite surprising given the increasing industry concerns on the business survival of these firms, and, the sheer number of acquisitions involving internet firms that has taken place in recent years. There is an increasing number of mergers and acquisitions among web-based firms, but it is not clear if M&A is a viable mode for growth of web firms. It is not even clear if these mergers and acquisitions have had any positive impact on the firms involved in the deals. Our research is aimed at addressing these gaps. We specifically examine the value created by M&A activities by investigating the stock market reactions to the web-related M&A announcements.

In this research we are focused on M&A activities of Internet-based firms. By Internet-firms or net firms, we refer to those firms who earn at least 50% of their revenue from online activities. Our definition of Internet firms is consistent with the Dow Jones

Internet index (<http://indexes.dowjones.com/djii/djiiabout.html>) that has also been used in prior event studies in e-commerce area (Subramani & Walden, 1999).

We examined the value created for over 80 firms that were involved in web mergers and acquisitions in 1999 using event study methodology. The results suggest that merger and acquisition activities do indeed lead to positive returns for the firm's shareholders.

## Theoretical Background

Mergers and corporate acquisitions have been extensively studied by researchers in strategic management, finance and economics. There are two broad streams of thought that try to explain the fundamental motives behind M&A activities of organizations. The first perspective, *individual growth maximization*, views M&A as being primarily motivated by managers to make personal gains from mergers. Researchers like Baumol (1967), Mueller (1969) and Amihud and Lev (1981) argue that executives pursue growth strategies like mergers and acquisitions in order to minimize the fluctuations in firm's earnings, as their earnings are related to the firm income. Another perspective, termed as the *value maximization*, postulates that M&As are primarily motivated by the desire to increase firm's value. The value maximization can be attained in two broad ways. One, through systematic exploitation of scale and scope economies of the firms involved in the merger activities (Capron, 1999) and two, by gaining access to specialized resources that are not otherwise available to the acquiring firms (Wernerfelt, 1984; Chatterjee, 1986). The value maximization view calls for increasing the overall firm value of the organization through M&A, thereby implying an increase in the value to a firm's shareholders as well.

Researchers have also used several methods to evaluate the performance impacts of merger and acquisition activities. Many authors have used accounting based measures such as increase in revenue, return of assets, return of sales etc for examining merger impacts. With varying accounting practices and methods across firms, these measures may not best capture the business performance impacts of M&A. Also accounting measures are usually aggregated over a period of time and best reflect the past performance of firms (Montgomery and Wilson, 1986). Recognizing the drawbacks of accounting measures, other researchers have used stock market value of firms to assess the economic impact of merger and acquisitions. The fundamental argument underlying this approach is that in an inefficient stock market, a firm's stock price should reflect the effectiveness of the various managerial initiatives that the firm is undertaking. The perception of the shareholders on various managerial initiatives gets reflected in the firm's stock prices, and hence this can serve as a good indicator of the effectiveness of these initiatives. Several researchers have adopted this approach to examine the stock market reactions to firm's M&A announcements (Turk 1992, Chatterjee, 1991, Lubatkin, 1987)

This approach of studying stock market reactions surrounding a particular event, popularly known as "event study methodology" examines cumulative abnormal returns to various firm announcements. Event studies are being increasingly used by several MIS researchers. (Subramani & Walden, 1999; Dos Santos Peffer & Mauer, 1993; Chatterjee, 2001). Guidelines for performing event studies have also been proposed Mswilliams and Siegel, 1997)

In this research we use event study approach to examine the shareholder wealth effect created by mergers and acquisitions of internet-based firms. Several researchers in the strategy area have found significant performance impacts of merger and acquisition activities of firms. Researchers have examined (i) the combined gains to shareholders of *acquiring* and *acquired* firms, and (ii) individual gains to shareholders of acquiring and acquired firms. Researchers have reported positive effects for combined gains and those of *acquired* firms, but have found little or no statistically significant gains for *acquiring* firms (Halpern, 1973; Mandelkar, 1974; Asquith, 1983). Some researchers have found that pre-merger gains are large and significant, while post-merger effects are small and insignificant (Lubatkin, 1987).

In this research, we expand prior research in strategy and finance areas to the phenomenon of M&A involving net firms. Many Internet firms have been using M&A as a dominant mode of corporate growth. Several reasons can be attributed towards this trend: (i) Intensification of competition – the number of Internet firms has grown exponentially since the inception of world wide web. If firms have to succeed in the face of intense competition, it is only natural for them to pool in their resources and exploit the synergies brought out by M&A. (ii) Resource availability - Many internet firms raised their finance from capital market through initial public offerings (IPOs), but later found the finances insufficient for their expansion and growth. They viewed M&As as a means to bring in financial resources as well as other valuable assets (iii) Natural trend towards consolidation: M&A activities can be viewed as a common phenomenon occurring in the growth phases of an industry. The number of Internet firms has been growing exponentially since 1994 and it is only natural to expect the industry to move to a consolidation phase. (iv) M&As also provide a viable exit strategy for net firms facing intense competition and resource crunch.

In summary, merger or acquisition of an internet firm is likely to give the acquiring firm access to specialized technical resources, larger informational support and add synergistic gains, thereby increasing the overall value creation. Hence we propose the following hypothesis :

**Hypothesis: For internet firms, the abnormal returns associated with merger and acquisition announcements will be positive.**

## Data Collection and Sample

Three sources provided the primary data used in this study. These were – PR Wire, Business Wire and the *dot com deal database* compiled and maintained by *The Standard* magazine. *The Standard* tracks different kinds of deals pertaining to Internet firms that are announced in the media sources. The description of firms and the definition of M&A according to *The Standard* are follows:

*“At least one of the firms in a deal must either be an Internet-related company or have significant Internet-related operations. Both U.S. and international firms are included. Smaller firms, such as those listed on bulletin and over-the-counter stock exchanges, typically are not included.”*

*“Merger /Acquisition: Refers to one company buying another company or joining wholly with another. This category includes firms that buy divisions or other pieces of companies”*

(<http://www.thestandard.com>)

The database reported 1181 announcements of web related M&A activities in the year 1999. In this research we treat “mergers” and “acquisition” activities together, and did not distinguish between them. Many firms in our initial sample were relatively new firms which were not being publicly traded. Since our intention was to examine the stock market value creation to the M&A announcements, we selected only those announcements for which the stock market data of the firms were available. We used the Center For Research in Security Prices (CRSP) database as our source for stock market information. CRSP database provides information on NYSE, AMEX and NASDAQ daily and monthly security prices to over 20,000 firms. Since we relied on CRSP database, we had to drop all the firms for which information was not present in CRSP database. These firms were typically those who were listed OTC or NASDAQ small exchanges.

The next step was to examine compounding effects for the examination period. There could be multiple announcements by firms during the event period that might affect their stock prices. Announcements pertaining to their earnings, dividend or other major corporate initiatives are likely to affect the stock market performance. For each event in our sample, we used BusinessWire and PR Newswire to examine if there were any other announcements in the 10 day period surrounding the M&A announcement. We eliminated all those events where firms had made multiple announcements in the 10 day period.

Another important consideration we had was the total trading activity and trading period of the firms in our sample. We dropped all those firms that did not have a trading history of 120 days prior to the event from further analysis. This resulted in a final sample of 80 internet firms.

## Analysis and Results

The market model that estimates the rate of return on stock price of firm  $i$  on day  $t$  is expressed by the following equation:

$$R_{it} = \alpha_i + \beta_i R_{mt} + \epsilon_{it}$$

where  $R_{it}$  is the rate of return on share price of firm  $i$  on day  $t$ ;  $R_{mt}$  is the rate of return on market portfolio of stocks (CRSP index) on day  $t$ ;  $\alpha$  refers to the intercept term;  $\beta_i$  is the systematic risk of stock  $I$ , and  $\epsilon_{it}$  refers to the error term.

The abnormal returns of firms are estimated using ordinary least squares regression model that is represented as follows:

$$AR_{it} = R_{it} - (a_i - b_i R_{mt})$$

$a_i$  and  $b_i$  represent the OLS parameter estimates obtained by regressing  $R_{it}$  over  $R_{mt}$  over an estimation period prior to the event, and  $AR_{it}$  refers to abnormal returns of firm  $i$  on day  $t$ .

The cumulative abnormal returns (CAR<sub>t1,t2</sub>) are calculated by averaging the daily abnormal returns over a time period (event window) between t1 and t2, for a sample of N firms using the following equation :

$$CAR_{t1,t2} = \left\{ \sum_{j=1}^N \sum_{t=t1}^{t2} AR_{it} \right\} / N$$

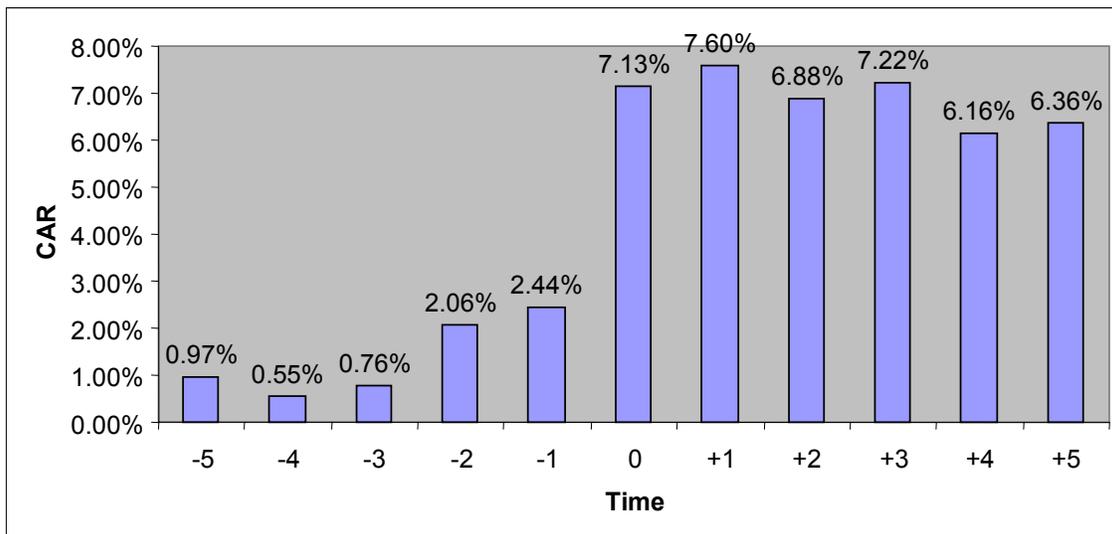
Following Subramani and Walden (1999), we used an estimation period of 120 days, that ends 45 days before the event date. We calculated cumulative abnormal returns (CAR) over different time periods. We examined the CARs over a three day (-1,+1), five day (-2, +2)and eleven day (-5, +5) event windows. These event windows have been used in prior studies (Subramani and Walden 1999, Seth 1990). The results of our analysis are shown in Table 1 and Figure 1.

**Table 1 CARs Related to Web M&A Announcements**

Event Period	CAR	Z values
-5 to +5	5.44%	2.37*
-2 to +2	5.19%	2.79*
-1 to +1	4.60%	3.06*

\*indicates significance at .01 level

From Table 1, it can be seen that internet firms on an average experience significant stock price gains (5.44%) over a eleven day event period. Figure.1 indicates the average cumulative abnormal returns on each day in the eleven days surrounding the M&A announcement. Mean CAR almost increase over thrice from 2.44% to 7.13% on the day of the announcement and it rose again to 7.60% on the day after the announcement. Further, table.1 indicates that the CAR of all the event periods tested to be positive and significant. These results indicate a strong support for our hypothesis.



**Figure1. Cumulative Abnormal Returns for Acquiring Firms**

## Conclusions

Though there is an increasing amount of merger and acquisition activities involving internet firms, there is very little knowledge on the performance impacts of these activities. This research attempted to examine the value created by the M&A activities of the acquiring firms. Through rigorous data collection and analysis, we found evidence to support our contention that the mergers and acquisitions create significant and positive impact on the shareholder wealth of acquiring internet firms.

Our findings have some important implications for practice and research. Several traditional firms as well as internet firms are looking for means to improve their profitability and business growth. Our study found support for mergers and acquisitions to

be a viable means of corporate diversification strategies for Internet firms. Firms lacking resources for succeeding in their e-commerce could consider acquisitions as an alternate means of bridging the gap in their resources and capabilities. For researchers, our study offers a foundation for further research in the area. Future research can specifically examine alternate acquisition strategies, post-acquisition performance of firms, and mechanisms for identifying specific target firms for acquisition.

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