Characteristics of Initial Public Offerings (IPOs) Issued through Internet-Based Investment Banks

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Abstract

In the past few years Internet-based investment banks have emerged that provide companies with another sales channel for selling their stock through initial public offerings (IPOs). In this study we address two research issues related to these new intermediaries. First, what are the characteristics of firms that choose online (Internet-based) investment banks to distribute some portion of their IPO (Internet IPOs) as opposed to choosing entirely traditional distribution methods? And second, what are the characteristics of the issues themselves? Using data from 27 IPOs issued between 16 July 1998 and 14 December 1998 we find that Internet IPOs are significantly larger in terms of market value than firms choosing traditional distribution venues. The Internet IPOs also employ more reputable investment banks to manage their IPO and their CEOs were significantly younger. Overall, we find that Internet and traditional IPOs have more similarities than differences. These findings have implications for investment banks as they seek to identify potential customers for their services.

Keywords: electronic markets, Internet, investment banking, initial public offering, financial services

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INTRODUCTION

In the past few years Internet-based investment banks have emerged that provide companies with another sales channel for selling their stock through initial public offerings (IPOs). Eventually, these new channels should provide companies with a clear choice of whether to use traditional investment banks, or online investment banks, or some combination when selling their IPO. When companies are considering an IPO they must first evaluate the financial issues to decide whether it is a viable financing option, and second they must identify which channel(s) they wish to use to distribute the IPO. In this paper we focus on the second decision. This study has an interdisciplinary focus combining information systems and finance issues.

Past information systems research has focused on economic analysis of the general impact of electronic markets (Bakos 1991; Benjamin and Wigand 1995; Malone *et al.* 1987, 1989; Rayport and Sviokla 1994). Because online markets for financial products and services are a relatively new phenomenon, only a limited amount of research has been conducted that is related to the impact of these new information technology-enabled channels on financial industries, such as banking, real estate and insurance, (Barrett and Walsham 1999;

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Crowston and Wigand 1999; Ramaswami *et al.* 1998; Salam and Zurada 1999). In this study we address two research issues. First, what are the characteristics of firms that choose to distribute some portion of their IPO online with Internet-based investment banks (Internet IPOs), versus choosing to distribute 100% of the issue with traditional investment banks (Traditional IPOs)? Second, what are the characteristics of the issues themselves? The financial performance of the IPO is outside the scope of this study. The overall goal of the study is to identify differences between traditional and Internet IPOs.

In the following sections we describe the traditional IPO process and the new Internet market enabled process. We then present our analysis of 27 IPOs issued in the last half of 1998. Finally, we discuss our findings and the implications they have for traditional and online investment banks. These findings are of interest to traditional and online investment banks as they seek to identify potential customers for their services.

This is an important research area because it potentially affects all public companies, or companies considering going public, and the investment banking industry. It is also important because of the large amounts of money typically involved in IPOs. This is indicated by the growth in online stock trading, of which IPOs are one component. Online trades accounted for 17% of total retail trades in 1997; this figure now approaches 30% (Dreyfuss 1998).

TRADITIONAL IPO PROCESS

The traditional IPO process involves the company selling the IPO, an investment bank that acts as an intermediary between the seller and buyers, and a select group of typically larger investors. The investment bank provides services such as pricing the stock, forming syndicates of investment banks to distribute shares, providing access to a select group of large investors to facilitate distribution and, if need be, price support in the IPO after-market by placing its own buy orders for the stock. Prior to the offer, the investment bank contacts its buying clientele and explains the details of the offer and the selling company. During this time the investment bank assesses interest in the IPO and takes preliminary subscriptions for shares. The bank then uses this information to determine the price and the number of shares to sell. Because many IPOs are over-subscribed, the bank pro-rates the shares during the final distribution based on the original subscriptions. This service comes at a price, however, as the investment bank receives a commission – typically based on the amount of money raised in the IPO.

This process has been used for IPOs for well over a century, but some questionable activities have evolved during that time. There is the practice of *spinning*, where the investment bank allocates shares to favoured or potential customers in the hope of winning future business. One could argue that by *spinning*, investment banks preclude the average investor from some potentially attractive IPOs. Several securities firms are currently under investigation by the Securities and Exchange Commission (SEC) for such practices (Bransten and Wingfield 1999). There is also *underpricing*. The stock price run-up of the average IPO on the first day of trading is so great, that it appears that investment banks are often setting the offer price too low. Theories have emerged to explain the existence and magnitude of *underpricing* and defend it as an efficient way to clear the IPO market (Carter and Manaster 1990). However, there is still a real possibility that many companies are being sold too cheap.

Consider the case of Theglobe.com, a Website builder that debuted in February. Theglobe's bankers, Bear Stearns and Volpe Brown Whelan, underwrote its shares for $9, raising $27.9 million in capital. On the first day of trading, the price rose to $63.50. Had Theglobe sold the IPO for $63.50, rather than $9, the company would have collected not $27.9 million but $197 million – seven times the money to build the brand and develop new products (Tully 1999). Given these transaction costs and a less than open IPO market, a new information technology enabled IPO may offer a solution.

ONLINE IPO PROCESS ENABLED BY THE INTERNET

The new IPO process involves the same seller, but a different form of intermediary. The new online investment bank provides an Internet-based IPO providing a more open IPO market with access to a larger number of smaller investors. Bob Lessin, CEO of Wit Capital, identified this as a primary goal: to level the Wall Street playing field by giving the little guy, individual investors, a chance to invest in a company when it first offers shares to the public and before the stock actually begins trading in the markets (Dorsey 1998). Wit Capital allows the investor to subscribe to shares at the offer price via the Internet, using Wit Capital's homepage to peruse pertinent documents concerning the issuing firm. While only a small portion of shares is now allocated to those online investment banks in the distributing syndicate, it appears to be expanding (Smith 1999).

A new IPO process is also being developed by William Hambrecht, owner of W.R. Hambrecht & Co. Using Mr. Hambrecht's plan, dubbed *OpenIPO*, investors submit bids for the number of shares they would take and at what price. After a few weeks of taking bids, the offering price is set at the lowest price at which all shares can be sold. Those bidding above the offering price will get all the shares they asked for at the offering price; those bidding at the offering price will get a portion of their bid; and those bidding less than the offer price won't get any shares. No more than 10% of the shares sold can go to a single bidder, and Hambrecht reserves the right to limit the purchase of anyone seeking to buy more than 1% (Bransten and Wingfield 1999).

STUDY DATA

To identify possible differences between IPOs using traditional distribution methods (traditional IPOs) and those that chose to have some portion distributed online (Internet IPOs), we collected data for a number of offerings issued during the last half of 1998. All firms going public were identified via information from IPO.Com, Inc. IPO.Com, Inc provides offer dates, SIC codes, a business description, IPO registration form and file dates and the offer price. Internet IPOs were identified using various issues of the *Wall Street Journal*. However, we were unable to determine what portion of the IPO was actually distributed in this manner. We identified nine Internet IPOs that went public between 16 July 1998 and 14 December 1998. In comparison, there were 84 IPOs issued between 16 July 1998 and 14 December 1998 according to IPO.Com, Inc. We confined the IPOs to only those issued in 1998 to ensure that we would have at least three months of stock price data from which to work. This provides evidence of after-market performance and extends beyond traditional price support periods that appear to last about four weeks (Asquith *et al.* 1998).

Comparable IPOs that were offered without the benefit of the Internet were chosen in two ways. First, we selected an event time-matched firm for each Internet IPO. The offering for these firms was within one day of the Internet IPO's offering and most (7) were on the same day. We then selected a second group of IPOs matched first by two digit SIC code and then by their offer date, getting as close to the Internet IPO's offering date as possible. Nine firms were selected using each method, for a total of 27 firms.

To examine the differences between Internet and traditional IPOs, we collected a number of firm and market characteristic variables. Most of the data for each firm were collected from the original IPO prospectus (forms S-1 or S-2), including the managing underwriter, the firms' most recently reported net income, revenues, the age of the firm at the time of the offer and the CEO's age and salary. Additional offer-related information was taken from the post-offer filing of form 424B. These data include the final offer price, the number of shares offered, the number of outstanding shares after the offer, the total expenses paid by the issuing firm, the underwriter's commission or discount, the book value of the firm and the number of shares offered by private shareholders. All of these documents are available on the EDGAR database from the Securities and Exchange Commission.

Finally, we used the 0–9 scale developed by Carter and Manaster (1990) and updated by Carter *et al.* (1997) to quantify underwriter reputation. The most prestigious underwriters are given a nine and the least prestigious are given a zero. According to Carter and Manaster, underwriters of high reputation are noted for choosing lower risk, larger firms than their less prestigious counterparts and for being better at distributing the IPO. For four firms, the underwriters were not listed in either paper and we used a 0 for their reputation, assuming that lack of information about these underwriters was indicative of a lack of prestige.

METHODS AND RESULTS

Descriptive statistics for all of the variables collected are found in Table 1. The statistics are presented for all 27 IPOs including the nine Internet IPOs and the 18 traditional IPOs. For each variable, both a t test of the difference in means and an F test using the Wilcoxon rank-sums test of the difference in samples are presented for the Internet and traditional IPOs. The non-parametric Wilcoxon test was included to prevent out-lier bias for a small sample and to avoid any distribution assumptions. The Wilcoxon test was chosen over other similar non-parametric tests because of its power-efficiency (see Conover (1980) for justification for the use of the Wilcoxon rank-sums technique).

It appears that the Internet IPOs are significantly larger in terms of market value than the traditional IPOs. The Internet IPOs also used more reputable underwriters and their CEO was significantly younger. Other than these three variables, however, no other unequivocal differences appear for any of the other fundamental firm characteristics. Interestingly, we did not find significant differences for offer size, underwriter discount, number of days from file to offer, insider percentage and total expenses of the offer incurred by the issuing firm.

IMPLICATIONS FOR TRADITIONAL AND ONLINE INVESTMENT BANKS

These findings have implications for both traditional and online investment banks as they attempt to identify firms who may wish to use their services in the future.

Traditional Investment Banker Implications

The first implication for traditional investment banks identified by this study is that they can expect a more competitive market for IPO offerings given the new online investment banks entering the industry. Our study did not find a significant difference in underwriter discount (commission) between traditional and online investment banks, but it is probable that there will be downward pressure on these fees as competition grows. This may be especially true for less reputable underwriters, as it appears they are less likely to form syndicates with online banks. The second implication is that traditional investment banks should focus less on offer characteristics, and more on firm characteristics, when they seek to identify firms likely to use their services. Other than underwriter reputation,

Table 1. Descriptive Statistics for 27 IPOs Issued Between 16 July 1998 and 14 December 1998

	All IPOs		Internet IPOs		Traditional IPOs		Difference in Samples	
	Mean	Std	Mean	Std	Mean	Std	t test[1]	F stat[2]
Firm Characteristics								
Market Value (000s)[3]	$292,877	$265,334	$491,821	$292,949	$193,405	$189,362	3.21***	2.91***
Revenues (000s)	$400,844	$783,120	$138,479	$388,130	$532,026	$901,330	1.58	2.03**
Net Income (000s)	$−4,083	$9512	$-2,669	$4,254	$-4,789	$11,326	0.70	0.08
Age of Firm (years)	6.67	9.74	3.33	1.66	8.33	11.62	1.79*	1.10
Book to Market (%)	55.41	142.26	13.96	10.25	76.14	171.86	1.53	3.11***
CEO Age (years)	44.30	8.80	38.11	7.52	47.39	7.83	2.94***	2.65***
CEO Salary (000s)	$264.07	$184.45	$234.44	$166.89	$278.89	$195.52	0.58	0.77
Offer Characteristics								
Offer Size (000s)	$52,478	$43,177	$48,861	$22,311	$54,286	$51.054	0.38	0.78
Underwriter Reputation[4]	6.92	3.37	8.81	0.33	5.98	3.81	3.13***	2.22**
Underwriter Discount(%)[5]	7.26	0.92	7.00	0.01	7.39	0.01	1.46	0.82
File to Offer (Days)	97.19	52.83	92.80	34.44	99.38	60.79	0.36	0.21
Insider (%)[6]	5.62	9.09	2.37	5.13	7.25	10.29	1.33	1.05
Expenses (000s)[7]	$2,689.56	$6,304.13	$1,261.11	$423.18	$3,404.78	$7,686.17	1.18	0.95

[1] Significance at the 10, 5 and 1 % levels is indicated by one, two and three asterisks, respectively.

[2] Result of the Wilcoxon Rank Sums test.

[3] As of the fifth day following the IPO.

[4] Reputation is measured via the Carter and Manaster Tombstone Ranking (see Carter *et al.* 1995). It is a discrete variable where 9 is most prestigious and a 0 the least.

[5] The discount (commission) is measured relative to the offer price.

[6] Insider is the % of the offer represented by the firm's private shareholders.

[7] Expenses is the total expenses of the offer incurred by the issuing firm.

traditional and Internet IPO issues were not significantly different. One unique firm characteristic they may focus on would be CEO age. Older CEOs tended to choose traditional investment banks.

Online Investment Banker Implications

Like traditional investment banks, one implication of this study is that online investment banks should focus less on offer characteristics, and more on firm characteristics, when they seek to identify firms who may wish to use their services. They should target firms with larger market values and younger CEOs. The second implication is that firms that used the Internet for their IPO chose underwriters with better reputations. This indicates that the firms making the offering felt that the online IPO process may be more risky so they chose a more reputable underwriter to offset some of this risk. Overall, online investment banking has been shown to be a viable option for IPOs in today's electronic commerce environment.

SUMMARY AND CONCLUSIONS

Raising equity in public markets involves many choices for issuing firms. Among these choices is how much stock to offer and at what price. They must also decide whether to use an investment bank to underwrite the issue and, if so, which investment bank. Traditionally, the underwriter pre-sells the entire offer to its clients – thus determining an optimal offer price and the demand for the issue. However, for these traditional IPOs, questions have arisen about some of the practices of the underwriter. For example, is the offer price discounted in an effort to satisfy the underwriter's preferred customers? Deep discounting may suggest that the firm did not receive an optimal price for its stock.

Recently, a new IPO process has developed where the issue is partially sold through the Internet (Internet IPOs), adding one more choice for the firm to make when going public. In this research we sought to determine what factors are important in making the decision to employ online investment banking as part of their share distribution method. We compared a sample of Internet IPOs with a contemporaneous sample of traditional IPOs, half matched within one day of the issue day and half matched by the first

two digits of the SIC code. We found that the Internet IPO firms were larger, had younger CEOs, and chose more reputable investment banks than the firms that chose the traditional method of going public.

Because this study involves a very recent development in financial markets, the sample size is small. Moreover, we were unable to determine what portion of the IPO was sold via the Internet. Future work will be able to work with considerably more data. In the final analysis, our study simply says that Internet IPOs, while new, are not that different from traditional IPOs, but firm characteristics may be an important indicator of whether a firm chooses a traditional or an online investment bank.

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