

## **Sharks in the Water: Why the merger wave among Internet firms became a feeding frenzy**

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## **Abstract**

Shleifer and Vishny (2003) propose that merger and acquisition transactions are driven by the relative stock valuations of the merging firms and that industries with a large variation in values will have higher merger activity. In this study we document acquisition activity and relative valuations for 440 Internet firms, which went public between 1990 and 2000. We show the relation between significant overvaluation during the late 1990s and heightened merger activity among Internet firms. While stock-based acquisitions were more prevalent among acquiring firms with higher relative valuations leading up to the bursting of the Internet bubble, firms making cash-based acquisitions in subsequent years actually were those with the higher relative valuations.

Did the sky-high valuations of Internet firms that characterized the late 1990s and early 2000s result in a merger wave where managers used overvalued stock to make acquisitions that were not in the best interest of shareholders? While other studies have examined mergers and acquisitions in general, we limit this study to the examination of acquisitions in this industry now known for a valuation bubble during the period under study. The phenomenon of the Internet frenzy of the late 1990s provides an interesting set of firms with which to examine the motivations behind and the market environment that spawns mergers and acquisitions.

Empirical studies have often documented a wealth loss to acquiring firms, particularly among firms using overvalued equity to make the acquisition. Moeller, Schlingemann, and Stulz (2005) document a total of 12,023 mergers that took place from 1980 to 2001, with 4,136 acquisitions (or 34%) occurring in the four-year period from 1998 to 2001. During the period 1998 to 2001, acquiring firm shareholders lost 12 cents per dollar spent on acquisitions – this compares to 1.6 cents per dollar during all of the

1980s. This apparent overestimation of the value of the acquiring firm and/or the acquired firm is startling. Additionally, Moeller et al document that the majority of the loss was concentrated in a relatively few firms.

Theoretical literature in the merger and acquisition area takes several different approaches. Mueller and Sirower (2003) test four hypotheses about why mergers occur using a sample of large company mergers between 1978 and 1990. The four hypotheses they explore include (1) market-for-corporate-control, (2) synergy, (3) managerial discretion, and (4) hubris. Mueller and Sirower find considerable support for the hubris hypothesis, whereby managers of acquiring firms believe they are more capable of managing than the existing executives, and the managerial discretion hypothesis, whereby managers are able to pursue their own goals (growth of the firm) by acquiring other firms. They find some support for market-for-corporate-control and little or no support for the synergy hypothesis, the two hypotheses that are consistent with acquisitions that increase efficiency and contribute to shareholder wealth.

Also consistent with managerial hubris or market irrationality, Bouwman, Fuller and Nain (2003) find that managers make poor acquisition decisions during periods of high market valuation. Although the market initially welcomes the announcement, over the long-run investors earn negative abnormal returns as the true quality of the acquisition is revealed. Rau and Vermaelen (1998) find that “glamour firms”, those with low book to market ratios, are more likely to be infected by hubris. On the other hand, they find that “value stocks”, those with high book to market ratios, are more prudent in their acquisition plans and tend to create shareholder value rather than destroy it.

Shleifer and Vishny (2003) examine the impact of relative misvaluations of acquirer and target. They assert that stock is used to pay for acquisitions by overvalued acquirers of relatively less overvalued targets and that a cash bid for the target would only occur if the target was undervalued even at the bid price. Both the decision to acquire and means of payment derive from market timing. Stock acquisitions are used by overvalued bidders who expect to see negative long-run returns on their shares, but are attempting to make these returns less negative. Shleifer and Vishny's model also predicts merger waves in which managers will make stock-based acquisitions in high market valuation periods and cash transactions will be used in low market valuation periods. A corollary is that the pace of stock mergers should be higher in industries and markets with a large dispersion of valuations.

Rhodes-Kropf and Viswanathan (2004) model a market where market values for bidders and targets can deviate from true value. Misvaluation has two possible components, firm-specific and market-wide. Bidders in their model have private information about the value of their firm and the potential value of the target firm. On the other hand, managers of target firms have difficulty assessing the potential synergies since they only have private information about the value of their firm and limited information about the components of misvaluation. In this setting, market overvaluation tends to make bids look more attractive to the target, while firm-specific overvaluation tends to make the bids look too low. In Rhodes-Kropf and Viswanathan's model, the chance that a merger occurs increases with market overvaluation. Misvaluation can trigger merger waves in the absence of any underlying reason for the acquisition, such as synergy. On the other hand, undervaluation may result in the halting of the merger wave

even if an underlying reason, such as inefficiency, suggests that assets should be redeployed.

Ang and Cheng (2004) test Schleifer and Vishny's (2003) and Rhodes-Kropf and Viswanathan's (2004) models using a sample of mergers between 1984 and 2001. They find empirical evidence to support Schleifer and Vishny's market driven acquisition model where overvaluation increases the probability that 1) a firm will become an acquirer and 2) that stock will be used as the medium of payment for the target. For stock mergers, Ang and Chen find that target shareholders that retain shares in the merged firm fare poorly, lending support for a critical assumption in Schleifer and Vishny's model that stakeholders in the target should have a short holding period, while shareholders in the acquirer need a longer investing horizon.

Dong, Hirshleifer, Richardson and Teoh (2003) study both acquirers and targets, and find that both are overvalued. Their overvaluation influences virtually every aspect of the acquisition, including method of payment, mode of acquisition, premium paid, target hostility to the offer, likelihood of offer success, and bidder and target announcement period return. Dong et al find that acquirers are overvalued in both cash and stock-based acquisitions, but that the overvaluation is greater for stock-based acquisitions.

Jensen (2004) argues that managers are reluctant to slow the speed of increase in their stock price, even when they can't deliver the performance necessary to justify the high valuation. Hence, their stock price overvaluation causes them to engage in activities, such as acquisitions, that may not be in the best interest of shareholders, in order to keep up the appearance of growth.

A recent study by Schultz and Zaman (2001) that specifically focuses on Internet firms documents their apparent overvaluation. As evidence of the overvaluation, they document, among other things, the significantly faster rate of acquisitions by Internet IPO firms relative to other IPOs during that time period. As with the decision to go public, there is strong evidence that managers are attempting to grab market share. Most Internet firms acquired other Internet firms or firms that would help them expand their existing Internet business.

In this paper, we examine acquisition activity among 440 Internet firms that went public during the period from 1990 to 2000. We track the relative valuation of our sample of Internet firms over time using two alternative valuation techniques. As evidenced by the Internet bubble during the late 1990s, we find that Internet firms had significantly higher valuations than their respective non-Internet industry peers. At the height of these relative valuations, the vast majority of these firms used equity to acquire other firms, including but not limited to other Internet firms. This is consistent with Shleifer and Vishny (2003) who predict that merger activity will be higher in industries with a large variation in values, a characteristic of the firms entering the Internet industry. Also consistent with Shleifer and Vishny's predictions is a decline in the frequency of acquisitions following the bursting of the Internet bubble. Furthermore, although stock-based acquisitions were more prevalent among acquiring firms with higher relative valuations leading up to the bursting of the Internet bubble, firms making cash-based acquisitions in subsequent years actually were those with the higher relative valuations.

## 1. Hypotheses

Consistent with the predictions of Shleifer and Vishny (2003), we expect increased merger activity among Internet firms when there are large variations in their value relative to more traditional firms (“bricks and mortar” businesses) in the same industry. This leads to the development of Hypothesis 1.

*Hypothesis 1: Acquisition activity among Internet firms will increase (decrease) during periods of higher (lower) relative valuations.*

Furthermore, when the variation in value results in significant overvaluation we expect the firms to be more likely to engage in acquisitions as acquirers. There are two reasons that this pattern could occur. First, the firm could be taking advantage of overvalued equity to get a bargain on the target. Alternatively, the firm could be using the acquisition to fuel the unrealistic growth targets that the financial markets forecast. This leads to the development of Hypothesis 2a.

*Hypothesis 2a: Internet firms with higher relative valuations will be more likely to engage in acquisitions.*

On the other hand, we expect that firms that are relatively undervalued will have a greater probability of becoming acquisition targets.

*Hypothesis 2b: Internet firms with lower relative valuations will be more likely to become acquisition targets.*

Our third hypothesis relates to the payment method employed in the acquisition. In the presence of overvalued equity, Internet firms with higher relative valuations, we expect a higher proportion of the acquisition will be consummated using stock. On the other hand, in the presence of potentially undervalued equity, Internet firms with lower relative valuations, we expect a greater proportion of acquisitions will be consummated with cash.

*Hypothesis 3: The higher (lower) the relative valuation of the acquiring firm, the more likely the acquisition will be completed with stock (cash).*

## **2. Data and Method**

We test our three hypotheses using a sample of 440 Internet firms that went public between 1990 and 2000 with data available on Compustat. Hoover's OnLine - IPO Directory, NASDAQ listings of IPOs, the IPO Reporter, and WSRN.com are our sources for Internet IPOs during this time period. We use SDC Mergers and Acquisitions database to identify completed acquisitions where our sample firms were either acquirers or target firms. For purposes of this paper, we focus on acquisitions where the target was 100% acquired.

As presented in Panel A of Table 1, 288 firms in our sample made acquisitions during the period 1990 to 2004. This means that over that time period, nearly two-thirds of our sample made acquisitions. Of the acquiring firms, 50 firms were subsequent targets. Among the 152 firms that did not make acquisitions, almost half (61 firms) became targets in a completed acquisition. That means that among 440 Internet firms, all but 91 firms were involved in a completed acquisition in some way, as a target or acquirer, between 1990 and 2004. As shown in Panel B of Table 1, since the majority of the firms did not even go public until 1999, most of this acquisition/target activity really took place over a much shorter window.

[Insert Table 1 about here]

Since the purpose of this study is to examine the effect of potential overvaluation on acquisition activity and the method of payment used, we need a measure of relative

value. However, standard measures of valuation are very difficult to apply in the case of Internet firms because many do not pay dividends, have negative earnings, negative free cash flow, and in many cases negative book values of equity. We use two alternative valuation measures to overcome these obstacles. First, we calculate a relative price-to-sales (Relative P/S) ratio, measured as total market value of the Internet firm divided by sales over the median price-to-sales for their industry, excluding Internet firms. Secondly, following the methodology outlined in Ofek and Richardson (2002), we compute an implied price-to-earnings (Implied P/E) ratio assuming that their sales will eventually yield a profit margin similar to their respective industry, excluding Internet firms. The industry is defined as two digit SIC code. Therefore the comparison industry of an internet retailer would be all non-internet retail firms.

In addition to examining valuation differences between acquirers, targets, and non-acquirers, we also explore differences in other financial measures. We use panel data, so that all independent variables are calculated for each year in the sample period, from 1990 to 2004. We classify each firm as an acquirer or non-acquirer by whether or not they made an acquisition that year. For each year, if the firm made an acquisition, the indicator variable *acquirer* takes the value of one, and zero otherwise. Therefore, a firm that made only one acquisition in 2000 would be classified as an acquirer in 2000 but a non-acquirer in all other years. As Table 1 shows, 136 of the firms in the sample were acquired during the sample period. For each year, if the firm was acquired, the indicator variable *target* takes the value of one. For all previous years, target will be zero. We only code the firm as acquired if a complete acquisition results. We classify firms as *wallflowers* if they are not an acquirer or target in a given year.

Because financial information is not available for targets in the year acquired, for all firms we use the previously reported fiscal results to measure each firm year. Financial variables examined include total assets, market value, sales, free cash flow, and operating return on assets (OROA). Market value is total market capitalization of the firm, measured as share price times the total number of shares outstanding. Free cash flow is calculated as net cash flow from operating activities less cash dividends and capital expenditures. We compute OROA as earnings before interest, taxes, and depreciation expense divided by total assets. Financial data is obtained from either [www.marketguide.com](http://www.marketguide.com) or Standard and Poor's *Research Insight*.

### **3. Results**

From 1993 to 2004, as shown in Table 2, there were 948 acquisitions completed by 288 firms in our Internet sample. More than half of those acquisitions took place in either 1999 or 2000. In 2000 alone, 178 firms made acquisitions, representing over forty percent of the sample of 440 Internet firms. Almost half of the firms making acquisitions in 2000 completed more than one.

[Insert Table 2 about here]

In Table 3 we report median relative price-to-sales ratios (Relative P/S) and median implied price-to-earnings ratios (Implied P/E) for the sample each year. We classify each firm as an acquirer or non-acquirer by whether or not they made an acquisition that year. Therefore, a firm that made only one acquisition in 2000 would be classified as an acquirer in 2000 but a non-acquirer in all other years. In Panel A, the Relative P/S ratios are reported. If Relative P/S is 1.0, this indicates the sample has the

same median price-to-sales as the industry. Instead, the Relative P/S is consistently above one; in 2000, the highest year of acquisitions, the median Acquirers' Relative P/S ratio is 19 times the industry, while the median non-acquirer had a Relative P/S ratio of 7.7 times the industry. We find evidence consistent with hypotheses 1 and 2a, i.e., Internet firms that make acquisitions tend to have higher Relative P/S valuations particularly in those years characterized by heightened acquisition activity.

[Insert Table 3 about here]

Figure 1 graphically depicts the merger concentration and its relation to Relative P/S valuations. The chart shows the median Relative P/S ratios (left axis) by year for both acquiring and non-acquiring firms. Superimposed on the chart (right axis) is the percentage of Internet firms making acquisitions in a given year. It is clearly evident that the most acquisition-intense years, 1999 and 2000, coincide with high relative valuation years.<sup>1</sup>

[Insert Figure 1 about here]

In Panel B of Table 3, we compare acquirers and non-acquirers by year using an alternative valuation measure, Implied P/E. Our results under this alternative measure are for the most part consistent with our findings in Panel A and our hypotheses 1 and 2a. Figure 2 graphically depicts the merger concentration and its relation to Implied P/E valuations. The chart shows the median Implied P/E ratios (left axis) by year for both acquiring and non-acquiring firms. Superimposed on the chart (right axis) is the number of Internet firms making acquisitions in a given year. It is evident that the most acquisition-intense years, 1999 and 2000, coincide with high valuation years.

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<sup>1</sup> Figures 1 and 2 do not include 1993-1996 when very few firms were making acquisitions and the medians are determined by less than five firms.

[Insert Figure 2]

In computing the Implied P/E measure we encountered problems in 1999 and 2000 with negative mean and median profit margins for two of our industry classifications. To eliminate negative P/E ratios, rather than taking the median of the individual ratios, we computed an industry profit margin by taking the total industry's mean net income divided by mean sales, as computed by Ofek and Richardson (2002). However, this measure is biased toward larger firms in the industry while our sample consists of small newly public firms. Dividing price-to-sales for each Internet firm by the price-to-sales of the industry is comparable to applying an industry profit margin to the Internet firm's sales to compute an implied net income and thus an implied P/E ratio. Our results are similar with the two measures. Because of the bias in the Implied P/E measure, from this point on, we limit our analysis to the Relative P/S measure.

We examine the acquisitions more closely in Table 4. Stock comprised roughly 61% of transactions and cash comprised roughly 35% of all acquisitions. In addition to being used in greater frequency, stock consideration also represented significantly more in dollar value. Overall, 45% of acquisitions were made entirely with stock.

[Insert Table 4 about here]

In Table 5 we examine the impact of relative valuation on the choice of payment. For hybrid transactions, those using cash and stock, we classify the acquisition as either cash or stock based on the predominate value of consideration received by the target. Up to the bursting of the Internet bubble and fall of sky-high Internet valuations, the number of stock-based acquisitions exceeds cash-based acquisitions in all years. We also find that in 1998 and 2000, the relative values of firms making stock-based acquisitions are

significantly higher than Internet firms making cash acquisitions. After 2001, there is an apparent shift in the form of payment as well as the relation between firm valuation and payment choice. Following the fall of Internet firm valuations, cash-based acquisitions are more prevalent, consistent with our third hypothesis. In addition, in 2001 and 2003 firms making cash-based acquisitions actually had higher relative valuations than firms acquiring with stock. After the Internet bust, “better” Internet firms may have been in a position to use cash rather than stock, which had been severely beaten down in price. Firms that continued to make stock-based acquisitions at this point may not have had an alternative payment vehicle, cash or debt assumption, available to them.

[Insert Table 5 about here]

At this juncture we shift our focus to those firms that were acquisition targets. There are actually three sets of targets. The first set of targets is the firms that our Internet sample acquired. A significant portion of the targets (87%) in this set are actually private firms. The second set of targets is comprised of firms in our Internet sample that are acquired. There are a total of 136 firms in this set. The final set consists of Internet firms that were acquired by other Internet firms. There are a total of 50 firms in this last set. Note that the third set is actually a subset of the second. Because of limited data available on the first set, we focus our attention on targets in the second and third set.

In Panel A of Table 6, we compare the relative valuations of targets from our second set, firms in our Internet sample that are acquired, with their acquirer. Note that in this comparison the acquirer may or may not be an Internet firm itself. In Panel B of Table 6, we examine valuation differences when both the target and acquirer are Internet

firms in our sample. In 2000 and 2001, the acquirers appear to be more overvalued than the targets; however this difference is only significant in 2000. After 2001 there is no clear difference in valuations between targets and acquirers. When the acquirer is also an Internet firm (Panel B), the acquirers appear to be more highly valued in years 2000-2003 but these differences are not significant except in 2000. This lack of significance is probably due to the small sample size.

[Insert Table 6 about here]

We examine the relation between target and acquirer valuations and the method of payment used in the acquisition in Table 7. We classify payment methods as cash, stock, hybrid, and other. In this case, hybrid transactions constitute a combination of stock and some other payment method. Other methods would include the assumption of debt. Regardless of whether or not the acquirer is an Internet firm, stock-based acquisitions represent the predominant payment vehicle prior to the bursting of the Internet bubble in 2001.

[Insert Table 7 about here]

We also examine the changes in relative valuations of target Internet firms leading up to the acquisition. When we examine the entire sample of Internet firms that are acquired, there is a significant fall in Relative P/S ratio preceding the acquisition. On the other hand, for Internet firms that are acquired by other firms in our sample, the valuation declines are not significant. This may be a function of the time frame involved. As shown in Table 7, the vast majority (about 75% of those for which we can obtain valuation data) of the within sample acquisitions take place prior to the fall in valuations observed in 2001.

[Insert Table 8 about here]

In Table 9, we provide a summary of various financial characteristics of those firms by whether they were an acquirer, target, or non-acquirer. Total assets, market value, sales, free cash flow, and operating return on assets are measured in firm years, so that each firm is included in all years of its existence. As described previously, we use panel data so that each firm is designated annually as one of the three types – acquirer, target or wallflower. For example, a single firm that survives eight years and is then acquired may appear five times as an acquirer, a wallflower in two years, and finally a target in one year.

[Insert Table 9 about here]

As can be seen in Table 9, acquirers are larger, both in total assets and sales, relative to the set of targets and wallflowers. Targets are also significantly larger than wallflowers. Consistent with potential overvaluation, firms that acquired also had significantly higher market capitalization the year prior to the acquisition. As expected, the median firm in the sample had negative free cash flow and negative operating return on assets for the sample period. Free cash flow is significantly more negative for targets and acquirers than for wallflowers when combining all firm years. However, in years 2002 and 2003, free cash flow went up for the full sample. Furthermore, during this post-Internet bubble period, the acquirers actually had a positive median free cash flow. This is consistent with our earlier results that reflect a shift in the payment method for acquisitions. It appears, in these later years, that acquirers had cash available with which to make the acquisition. Overall, operating return on assets, while negative, is

significantly greater for acquirers than for targets and wallflowers. Acquirers, while more overvalued, appear to be the stronger firms in the Internet industry.

#### **4. Conclusions**

Not surprisingly, Internet firms exhibited significantly higher valuations using price-to-sales measures than their respective industry peers in the 1990s. Given the required return demanded by such high valuations, it is evident that managers were expected to produce significant growth prospects. We find evidence that these lofty valuations contributed to a merger wave, as relatively overvalued Internet firms acquired other firms, Internet and others alike. We also show that in the presence of high relative valuations, stock-based acquisitions were more prevalent. As the Internet bubble burst, not only did the frequency of acquisitions diminish, but the relation between valuations and acquisition payment methods also changed. As equity valuations fell, firms with higher relative valuations shifted to cash-based acquisitions. This may represent the ability of more established Internet firms to actually choose among alternative payment methods, electing to pay cash for targets in the period immediately following a decline in the price of their shares.

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**Table 1. Sample Distribution**

The following table provides the sample distribution 440 Internet IPOs between 1990 and 2000. Panel A presents a reconciliation of the full sample by activity - whether the firm was an acquirer, target, both or neither (wallflower). Panel B presents a breakdown of the sample by year and outcome.

<i>Panel A: Acquisition, bankruptcy, and going private activity by sample firms</i>					
Description	Number of firms				
One acquisition	101				
Two acquisitions	61				
Three or more acquisitions	<u>126</u>				
Total acquiring sample	288				
Acquiring firms that became subsequent targets	75				
Acquired (never acquirers)	61				
Wallflowers – neither acquirer or acquired	<u>91</u>				
Total	<u>440</u>				

<i>Panel B: Sample distribution by year</i>					
Year	IPO	Acquired	Financial distress <sup>A</sup>	Delisted <sup>B</sup>	Full Sample
1990	1				1
1991					1
1992	1				2
1993					2
1994	3				5
1995	5	1			10
1996	43	1			52
1997	21	2	1	1	70
1998	27	2	1		94
1999	244	9			331
2000	95	32	9	1	380
2001		44	47	8	278
2002		15	22	7	233
2003		17	18	3	191
2004		13	5	3	167
Total	440	136	103	23	

<sup>A</sup> Includes bankruptcies and liquidations.

<sup>B</sup> Regardless of whether the delisting was involuntary or voluntary.

**Table 2. Acquisition Distribution**

The following table provides a summary by year of acquisitions made by 288 Internet firms during the period 1990 to 2004. A summary is also provided of how many firms made a given number of acquisitions in each year.

Year	Acquisitions	Firms making Acquisitions	Number of Acquisitions by a Given Firm											
			1	2	3	4	5	6	7	8	9	10	11	12
1993	1	1	1											
1994	7	3		2	1									
1995	11	5	3			2								
1996	16	8	4	3				1						
1997	21	17	14	2	1									
1998	59	41	32	6	1	1				1				
1999	226	114	61	28	8	10	4		2				1	
2000	320	178	94	57	14	7	4					1		1
2001	102	76	60†	10	3	2	1							
2002	70	54	43	8	2		1							
2003	46	37	30	5	2									
2004	69	49	40	6	1		1				1			

†The acquisition of Time Warner by AOL is eliminated from the sample.

**Table 3. Price-to-sales and Implied Price-to-earnings Comparisons: Acquirers vs. Non-acquirers**

The following table provides a comparison of the median relative price-to-sales ratios and implied price-to-earnings ratios by year of acquiring firms versus Internet firms that did not make acquisitions in that year. The relative price-to-sales ratio is calculated by taking total market value divided by sales for the Internet firm over total market value to sales for the industry. Following the methodology outlined in Ofek and Richardson (2002), we compute an implied price-to-earnings ratio assuming that our Internet firms' sales long-term will yield a profit margin similar to their respective industry, excluding Internet firms. The number of acquiring firm observations is 468 versus the 583 firm/acquisition years shown in Table 1 due to missing information necessary for the calculation of relative price-to-sales.

Year	Panel A				Panel B			
	Non-acquirers		Acquirers		Non-acquirers		Acquirers	
	N	Relative P/S	N	Relative P/S	N	Implied P/E	N	Implied P/E
1993	0	-	0	-	0	-	0	-
1994	1	0.4	0	-	1	3.6	0	-
1995	5	1.4	1	159.0	5	4.5	0	-
1996	10	6.9	4	79.2**	9	39.4	3	124.5
1997	36	3.0	14	5.3	33	23.6	13	37.6
1998	41	2.5	27	6.4**	39	21.8	26	33.7**
1999	48	6.2	76	31.4***	41	33.7	48	74.5
2000	181	7.7	158	19.0***	141	77.2	132	146.4***
2001	212	2.7	67	2.0	212	23.3	65	36.5
2002	231	1.4	48	2.0	194	17.5	46	21.3
2003	205	1.3	36	3.4***	176	7.7	33	13.0**
2004	165	1.5	43	1.9	132	17.3	39	22.1**

\*\*\*, \*\* Indicates the group is significantly larger than the non-acquiring sample at the 1% and 5% levels, respectively.

† Excludes one all debt acquisition in 2004.

**Table 4. Transaction Value and Method of Payment Summary**

The following table summarizes the total value and payment methods for 948 acquisitions made by 288 Internet firms between 1990 and 2004.

	Mean	Median	Maximum	Minimum
Cash consideration	15.7	0.2	920.0	0.0
Stock value	220.9	12.4	21,101.4	0.0
Debt assumption	0.2	0.0	80.0	0.0
Other	3.6	0.0	822.8	0.0
Total dollar value of transaction†	240.4	26.9	21,101.4	0.1
Method of payment				
Percentage cash	35.1	1.9	100.0	0.0
Percentage common stock	60.7	90.5	100.0	0.0
Percentage debt	0.8	0.0	100.0	0.0
Percentage other	3.4	0.0	100.0	0.0
Percentage that are:				
All cash	25.3			
All stock	45.3			
All debt	0.2			
Hybrid transactions	<u>29.2</u>			
	100.0			

†The acquisition of Time Warner by AOL is eliminated from the sample.

**Table 5. Price-to-sales Comparisons: Stock vs. Cash Acquisitions**

The following table compares the median relative price-to-sales ratios for firms making primarily stock acquisitions versus those that make primarily cash acquisitions. The relative price-to-sales ratio is calculated by taking total market value divided by sales for the Internet firm over total market value to sales for the industry. The number of acquiring observations is 468 versus the 583 firm/acquisition years shown in Table 1 due to missing information necessary for the calculation of relative price-to-sales.

Year	Stock acquirers		Cash acquirers	
	N	Rel P/S	N	Rel P/S
1993	0	-	0	
1994	0	-	0	-
1995	1	159.0	0	-
1996	3	116.0	1	115.1
1997	11	4.3	3	6.4
1998	20	51.3***	6	1.7
1999	52	49.7	14	24.0
2000	126	29.6**	25	16.2
2001	50	1.9	23	4.5**
2002	21	2.0	31	2.2
2003	18	2.3	17	4.1*
2004†	21	2.0	25	2.9

\*\*\*, \*\* Indicates the group is significantly larger at the 1% and 5% levels, respectively.

† Excludes one all debt acquisition in 2004.

**Table 6. Price-to-sales Comparisons: Targets versus Acquirers**

The following table compares the median relative price-to-sales ratios for the firms acquired by Internet firms in our sample. The relative price-to-sales ratio is calculated by taking total market value divided by sales for the target/acquiring company over total market value to sales for their respective industry. Panel A focuses on the full sample targets, while Panel B shows only within-sample acquisitions. Full sample targets represent the subsample of Internet firms that are targets in a completed (100%) acquisition, in which case the acquirer may or may not be an Internet firm. Within-sample acquisitions show only those acquisitions where the target firm and acquiring firm are both in our Internet sample.

	Targets		Acquirers	
	N	Relative P/S	N	Relative P/S
<i>Panel A: Full sample of targets</i>				
1996	1	6.90		
1997	1	2.16		
1998	2	1.49	1	5.35
1999	7	9.91		
2000	35	7.34	22	26.41***
2001	38	0.89	24	1.27
2002	13	1.35	11	1.34
2003	16	2.70	6	1.91
2004	12	0.79	9	0.95
Full Sample	125	2.21	73	2.20
<i>Panel B: Within sample acquisitions</i>				
1999	1	9.90		
2000	17	9.69	13	34.73***
2001	9	0.45	9	1.09
2002	2	2.01	2	5.07
2003	3	1.59	3	1.51
2004	4	1.05	4	1.47
All firms	36	2.96	31	5.74

\*\*\* Indicates the group is significantly larger at the 1% level.

**Table 7. Effect of Price-to-sales on Payment Method**

The following table presents median price-to-sales ratios for targets and acquirers by method of payment. The relative price-to-sales ratio is calculated by market value divided sales for the company divided by market value to sales for the industry. Panel A focuses on the full sample targets, while Panel B shows only within-sample acquisitions. Full sample targets represent the subsample of Internet firms that are targets in a completed (100%) acquisition, in which case the acquirer may or may not be an Internet firm. Within-sample acquisitions show only those acquisitions where the target firm and acquiring firm are both in our Internet sample.

	N				Targets				Acquirers			
	Cash	Stock only	Hybrid	Other	Cash	Stock only	Hybrid	Other	Cash	Stock only	Hybrid	Other
<i>Panel A: Full sample of targets</i>												
1996		1				6.90				-		
1997	1				2.15				-			
1998		?				12.31				5.36		
1999		5				9.92				-		
2000	3	25	4	2	22.63	9.70	2.13	50.28	1.59	32.28	1.86	-
2001	19	16	3	3	1.10	0.54	1.15	1.53	2.82	4.08	1.07	-
2002	4	4	5		1.17	2.19	1.25		1.34	0.80	2.81	
2003	9	3	3	1	2.71	2.69	1.85	-	13.53	1.01	1.52	-
2004	8	3	1		0.80	0.42	1.22		1.21			
Total	44	58	16	7	1.50	2.86	1.41	6.68	1.54	2.45	2.95	-
<i>Panel B: Within-sample acquisitions</i>												
1999		1				9.91				-		
2000		16	1			10.11	2.73			34.74	-	
2001	1	6	2		0.17	0.44	2.27		5.75	0.74	7.55	
2002		1	1			2.76	1.25			2.21	7.94	
2003	1	1	1		1.59	0.95	3.01		24.74	1.51	0.59	
2004	1	2	1		3.59	1.22	-		2.95	2.00	-	
Total	3	27	6		1.59	4.06	1.99		5.75	19.54	2.00	

**Table 8. Target Relative Price-to-sales leading up to Acquisition**

The following table presents median relative price-to-sales ratios for targets over a three-year window. Time  $t$  is the acquisition year,  $t_1$  is the year prior, and  $t_2$  is two years prior to the acquisition. The relative price-to-sales ratio is calculated by taking total market value divided by sales for the target Internet firm divided by total market value to sales for their industry. Full sample targets represent the subsample of Internet firms that are targets in a completed (100%) acquisition, in which case the acquirer may or may not be an Internet firm. Within-sample targets show only those acquisitions where the target firm and acquiring firm are both in our Internet sample.

Sample	$t_2$	$t_1$	$t$
Full sample targets	3.23**	3.95*	2.21
Within-sample targets	4.10	5.23	2.96

\*\* Significantly different from time  $t$  at the 10% level.

\* Significantly different from time  $t$  at the 1% level.

Note:  $t-2$  and  $t-1$  are not significantly different from each other.

**Table 9. Financial Characteristics of Acquirers versus Non-acquirers**

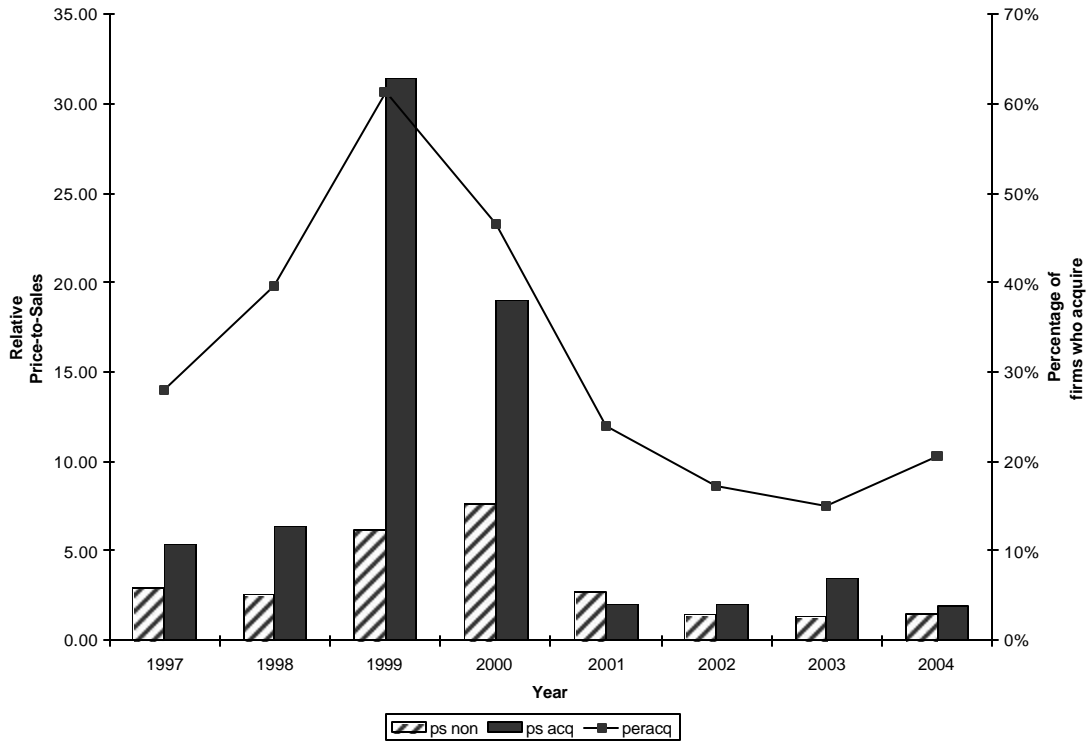
The following presents summary statistics for the full sample of 440 Internet IPO firms and subsets of the sample; acquirers, targets, and wallflowers, neither a target nor acquirer in a given year. For each firm, all years in the sample are included. Total assets, market value, sales, free cash flow, and operating return on assets are measured in firm years. If the firm made an acquisition in a given year, it is classified as an acquirer in that year.

	1997	1998	1999	2000	2001	2002	2003	2004	Total
<b>Total Assets</b>									
Full sample	10.34	11.60	80.66	123.30	90.07	80.10	91.25	116.30	59.27
Acquirers	69.70	99.47	160.90	287.23	153.46	199.72	314.64	338.66	184.41 <sup>a</sup>
Targets	53.77	67.00	106.97	89.71	132.17	54.18	63.54	-	93.78 <sup>b</sup>
Wallflowers	8.99	10.00	62.19	90.82	81.02	70.62	74.81	93.92	39.11 <sup>c</sup>
<b>Market Value</b>									
Full sample	137.93	307.15	737.96	96.00	58.91	37.94	92.71	100.34	123.29
Acquirers	213.85	1,080.34	1,087.54	310.02	202.18	209.62	518.73	416.77	441.89 <sup>a</sup>
Targets	137.93	349.56	450.40	69.00	82.53	62.49	132.00	-	137.01 <sup>b</sup>
Wallflowers	115.06	174.79	647.66	49.62	43.27	25.57	55.46	55.37	75.54 <sup>c</sup>
<b>Sales</b>									
Full sample	7.83	7.04	20.64	51.50	55.49	55.58	68.74	82.45	27.66
Acquirers	64.34	47.70	36.96	83.34	77.32	86.91	138.58	157.26	71.15 <sup>a</sup>
Targets	42.22	50.72	28.53	52.28	38.27	42.31	49.08	-	42.15 <sup>b</sup>
Wallflowers	6.22	6.12	15.52	33.78	45.74	45.90	55.98	69.07	19.02 <sup>c</sup>
<b>Free Cash Flow</b>									
Full sample	-4.48	-4.80	-14.51	-28.98	-18.19	-6.72	-1.36	0.03	-7.87
Acquirers	-7.88	-10.69	-18.55	-35.85	-22.21	-9.76	4.86	4.22	-16.34 <sup>a</sup>
Targets	-14.37	-10.30	-11.46	-30.82	-17.46	-9.00	-5.42	-	-16.56 <sup>a</sup>
Wallflowers	-4.33	-4.58	-12.67	-25.76	-17.61	-6.47	-1.75	-0.47	-6.32 <sup>b</sup>
<b>Operating ROA</b>									
Full sample	-0.37	-0.42	-0.19	-0.24	-0.23	-0.08	-0.01	0.03	-0.19
Acquirers	0.01	-0.10	-0.12	-0.13	-0.13	-0.04	0.03	0.05	-0.08 <sup>a</sup>
Targets	-0.13	-0.03	-0.10	-0.31	-0.17	-0.10	-0.09	-	-0.17 <sup>b</sup>
Wallflowers	-0.40	-0.48	-0.22	-0.31	-0.29	-0.10	-0.02	0.02	-0.23 <sup>b</sup>

Groups denoted by the letter a are significantly different from b and c at the 1% level. Groups denoted by the letter b are significantly different from c at the 1% level. There are no significant differences across groups with the same letter.

**Figure 1. Relative Price-to-sales and Percentage of Firms Acquiring by Year**

The following chart shows the median price-to-sales ratios for acquiring and non-acquiring firms by year (left axis). Also indicated is the percentage of firms (right axis) making acquisitions by year.



**Figure 2. Implied Price-to-earnings and Number of Acquisitions by Year**

The following chart shows the median implied price-to-earnings ratios for the full sample and the subsamples of acquiring and non-acquiring firms by year (left axis). Also indicated is the total number of acquiring Internet firms by year.

