IPO Returns: Pre And Post Dotcom Bubble

Danny Kayne, Colorado College
Judith Laux, (E-mail: jlaux@coloradocollege.edu), Colorado College

ABSTRACT

This study inspects the relative first-day returns of tech/internet IPOs before, during, and after the 1999-2000 dotcom "bubble" to investigate whether market inefficiency and agency conflicts were resolved. Using IPOs during the 1990 to 2004 period, we discover significant reversals in underpricing of internet IPOs following the large-scale investigation of IPO valuation practices led by New York State Attorney General Elliot Spitzer.

INTRODUCTION

Our investigation of the relative pricing of internet and non-internet IPOs begins with a general look at the underpricing phenomenon. "Underpricing" occurs when issuing firms receive less than a market-based "fair" price, and early, often handpicked, buyers receive more as they later sell the initially underpriced shares. At issue is whether such mispricing represents a wealth transfer that provides evidence of principal-agent conflicts. Also at issue is whether markets are inefficient, as the last to buy experience lower than expected risk-adjusted returns on their investment. The current study reviews literature related to IPO pricing and compares returns in the periods surrounding the dotcom bubble. The following section introduces the underpricing phenomenon along with general descriptive statistics and is followed by a more complete review of the literature and a short section on one of the premier players in the IPO scandal, Frank Quattrone. This is followed by data, results, and conclusions.

THE UNDERPRICING PHENOMENON

Initial public offerings attracted empirical investigation long before the dotcom bubble of the late 1990s, primarily because they represent a true test of valuation. Underwriters are charged with researching the industry and macroeconomic conditions faced by the launching firm and must offer guidance on the appropriate per share price. Confronted with the possibility of overpricing the security and having a failed offering, the temptation is to err in the other direction. Similarly, managers, who normally will hold shares for a certain lockup period, also stand to benefit from a stock price that will soar rather than settle. Studies prior to the dotcom period indicated that first-day returns had not risen above 21.1% (figure for 1995) [Reilly and Norton, 2003, p. 318] and averaged 16.4% [Ritter, 1991, p. 3].

In 1999 and 2000, however, average first-day returns swelled to 69% and 55.5%, respectively [Reilly and Norton, 2003, p. 318], and this apparent market imbalance did not go unnoticed. An investigation into IPO allocation, pricing, and favoritism commenced, and regulatory actions ensued.[1] This paper looks at post-dotcom returns for evidence that these reforms improved market efficiency. The following section offers a more detailed review of the pertinent literature.

[1] For a good picture of this period, including Frank Quattrone's apparent role, see the following: Smith [2003]; Elkind et al [2001]; Gasparino and Schroeder [2002]; Gasparino [2002]; Opdyke and Simon [2003]; Smith et al [2003].

REVIEW OF LITERATURE

Several studies address the issue of IPO underpricing and the resultant transfer of wealth, most notably Ritter [1991], Aggarwal et al [2002], Loughran and Ritter [1995 and 2004], and Hansen [2001]. Ritter [1991] sets the tone for expected returns, providing average IPO first-day returns from 1975 to 1984. Estimated returns were found to be 16.4% on average at the end of the first trading day [Ritter, 1991, 3]. Loughran and Ritter [2004] examine the effects of underpricing from the 1980s until after the dotcom bubble. According to the sample population used, during the 1980s first-day returns were a meager 7%**;** from 1990 to 1998, returns more than doubled (to 15%), and during the dotcom bubble, returns averaged 65%. Following the dotcom bubble (2001 to 2003), average first-day returns reverted to 12% [Loughran and Ritter, 2004, 5-12]. Aggarwal et al [2002] contrasts internet and non-internet IPOs. Their findings support two notions: 1) that underpricing and manipulative research coverage represented methods deliberately used in pricing IPOs during the 1990s and the dotcom bubble, and 2) that internet IPOs had greater underpricing. Specifically, "…the internet subsample… [171 firms with underpricing in excess of 50%, two-thirds of which were internet-related] has significantly greater underpricing (mean of 66.2% and median of 33.3%) than the non-internet subsample (mean of 35.2% and median of 17.6%)" [Aggarwal et al, 2002, 119]. Some studies address the dotcom industry specifically, including Ljungqvist and Wilhelm [2003], Johnston and Madura [2002], and Bartov, Mohanran, and Seethamraju [2002]. None, however, offers a look at all three periods to contrast internet and non-internet IPOs. Before reviewing our data and results, the following section offers a brief description of one of the major players in the IPO scandal, Frank Quattrone, and the results of the Spitzer investigation.

FRANK QUATTRONE AND FALLOUT OF THE IPO INVESTIGATION

More than any other single contributor, Frank Quattrone, an employee with Credit Suisse First Boston, is accredited with manufacturing the dotcom bubble. "Quattrone came to Silicon Valley in the early 1980s, a time when the big Wall Street firms regarded tech banking as just an interesting niche business. But Quattrone believed that the tiny, struggling companies that then made up the tech galaxy were destined to become fast-growing giants…" [Elkind et al, 2001, 38]. From 1998 to 2000, Quattrone and his team underwrote 138 tech firms, more than the combined total of his competitors. Although the potential of the companies he underwrote was not always as favorable as the research that promoted the stock, Quattrone continuously made sure that optimistic coverage of the company was given to investors and that IPO shares were allocated to "friends of Frank." Regardless of his practices, Quattrone was able to hype up issuances of companies he planned to underwrite to reap high first-day returns [Elkind et al, 2001, 34-43]. VA Software Corp. (previously known as VA Linux Systems) represents one example of this pricing exuberance. On December 9, 1999, Linux offered its IPO shares at $30**;** suspicion of faulty pricing practices and favorable share allocation arose when first-day prices reached as high as $299 [premium.hoovers.com, 10008]. With Quattrone dominating the tech industry, competing banks were forced to follow suit in the way they issued IPOs. Quattrone's dirty practices were becoming the industry standard [Gasparino and Schroeder, 2002, A1].

When many of the internet stocks crumbled following the first few weeks of issuance, an investigation into IPO allocation, pricing, and favoritism spearheaded by New York State Attorney General Elliot Spitzer commenced, and regulatory actions resulted. According to Smith et al, Spitzer's findings included IPO allocation favoritism, fraudulent research reports, unfair research or research not given in good faith, illegal acceptance of tainted research, and "IPO 'spinning'" [2003, C1]. Changes were mandated in the investment banking industry, and reparations (including a $1.4 billion settlement) from the investment banks were required [Smith et al, 2003, C1, C3]. In addition, legislation included "a clear separation of stock research from investment banking, 'independent' research for investors at no cost, better disclosure of stock ratings, and the ban of IPO 'spinning'" [Zuckerman and Craig, 2003, C1, C9]. The current paper looks at post-dotcom returns for evidence that these reforms had a positive impact on market efficiency. If investment banks are conforming, agency relationships should improve, with issuing firms receiving a fairer price and markets more efficiently equating risk and return.

DATA AND RESULTS

In defining internet stock classifications (listed on the following page), we relied on a system of classification November 2004, we turned to Hoovers.com's IPO Central Website for IPO offer dates, offer prices, and first-day

used. in Marshall et al [2004, p. 107] and SIC codes that define internet related companies. By using these two sources as sample standards, our population is synchronized with previous studies. For internet IPOs from January 1998 to closing prices. SIC code verification was found at www.osha.gov. Results from Loughran and Ritter [2004] and Johnston and Madura [2002] were also used

Internet Classification	Description of the Classification	Example
Advertising	Providing advertisement services on the Web or do direct marketing	Doubleclick, Inc.
Consulting and Designers	Develop and install web technologies and offer Web design services	MarchFIRST, Inc.
Content and Communities	Online communities that are formed to support groups within common interests	Go2net, Inc.
E-Commerce Enablers	Provide software for e-commerce	Ariba, Inc.
E-Tailors	Sell to consumers online	Amazon.com, Inc.
Financial Services	Provide online financial services such as banking and stockbrokerages	NetBank, Inc.
ISP/Access	Provide Internet services or access	EarthLink, Inc.
Internet Services	Provide services such as website hosting or e-mail management	Versign, Inc.
Performance Software	Provide software such as operating systems or software for working with multimedia content on the Web	Tibco Software, Inc.
Search and Portal	Internet Search Engines provide help to users in finding information on the web. Portals provide an entry to the web, often including a search engine and navigation aid.	Yahoo, Inc.
Security	Create and sell software for Internet-oriented software such as firewalls and encryption	Check Pt Software Technology LTD
Speed and Bandwidth	Provide services that improve the performance of using the Internet	Cisco Systems, Inc.

SOURCE: Beverly B. Marshall, Clarie E. Crutchley, and Diane Lending, "Early Internet IPOs Versus Subsequent Entrants," *Journal of Economics and Finance* 28, No. 1 (Spring 2004): 107

Table 1 on the following page shows the number of firms issuing IPOs for the three periods—pre-dotcom (1990 to 1998), dotcom (1999 to 2000), and post dotcom (2001 to 2004). These are categorized as internet related or non-internet related. By comparing both types of IPOs, first-day returns can be better understood. The numbers indicate that the pre-dotcom period was characterized by fewer dotcom IPOs (1081) than non-internet IPOs (2315), while the dotcom bubble showed a significantly different picture, with 585 internet-related IPOs in a two-year period versus 218 non-internet IPOs. The period following the bubble evidenced a significant reversal (86 dotcoms, 276 non-internet IPOs). Even more striking, however, are the relative yields during the three periods. For internet related IPOs, the average initial return experienced before the dotcom bubble was 22.2%, while non-internet IPOs averaged a yield of 11.3%. During the bubble, however, internet IPOs averaged a whopping 80.6%, with non-internets averaging a relatively meager 23.1%. Following the dotcom bubble, internets averaged yields of 11.4%, while non-internets averaged 9.12%.

Table 1: Number of IPOs and Average Returns: Before, During, and After the Dotcom Bubble

	Internet	Non-Internet
1990-1998 period	N = 1081	N = 2315
	Return = 22.2%	Return = 11.3%
1999-2000 period	N = 585	N = 218
	Return = 80.6%	Return = 23.1%
2001-2004 period	N = 86	N = 276
	Return = 11.4%	Return = 9.12%

SOURCES: 1990-1998 and 1999-2003 data from Jarrod Johnston and Jeff Madura, "The Performance of Internet Firms Following Their Initial Public Offering," *The Financial Review* 37 [2002], 529, 534. 2004 data from http://premium.hoovers.com/global/ipoc/ index.xhtml?page id=10008.

In short, prior to the dotcom bubble, the number of tech and internet related firms that issued IPOs constituted approximately one-third of all IPOs. During this time period, average initial returns for internet related IPOs almost doubled the average initial returns on non-internet IPOs, perhaps a reflection of the additional risk of these relatively hard-to-value stocks. During the dotcom bubble, the number of internet IPOs increased dramatically, to more than twice the number of non-internet IPOs. The average returns of internet related IPOs almost quadrupled the average returns experienced for non-internet IPOs. Following the dotcom bubble, internet IPOs dwindled in comparison to the number issued during the bubble, while the number of non-internet IPOs increased. Internet IPO yields settled at roughly half their pre-bubble level.

CONCLUSIONS

Prior to and following the dotcom bubble, internet and non-internet IPOs can be viewed as having normal levels of returns**;** as defined by Ritter [1991], Reilly and Norton [2003], and Elkind et al [2001], normal returns are between 10% and 20%. The initial day returns experienced during the dotcom bubble were far from normal. Can we ascribe the return to normalcy to the actions of Elliot Spitzer? Probably not, since the sanctions were not enacted until early 2003. Even by the end of 2000, however, the investigations into investment banks issuing high-yielding internet IPOs had begun, perhaps spurring other I-banks to price the securities more appropriately. Certainly, information was being revealed to market participants surrounding the misdeeds of the investment bankers, and perhaps it is a testament to the resiliency of the markets to react to this information, or as Robert Shiller states it: "Indeed it is thanks to a market's ability to respond appropriately to such factors, for a variety of investments, that well-functioning financial markets generally promote, rather than hinder, economic efficiency" [Shiller, 2000, 18].

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