

# **WHAT HAS EXPLAINED IPO UNDERPRICING?**

by

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## **ABSTRACT**

For the period 1998 to 2004, the average first-day return on initial public offerings of common stocks is 33%. This paper explores what has explained the IPO underpricing. Using data on 1598 firms-commitment, I find the cross-sectional distribution of one day average returns is modelled better as a mixture of three components: underwriters' reputation, industry composition and market valuation. I also examined the difference in initial average return between issues underwritten by prestigious banks and non-prestigious banks. I find, during the tech bubble period 1998-2000, the underwriters' reputation is positively related to IPO initial returns; and during the post-bubble period 2001-2003, IPOs managed by more reputable underwriters are associated with less short-run underpricing. As time changes, underwriters' reputation is not a significant determinant of IPO initial returns. The firms industry and market valuation are consistently positively related to the IPO initial returns.

### **Keywords:**

- Initial Price Offering
- IPOs
- Underpricing
- Initial Return
- Performance

## **DEDICATION**

To my families, who have loved, encouraged and supported me throughout all these years- I would not have made it this far without you- THANK YOU. I would like to give special thanks to my two little lovely nieces: Michelle and Rachel. To watch them grow up everyday, they bring me strength, courage and the meaning of life.

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## 1. INTRODUCTION

It has been repeatedly shown that for most IPOs, shares start trading well below their market value, allowing huge profit opportunities to be exploited. What explains the underpricing of initial public offering in 1998-2004, where the average first-day return of 32.33%? In this paper, I address this and the related question of why IPO underpricing almost doubled from 31% in 1998 to 64% during 1999-2000 the internet bubble. I argue that the part of deep underpricing can be attributed to changes in the composition of firms going public. I also argue that the other part of underpricing can be explained by the increased valuation associated with the bull market of 90s.

A number of studies supported that prestigious bankers underprice less often than non-prestigious bankers. I find, during the tech bubble period 1998-2000, the underwriters' reputation is not significantly related to IPO initial returns; and during the post-bubble period 2001-2003, IPOs managed by more reputable underwriters are associated with less short-run underpricing, which is consistent with prior studies. My explanation for this reversal is during the internet bubble period, the demand for the offering is unexpectedly strong and a usually large numbers of the firms going public, resulting in high average underpricing. During the internet bubble period, there are 482 technology, telecommunication and internet companies go to public compare with the period 2000 to 2004 of 75. A usually large number of IPOs had unexpectedly strong demand because of the rapid increase of valuation during the internet bubble. S&P P/E

ratio was increased from 33 times in January 1998 to 44 times in December 1999, and remain at 40s level throughout 2000.

The changing composition is based on the assumption that riskier IPOs will be underpriced by more than less risky IPOs. If the proportion of IPOs that represent risky stocks increases, the average underpricing should increase as well. I document that the proportion of IPO representing technology and telecommunication firms has increased over time. Especially during the internet bubble period, the severe underpricing can be attributed to a large number of technology related companies going public.

I hypothesize that the market valuation should positively relate to IPO initial return. As the market become expensive, investor's sentiments are high. Investors are willing to pay higher premium for the new offerings.

The rest of this paper is as follows. In section 2, I will have a brief literature review on IPO underpricing from various studies. The data description and a discussion of underwriter reputation measures are contained in section 3. Section 4, summarize the empirical evidence. Section 5, outline the methodology employed and the results are discussed in section 6. My conclusions are contained in section 7. A list of investment banks with updated Carter-Manaster ranking for the period 1980-2004 are provided in Appendix for convenient reference.

## **2. IPO UNDERPRICING LITERATURE REVIEW**

For over 20 years, researchers investigated the underpricing associated with initial public offerings. Ibbotson(1975) and Ritter(1984), among others all document convincing evidence that initial public offering are on average underpriced. But why could firm leave money on the table<sup>1</sup>?

### **2.1 Theories Based on Asymmetric Information**

Most of the theoretical and empirical studies hold that initial underpricing is undertaken deliberately. Some studies focus on asymmetric information. Barron(1982) argues that asymmetric information exists between underwriters (better informed) and the issuers (less informed); therefore, underwriters are able to price new issues below the market equilibrium to reduce the probability that they will absorb losses due to unsold stocks. Rock (1986) assumes that only a random group of investors are informed about the firm's value, but that neither the firm nor its underwriting bank, nor the remaining investors know the firm's true value; in this scenario, underwriting compensates these uninformed investors for their biased purchase of lower value firms. Benveniste and Spindt (1989) and Benveniste and Wilhelm (1990) also assume that both the underwriting bank and the firm are uninformed about the firm's true value, but they further assume that there are some investors who repeatedly interact with the investment bank, who are informed about the firm's prospects. In this case, underpricing compensates informed investors for revealing their private information to the investment bank.

Allen and Faulhaber (1989) and Welch (1992) were in favour of the signalling model. Under the signalling model, underpricing is the costly signal that high quality firm chose to separate themselves from low quality firms. To distinguish themselves from the poor of low quality issuers, high quality issuers may attempt to signal their quality. They point out that in this model, better quality issuers deliberately sell their shares at a lower price than the market believes they are worth, which deters lower quality issuers from imitating. With some patience, these issuers can recoup their up front sacrifice post-IPO, either in future issuing activity or analyst coverage. Another way to demonstrate that they are high quality firms by throwing money away.

Benveniste and Spindt(1989) and Beneveniste and Wilhelm (1990) argue that the come practice of “book building” allows underwriters to obtain information from informed investors. With book building, a preliminary offer price range is set, and then underwriters and issuers go on a road show to promote the company to prospective institution buyers and individual investors. This road show allowed underwriters to estimate demand as they record “indication of interest” from potential buyers. If there is strong demand, the underwriter will set a higher offer price. If potential buyers know that showing a willingness to pay a higher price will result in a higher offer price, those buyers must be offered something in return. To reduce investors, underwriters must offer some more IPO allocation or underpricing when those buyers indicate a willingness to purchase shares at a high price.

In the agency-based explanation for underpricing, the issuers is less informed, but relative to its underwriter, not relative to investors. To induce the underwriter to put in

the requisite effort to market shares, it is better for the issuer to permit some underpricing, because the issuer cannot monitor the underwriter without cost. But some argue that when underwriter themselves go public, their shares are just as underpriced even though there is no monitoring problem.

## **2.2 Theories Focusing on the Allocation of Shares**

In recent years, more attention has been drawn to how IPOs are allocated and how those shares are traded. Especially, the allocation of shares to institutional investors versus individual investors has been a topic of interest. Many empirical papers examining IPO allocations focus on the distinction between institutional and individual/retail investors. The scale and size difference, make the institutions clients are more likely be informed and more important than the retail clients

A considerable amount of research have accused the investment bankers are responsible for the IPO underpricing. Daily and Dalton (2005) find several reasons why investment bankers might purposively undervalue the IPO firm's stock. When the investment banker underwriting a firm, the underwriter is assumed under an obligation to purchase all the shares from the firm at an offer price and then sell those shares, at that price to other investors. If the offer price is too high to support the volume to which the investment bankers are committed, the investment bankers are left holding unwanted shares in the IPO firms. As a consequence, the investment bankers have a strong incentive to ensure that the offer price is sufficiently low to guarantee sufficient demand for the stock.

### 2.3 Theories Focusing on Underwriter Reputation

A number of studies have examined the differential performance of initial public offerings underwritten by prestigious and non-prestigious investment banks. The result is prestigious bankers tend to underprice less. They argue that the level of investment banker prestige determines the expected level of informed investor activity and hence the degree of underpricing. The lower the risk, the less the incentive for an investor to acquire information. If less information is acquired, then smaller number informed investors are seeking to invest in IPOs offered by prestigious bankers. As a result, there is an inverse relationship between the level of banker prestige and the degree of IPO underpricing. Betty and Ritter (1986) state that prestigious bankers are associated with lower-risk issues than non-prestigious banker, since prestigious bankers may only deal with large issues of strong, low-risk firms for which there would be little risk in setting the offering price. Carter and Manaster (1990) find that high quality underwriters seem to have left less money on the table for their investors- at least in the 1980s.

Despite the intense interest in the underpricing issue, very few studies relate the underpricing to the firms on the basis of industry. This paper will continues study on the predictability of underwriter's reputation as IPO return on the first day trading. I also divided the period 1998 to 2004 into two sub-periods, the tech bubble (1998-2000) and post tech bubble (2001-2004). Interestingly enough, I find during the tech bubble period, prestigious underwriters were positively related to initial day return and leave large amount money on the table. In addition, I explore the underpricing by analyzing industry classification and broad market valuation, and their relationship with underpricing.

### 3. IPO DATA

My primary data source for IPOs from 1998-2004 is from Data System, Inc. and IPOmonitor.com , they have been recommended by several reputable IPO academic professors, including Jay Ritter. Both companies provide wide range of data resources from different perspective. Data system is a good resource for financial statement data, such as revenue, net income and assets when firms go to public and information on underwriting mangers. IPOmonitor provides detailed data on trading information, includes first day close, money raised on the first day and market valuation. I have made thousands consolidations on these two sets of data. In my analysis, I exclude ADRs, close-end funds, stock with warrants and units. I also exclude IPOs with an offer price below \$5.00 dollar per share. What remains are almost all IPOs traded on NASDAQ and NY stock exchanges and those companies are large enough to be of interest to institutional investors. The sample size is 1,598 firms. The initial underpricing is defined as the percentage price change form the offering price to the closing price of the first trading day.

For the underwriter prestige rankings, I use the Carter-Manaster Reputation Rankings for IPO underwriters 1980-2004. The ranking system is, when a firm goes public, the underwriting section of the prospectus lists all the investment banking firms that are part of the underwriting syndicate, along with the number of shares that each underwriters. More prestigious underwriters are list higher in the underwriting section, in

bracket, with the underwriter in higher brackets<sup>1</sup>. It is assigned the top ranking of 9 on a 0-9 scale. In general, underwriters with a rank of 8.0 to 9.0 are considered to be prestigious national underwriters. Those with a rank of 5.0 to 7.9 are considered to be quality regional or niche underwriters. Underwriters with a rank of 0 to 4.9 are generally associated with penny stocks, and many of those with rank of below 3.0 have been charged with market manipulations by the SEC.

Ritter (2002) made several alternations to the Carter and Manaster ranking. He points out the potential flaw in CM methodology is that a penny stock underwriter that is never allowed into a syndicate a reputable underwriters might never be in a low bracket. A list of investment banks with updated Carter-Manaster ranking for the period 1980-2004 are provided in Appendix for convenient reference.

For market valuation, I use S&P P/E ratio as proxy. Those data are from Robert Shiller, a professor of Economic at Yale. The P/E ratio was calculated as the average previous ten years S&P real earnings divided by monthly S&P real price.

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<sup>1</sup> Bracket is a group of investment banks that have occupied a leading role in high-quality securities underwriting in the years since the Securities ACT of 1933.



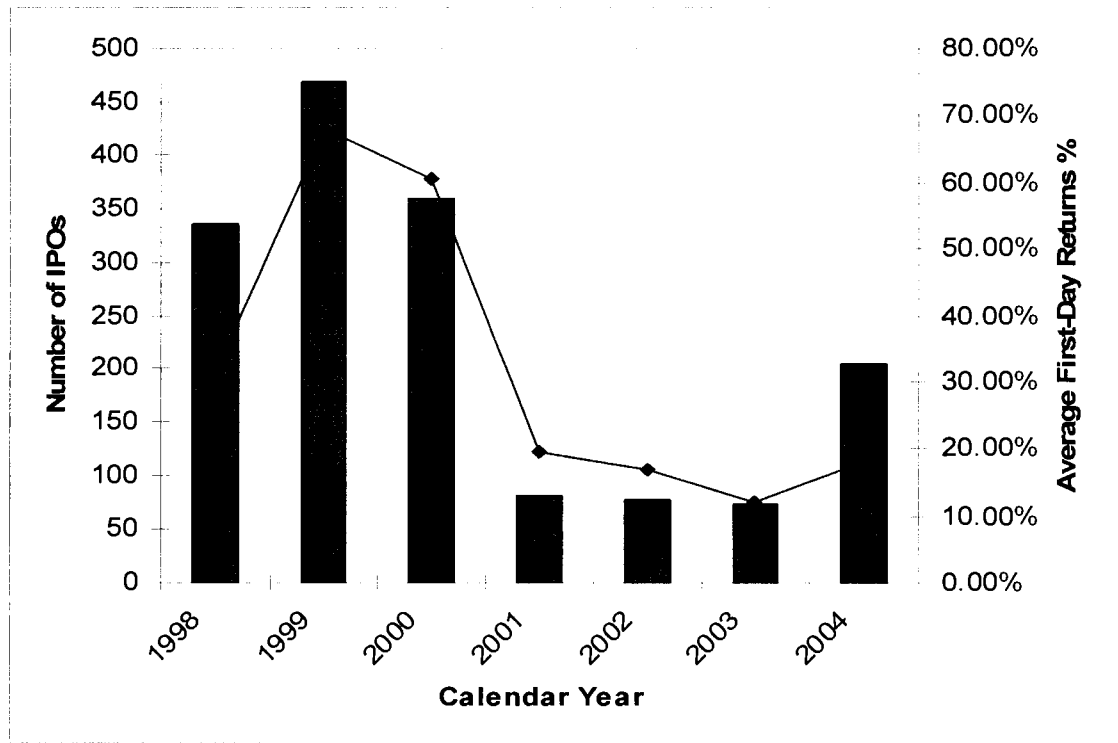
#### **4. TIME SERIES OF FIRST DAY RETURNS: THE EMPIRICAL EVIDENCE**

Figure 1 plots the annual volume and average first-day return on IPOs from 1998-2004. Table 1 reports the mean (Panel A) and medians (Panel B) of the first-day returns by year of issue. In this analysis, I divided the sample period into two sub-periods: 1998-2000 (the internet bubble) and 2001-2004 (the post bubble period). The average first-day return in 1998 was 31.49%, and then jumped to 68% during the internet bubble. In post-bubble period, annual IPO volume dropped to 80 issues or fewer with a mean initial return of approximately of 17%.

Table 1 reports from 1998 through 2004 the underpricing of IPOs, represent by the first-day returns, the number of IPOs issued in each year, money left on the table and offer price and close price on the first day. Underpricing took a big jump in the bubble period, as did the amount money left on the table. The amount of money left on the table represents the profits made by investors on the first day trading. During 1998 to 2004 the average first day returns is 33%. In 1999, with 468 companies went to public, the average first day return was as high as 68%. In 2003, only 73 companies went to public, with the initial return as 12% the lowest in the whole sample period.

**Figure 1. Number of IPOs (Bars) and Average First-day returns (lines) by Cohort Year.**

IPOs with an offer price below \$5.00 per share, Units offers, closed-ended funds, ADRs, stocks with warrants are excluded. Data from IPO data system, inc. and IPOmonitor.com and other sources, with correction by author. The first-day return is defensed as the percentage change from the offer price to the closing price. The data plotted are proctored in Panel A of Table 1.



**Table 1. Number of IPOs, First Day Return, Amount of Money Left on the Table, Offer Price, and Closed Price by Cohort Year 1998 to 2004** Number of IPOs (Bars) and Average First-day returns (lines) by Cohort Year.

IPOs with an offer price below \$5.00 per share, unit offer, close-end funds, ADRs, Stock with Warrants, REITs have been excluded. Data are from IPO Data and IPO Monitor, with supplements from Hoover's IPO and other sources, and correction by author. The first day return is defined as the percentage change from the offer price to the closing price. Money left on the table is defined as the first day price change (offer price to close) times the number of shares issued. Gross Proceeds is the amount raised from investors in millions.

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**Panel A: Means**

Year	Number of IPOs	First-Day Return	Money Left on the Table in Millions	Offer Price	First-Day Close Price
1998	336	31.49%	\$ 18.43	\$ 12.04	\$ 15.33
1999	468	68.16%	\$ 65.01	\$ 14.45	\$ 25.12
2000	360	60.60%	\$ 76.30	\$ 14.96	\$ 25.47
2001	80	19.37%	\$ 138.91	\$ 15.86	\$ 18.22
2002	77	16.71%	\$ 7.75	\$ 15.02	\$ 16.66
2003	73	11.86%	\$ 15.99	\$ 14.27	\$ 16.05
2004	204	18.09%	\$ 24.93	\$ 13.96	\$ 16.26
Total	1598	32.33%	\$ 49.62	\$ 14.37	\$ 19.02

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**Panel B: Medians**

Year	Number of IPOs	First-Day Return	Money Left on the Table in Millions	Offer Price	First-Day Close Price
1998	336	11.18%	\$ 3.01	\$ 11.00	\$ 13.75
1999	468	37.50%	\$ 25.29	\$ 14.00	\$ 19.06
2000	360	30.70%	\$ 21.95	\$ 14.00	\$ 18.15
2001	80	13.25%	\$ 11.13	\$ 14.00	\$ 16.69
2002	77	7.14%	\$ 4.86	\$ 25.00	\$ 15.85
2003	73	8.68%	\$ 8.25	\$ 24.00	\$ 15.90
2004	204	7.20%	\$ 5.93	\$ 13.00	\$ 14.22
Total	1598	16.52%	\$ 11.49	\$ 16.43	\$ 16.23

## 5. METHODOLOGY

The purpose of this paper is to test what has explained the IPO underpricing. In another words, what's the relationship between IPO initial return with selected economic variables. I use the ordinary least squares regression to examine the explanatory power of those variables. Previous research suggests that underwriter reputation signals the underlying risk of the offering that is implied into the initial market return. Underwriter reputation explains the underpricing over time. I use the underwriter reputation as independent variable in the regression analysis. To be consistent with prior research, the coefficient for the reputation measure should be negative. However, my testing results shows positive relationship between reputation and initial return, which it suggest the underwriter with higher reputation will bring a high initial return to the IPOs they underwritten. In addition, the  $R^2$  is not significant enough to convince me that the reputation score is negatively highly correlated to the initial return as previous paper suggested. To increase the explanatory power, I add three variables into the regression: Underwriter reputation dummy, industry dummy and market valuation.

### 5.1 Underwriter Reputation and IPO Initial Returns

I divided underwriter reputation into two categories: High reputation underwriter with a Carter and Manaster rank of 8.0 or higher; Low reputation underwriter with a rank below 8.0, on scale of 0 to 9. Then I assign 1 to high reputation underwriters and 0 the other.

## **5.2 Industry Composition and IPO Initial Returns**

From observation, I find during the testing period 1998 to 2004, there are 685 companies out of sample 1598 are in technology, internet and telecommunication industry. I divided IPOs into broad two broad categories, Tech and Non-Tech. For technology /internet/ telecommunication firms, I assign 1, and the rest assign 0. My hypothesis is that there should be a positive relationship between Tech and initial returns. This is because as technology companies usually inherited higher risk, investors are required to have higher return to compensate the risks they take, which represented by a wide spread of offer price from the first day open price and from closing price.

## **5.3 Market Valuation and IPO Initial Returns**

To construct market valuation, I use S&P Ten Years rolling P/E ratio as proxy. The source of data is from Robert J. Shiller Professor of Economics at Yale University. The way he calculates the Ten-Years Rolling P/E ratio is: the average of previous ten years monthly S&P real earnings divided by S&P monthly Real Price. I focus on factors known before pricing in order to avoid the influence of factors that play a role once the firms have been listed, such as market conditions after the IPO date. Then for each individual offering, the market valuation variable is constructed for the one month period before the IPO offering date. Giving an example, if the IPO offered on in the month of March 2004, I use the monthly P/E in February 2004. I hypothesize that IPO initial return should positively relate to market valuation. General speaking, when market becomes expensive, investors are willing to pay higher price for the new offerings.

#### 5.4 The Model

$$\begin{aligned} \text{Initial Return}_i &= a_0 \\ &+ a_1 * \text{underwriter reputation measures} \\ &+ a_2 * \text{Industry Composition} \\ &+ a_3 * \text{Market Valuation} \\ &+ e_i \end{aligned}$$

## 6. RESULTS

Table 2 compare the initial return and money left on the table in three different period: the whole sample period 1998 to 2004, the internet bubble and post internet bubble. For the period 1998 to 2004, the average money left on the table initial offering price is \$50.324 million and \$14.035, respectively. The average underpricing is 44.4%, this mainly attribute to the high initial return during the internet bubble period. During the 1998-2000, the average first-day return is as high as 55%, compare with the average initial return of 17% during the post bubble period.

**Table 2.** Mean initial returns, money left on the table, offering price, first day closing price, number of shares issued and number of IPOs in each periods.

<b>Mean</b>	<b>1998-2000</b>	<b>2001-2004</b>	<b>1998-2004</b>
Initial Return	<b>0.55</b>	<b>0.17</b>	<b>0.444</b>
MLOT	53.64	41.39	50.324
Offering Price	13.84	14.55	14.035
Closing Price	22.15	16.66	20.665
Shares Issued	7.71	13.56	9.292
S&P P/E	40.50	27.24	36.908
Number of IPOs	<b>1,598</b>	<b>434</b>	<b>1,164</b>

Table 3 reports the matrix of correlation coefficients for all variables employed in the study. Underpricing is significantly and positively correlated with industry dummy and market valuation. The reputation score is not significantly correlated with underpricing which is contradict to previous study suggested. Even if substitute the

reputation score with the reputation dummy, the correlation with underpricing is increased slightly but not significantly impressed. In the following section, I will present the test result on single individual variables as well as the multi-regression test.

**Table 3. Correlation Coefficients of Variables**

	Initial Return	Reputation Score	Reputation Dummy	Industry Dummy	S&P P/E Ratio
Initial Return	1				
Reputation Score	0.027	1			
Reputation Dummy	0.037	0.714	1		
Industry Dummy	0.277	0.030	0.1637	1	
S&P P/E Ratio	0.268	0.017	0.0620	0.380	1

## 6.1 Reputation Score and Initial Underpricing

According to previous study, reputable underwriters tend to underwrite issues of high quality firm, and high quality firm tend to be associated with less underpricing. According, I explore the relationship between IPO risk and underwriter reputation in this section of the paper. According to Carter-Manaster reputation measure methodology, I define high reputation underwriter as having a reputation ranking of 8 or more, low reputation underwriters as having a reputation rank of less than 8. This partitioning results in 988 and 607 in high and low reputation underwriter categories. Table 4 reports mean initial return and money left on the table based upon sample partitioning. For the period 1998 to 2004, the mean initial underpricing of 46.4% for the high reputation underwriter group is higher than the mean initial underpricing of 40.8% for the low reputation group. The results were inconsistent with previous study, which high reputation underwriter should associate with lower initial returns. To go further study, I divided sample period into two sub-period, 1998 to 2000 the tech bubble period and 2001



to 2004 the post bubble period. Table 4 shows that during the tech bubble period, the reputation of underwriter is positively related to the initial return. During the post tech period, the underwriter reputation is negatively related to the initial return, which consistent to previous study. My argument of this phenomenon during the tech bubble period is, prestigious underwriters may lower their underwriting standards and took public an increasing number of young and unprofitable companies, which results in higher underpricing.

**Table 4. IPO Initial Mean Return and Underwriters' Reputation. 1998-2004**

MLOT is money left on the table. The Carter-Manaster measure is a discrete underwriter reputation variable 0-9 where a 9 is the most prestigious underwriter and 0 is the least prestigious underwriter.

<b>Panel A: 1998-2000 "Tech. Bubble"</b>			
	Number of IPOs	Initial Return	MLOT
High Reputation	717	<b>0.595</b>	72.360
Low Reputation	451	<b>0.465</b>	23.891
<b>Panel B: 2001-2004 'Post Tech. Bubble'</b>			
	Number of IPOs	Initial Return	MLOT
High Reputation	277	<b>0.128</b>	56.404
Low Reputation	157	<b>0.245</b>	14.895
<b>Panel C: 1998-2004</b>			
	Number of IPOs	Initial Return	MLOT
High Reputation	988	<b>0.464</b>	68.247
Low Reputation	607	<b>0.408</b>	21.589

In row 1 of table VI, it shows the testing results for Underwriter reputation scores. The reputation results does not have a significant explanatory power, only explain 0.9% of the first day return. In regression 2, I use the reputation dummy as explanatory variable (set equal to one if the lead underwriter has a rank of 8 or more and zero otherwise), the explanatory power is slightly improved with  $R^2 = 0.012$  compare with the reputation score

$R^2=0.009$ . I proportion the testing period into the 1998 to 2000 and 2001 to 2004 and test the reputation dummy respectively in regression 3 and 4. The test results shows during the tech bubble period, the reputation remain a positive relationship with the initial return and  $R^2$  dose not change significantly. There are 1,168 firms went to public during the Tech Bubble period, some people call it Hot Market<sup>1</sup>, the number of low quality firms were increased as well. Prestigious underwriters may lower their underwriting standard and underwritten both high quality and low quality firms. As the results, during this period the higher reputation may not associated with lower initial returns. During the post tech bubble period, the underwriter reputation negatively related to the initial returns, which consistent to the reputation theory as prior studies tested. Again during the post tech bubble period, there are only 434 firms that went public. In contrast to Hot Market, some researchers call this period as Clod Market<sup>2</sup>. As a number of firms went to public dropped, prestigious underwriter may only underwritten high quality firms, and high quality firms usually associate with lower initial returns. As Table 6 shows, Regression 2, 3 and 4 testing the reputation dummy in period 1998-2004, 1998-2000 and 2001-2004 respectively. Reputation is a better explanatory variable in period 2001 to 2004 period as the  $R^2$  is slightly higher and the coefficient is negative but not significantly different. This result is consistent with reputation theory that reputation explains the IPOs underpricing and negatively associated with initial returns.

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<sup>1</sup> Hot Market refers to a high number of IPOs and high volume.

<sup>2</sup> Cold Market refers to low number of IPOs and low volume.

## 6.2 Industry Dummy and Initial Underpricing

From empirical evidence, technology companies are more likely related to higher initial return or tech stocks have been underpriced more than non tech stocks. Furthermore, the difference has increased during the period of 1999 to 2000, the tech bubble period. It is worth to know that the proportion of IPOs that the tech stocks has decreased over time from 60% during 1998 to 2000 the internet bubble period to as low as 18% in the period 2001 to 2004 as Table 5 shows. It is also interesting to know that the underpricing of both tech and non tech have increased over time through 1998 to 2004. Thus, the increased underpricing of IPOs in general is not attributed to an increased proportion of tech stocks in the mix of companies going public. My hypothesis is that the IPO underpricing during 1998 to 2004 is attributed to the industry of the firms went to public. To test the industry variable, I use a very broad industry classification: technology and internet related stocks versus all others. I assign one if the company is tech related and zero otherwise. In Table 6 regression 5, industry dummy has a high explanatory power with  $R^2=0.076$ . At 95 percent confidence level, the coefficient is statistically significant as  $t=11.52$ . This test result is consistent with the explanation of the industry risk associated with underpricing. As firms undertake higher risk, investors require higher return to compensate for the associated risk they bore. From underwriters' point of view, when they underwritten companies with higher risk, they prefer to lower the offering price to avoid inventory in hand, which will result in large spread on the first trading day.

**Table 5. IPO Initial Mean Return and Industry Composition. 1998-2004**

MLOT is money left on the table. The Carter-Manaster measure is a discrete underwriter reputation variable 0-9 where a 9 is the most prestigious underwriter and 0 is the least prestigious underwriter.

<b>Panel A: 1998-2000 "Tech. Bubble"</b>			
	Number of IPOs	Initial Return	MLOT(In Millions)
Non-Technology	561	<b>0.330</b>	30.51
Technology	607	<b>0.740</b>	75.03

<b>Panel B: 2001-2004 'Post Tech. Bubble'</b>			
	Number of IPOs	Initial Return	MLOT(In Millions)
Non-Technology	356	<b>0.162</b>	21.016
Technology	78	<b>0.209</b>	134.36

<b>Panel C: 1998-2004</b>			
	Number of IPOs	Initial Return	MLOT(In Millions)
Non-Technology	917	<b>0.265</b>	26.823
Technology	685	<b>0.684</b>	81.903

My test results refute some study that the number of IPOs is positively related to the initial returns. As Table 5 shows, the initial return is not associated with the number of firms went to public in any of the three period tested. It confirms my hypothesis that the initial returns are positively related to the industry of IPO firms. The riskier the industry is, the higher initial return of IPO.

### 6.3 The Market Valuation and Initial Underpricing

Some studies have documented a strong relationship between the return in the overall market and the underpricing of IPOs. Market return is often said to play an important role in determining IPO underpricing. In this paper, I test the hypothesis that if market valuation can be a variable to explain the underpricing. To construct market valuation, I use S&P ten years rolling P/E ratio as proxy. The source of data is from

Robert J. Shiller Professor of Economics at Yale University. As Table 6 shows, no matter the testing period is the whole sample period, tech bubble or post internet bubble, the initial return is consistently increase as the market valuation increase. Regression 6 in Table 7 approved my hypothesis that market valuation can predict initial returns of IPOs. The explanatory power is as high as industry dummy at 7.2%. My explanation to the relationship between market valuation and underpricing is when the general market valuation is high, the market becomes expensive, investors looking for alternative investment products which can bring them a higher return. Ritter (2002) document that from 1980 to 2000 the average first day return is 18%, ranging from the lowest return in 1988 at 5.4% to the highest return in 1999 at 72%. It is not surprise that when investors seeking for new investing opportunities, they turn to IPO markets.

**Table 6. IPO Initial Mean Return and S&P P/E Ratio, 1998-2004**

MLOT is money left on the table in millions. The Carter-Manaster measure is a discrete underwriter reputation variable 0-9 where a 9 is the most prestigious underwriter an 0 is the least prestigious underwriter.

	<b>Number of IPOs</b>	<b>Initial Return</b>	<b>S&amp;P P/E</b>	<b>MLOT</b>
1998-2004	1602	<b>0.444</b>	<b>36.908</b>	50.324
1998-2000	1168	<b>0.545</b>	<b>40.501</b>	53.643
2001-2004	434	<b>0.170</b>	<b>27.239</b>	41.388

As market valuation is high, investors are willing to pay higher price for the new offerings. From firm valuation point of view, the offering price set by the underwriting company may not reflect the true value of the IPO. Usually the firms went to public are young companies, the accounting data are in many cases too unreliable as measure of valuation, especially many firms going public are being valued on the basis of their

growth option, not their historical financial statement. As the test results show the general market valuation is positively related to initial return. The higher the market PE, the higher initial return, as the pricing of offering price may not reflect by the general market valuation.

#### **6.4 Multiple Variables and Initial Underpricing**

In Table 8 shows the pair testing and multi-variables testing results. Regression 1, 2 and 3 testing the reputation dummy and industry dummy, reputation dummy and S&P P/E ratio, industry dummy and S&P P/E ratio respectively. As row 1 and 2 in Table 7 report, by adding reputation dummy to industry or S&P P/E, the R square is not significantly improved if testing industry and market valuation along. Row 3 shows, industry and market valuation together explain 10.7% of initial underpricing. In regression 4, I test all three variables: underwriter reputation dummy, industry dummy and market valuation. As the last row in Table 7 shows, the overall explanatory power of the model is increased to 10.9%, which means by adding reputation dummy variable in addition to industry and market valuation the overall explanatory power is only increased by 0.2%, although the  $t$ -stats of reputation dummy is significant different ( $t=-3.435$ ). It means that as time change, the composition of company going to public is changing as well, the reputation variable may not be an efficient variable to predict the first day return of IPOs. I suspect, the cause of reputation variable losing its explanatory power is due to the internet bubble effect. During internet bubble, high reputation underwriters may underwrite both high and low quality firms. As the effect, the reputation measure becomes less relevant to initial underpricing compare with during the post bubble period.

**Table 7. Single Variable Testing. Cross Sectional Regressions Explaining the Initial Returns for 1598 IPOs issued from January 1, 1998 Through December 31, 2005.**

The dependant variable is the initial IPO percentage return of 1598 firm commitment non-unit IPOs within the period January 1, 1998 through December 31, 2004. the initial return is the percentage increases from the offering price to the first day closing price. Independent variables include the Reputation dummy, Industry Dummy, S&P P/E ratio. The depended variable in all regressions is the percentage of first day return from the offer price to the first day closing price. The industry dummy takes a value of one (zero otherwise) if the firm was in the technology or internet business. The reputation dummy variable equals one (zero otherwise) if the IPO's underwriter has a rank of 8 or above on the 0-9 Carter and Manaster scale. All tests are tested at 5 percent significant level. The t-statistics are reported in parentheses.

$$\text{Initial Return}_i = a_0 + a_1 * \text{underwriter reputation measures} + b_2 * \text{Industry Composition} + b_3 * \text{Market Valuation} + e_i$$

Regression	Intercept	Reputation Score	Reputation Dummy	Industry Dummy	S&P P/E	F	Adj. R <sup>2</sup>
(1)	0.424 (16.29)	0.003 (1.006)				4.468	0.009
(2) 1998-2004	0.396 (9.14)		0.058 (1.21)			7.46	0.012
(3) 1998-2000	0.465 12.15		0.1297 (2.655)			7.05	0.006
(4) 2001-2004	0.245 (7.465)		-.0117 (-2.85)			8.14	0.018
(5)	0.264 (11.15)			0.418 (11.517)		132.646	0.076
(6)	-0.678 (-6.632)				0.03 (11.14)	124.201	0.072

**Table 8. Multi-variables Testing. Cross Sectional Regressions Explaining the Initial Returns for 1598 IPOs issued from January 1, 1998 Through December 31, 2005.**

The dependant variable is the initial IPO percentage return of 1598 firm commitment non-unit IPOs within the period January 1, 1998 through December 31, 2004, the initial return is the percentage increases from the offering price to the first day closing price. Independent variables include the Reputation dummy, Industry Dummy, S&P P/E ratio. The depended variable in all regressions is the percentage of first day return from the offer price to the first day closing price. The industry dummy takes a value of one (zero otherwise) if the firm was in the technology or internet business. The reputation dummy variable equals one (zero otherwise) if the IPO's underwriter has a rank of 8 or above on the 0-9 Carter and Manaster scale. All tests are tested at 5 percent significant level. The t-statistics are reported in parentheses.

$$\text{Initial Return}_i = a_0 + a_1 * \text{underwriter reputation measures} + b_2 * \text{Industry Composition} + b_3 * \text{Market Valuation} + e_i$$

Regression	Intercept	Reputation Dummy	Industry Dummy	S&P P/E	F	Adj. R <sup>2</sup>
(1)	0.272 (8.648)	-0.013 (-3.662)	0.420 (11.418)		66.354	0.0766
(2)	-0.692 (-6.679)	0.031 (3.831)		0.030 (11.070)	62.433	0.0724
(3)	-0.486 (-4.713)		0.309 (7.998)	0.022 (7.474)	96.533	0.1077
(4)	-0.4376 (-4.033)	-0.0668 (-3.435)	0.320 (8.125)	0.021 (7.486)	65.085	0.1090



## 7. CONCLUSION

What has explained IPO underpricing over time? I explore three non-mutually exclusive explanations: underwriter reputation, industry of issuing firm and general market valuation.

During the whole sample period 1998 to 2004, only a small part of underpricing can be attributed to the underwriters' reputation. Further analysis, during the internet bubble 1998 to 2000, the underwriter reputation is not the main reasons for underpricing. Consistent with Carter and Manaster (1990), I find during the post internet bubble 2001 to 2004, a deeper underpricing often is accompanied by lower underwriter reputation. But the negative relation is not significant.

The universe of companies going to public in the U.S. has changed over time. For example, during 1998 to 2000 there has been a noticeable shift towards technology stocks. The empirical test result has approved the hypotheses that the industries of IPOs are positively associated with initial underpricing. One reason is technology related firms are usually associated with higher risk. To reduce the uncertainty, when setting the offering price, the investment bankers have a strong incentive to ensure that the offer price is sufficiently low to guarantee sufficient demand for the stock. As a consequence, the IPO associated with higher volatility, will have a high initial return on the first day.

The reason that IPOs underpriced varies depending upon the general market valuation. A high market valuation associates with high investment sentiment. In seeking new investment opportunities, investors are willing to pay higher price for the new shares. Alternative explanation is the firm's fundamental valuation is not in line with the market valuation, as IPOs are usually young companies which lacking of reliable historical financial data. The valuation of the IPO may not keep up with the market valuation. As a result, the higher market valuation, the deeper the underpricing of IPOs.

When I look at the whole sample period, by adding industry variable and market valuation variable in addition to underwriter reputation variable, the overall explanatory power of the model is increased. It shows there are strong cross-sectional relations between underpricing and both the industry composition and market valuation.

There are still some works need to be done in this area in the future. If those variables are reliable independents in explaining IPO underpricing in other countries especially emerging market, such as China? Besides the three variables I have tested in this paper, what other economic variables are consistent and are better in explaining IPO initial returns? Are interest rate and GDP growth rate can be used as variables in explaining IPO underpricing? To aid future researchers needing to control for underwriter reputation, the Appendix provides a list of investment bankers in the sample with updated Carter-Manaster ranks.

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**APPENDIX:  
CARTER- MANASER REPUTATION RANKINGS  
FOR IPO UNDERWRITERS 1980-2004**

Investment Banks	Rank 80-84	Rank 85-91	Rank 92-00	Rank 01-04
A. G. Becker Paribas Inc.	7.100	7.100	-9.000	-9.000
A. J. Michaels & Co., Ltd.	-9.000	-9.000	2.100	-9.000
A. L. Havens Securities	2.100	2.100	-9.000	-9.000
A. M. Levine	-9.000	2.100	-9.000	-9.000
A. T. Brod & Co.	1.100	1.100	1.100	-9.000
A.R. Baron & Co., Inc.	-9.000	-9.000	1.100	-9.000
A.S. Goldman & Company	-9.000	1.100	1.100	-9.000
AB Capital Markets	-9.000	-9.000	3.100	-9.000
ABD Securities	-9.000	-9.000	8.100	-9.000
ABN AMRO Chicago Corp	-9.000	-9.000	8.100	-9.000
ABN AMRO Incorporated	-9.000	-9.000	8.100	8.100
ABN AMRO Rothschild	-9.000	-9.000	8.100	8.100
ABN-AMRO Holding NV	-9.000	-9.000	8.100	8.100
Access Securities	-9.000	-9.000	4.100	-9.000
Acciones y Valores de Mexico	-9.000	-9.000	5.100	-9.000
Adams Harkness & Hill Inc	-9.000	5.100	5.100	5.100
Adams, Cohen	-9.000	5.100	6.100	-9.000
Adams, James & Foor	2.500	-9.000	-9.000	-9.000
Advest Inc	5.500	7.125	6.100	6.100
Aegis Capital	-9.000	-9.000	4.100	-9.000
AG Edwards & Sons Inc	6.500	8.000	7.100	7.100
Agean Group Inc	-9.000	-9.000	3.100	-9.000
AIB Capital Markets	-9.000	-9.000	5.100	-9.000
Akroyd & Smithers Inc	0.500	7.100	-9.000	-9.000
Alan-Bush Brokerage	-9.000	4.100	-9.000	-9.000
Alex Brown & Sons Inc	7.500	8.875	8.100	-9.000
Alfred Berg Fondkommission AB	-9.000	-9.000	5.100	-9.000
Alison, Baer Securities	-9.000	2.100	-9.000	-9.000
Allen & Co Inc	5.000	7.000	4.100	-9.000
Allen C. Ewing	5.100	-9.000	5.100	-9.000

Investment Banks	Rank 80-84	Rank 85-91	Rank 92-00	Rank 01-04
Allied Capital Group	-9.000	3.500	-9.000	-9.000
Alpha Finance US Corporation	-9.000	-9.000	-9.000	5.100
Alstead, Strangis & Dempsey	2.100	-9.000	-9.000	-9.000
American Equities Overseas Ltd	-9.000	-9.000	3.100	-9.000
American Fronteer Financial	-9.000	-9.000	3.100	-9.000
American Investors of Pittsbrg	-9.000	2.100	-9.000	-9.000
American Securities	-9.000	4.333	-9.000	-9.000
American Trading & Investments	-9.000	-9.000	3.100	-9.000
AmeriCorp Securities	-9.000	-9.000	3.100	-9.000
AmeriCorp Securities Services	-9.000	-9.000	3.100	-9.000
Anderson & Strudwick	-9.000	-9.000	4.100	-9.000
Anderson-Bryant	-9.000	2.100	-9.000	-9.000
Andrew Alen Securities, Inc.	-9.000	2.100	-9.000	-9.000
Andrew, Alexander, Wise	-9.000	-9.000	3.100	-9.000
Anthony Investment	-9.000	2.100	-9.000	-9.000
Apple Financial	2.100	2.100	-9.000	-9.000
Argent Securities, Inc.	-9.000	-9.000	3.100	-9.000
Arizona Securities Group Inc.	-9.000	-9.000	3.100	-9.000
Arnhold and S Bleichroeder Inc	-9.000	-9.000	7.100	-9.000
Arnold Bleichroeder Company	-9.000	-9.000	7.100	-9.000
Arthur W. Wood	-9.000	3.100	3.100	-9.000
Artoc Bank and Trust	2.100	-9.000	-9.000	-9.000
Ashtin Kelly & Co., Inc.	-9.000	-9.000	2.100	-9.000
Auerbach Pollak & Richardson	-9.000	-9.000	5.100	-9.000
B. C. Christopher Securities	4.100	5.500	-9.000	-9.000
BA Securities	-9.000	-9.000	7.100	-9.000
Bache Halsey Stuart Shields	8.000	-9.000	-9.000	-9.000
Bacon Stifel Nicolaus	2.100	5.750	-9.000	-9.000
Bacon, Whipple	4.100	-9.000	-9.000	-9.000
Baer & Company	-9.000	5.100	-9.000	-9.000
Bailey Martin & Appel	-9.000	2.100	-9.000	-9.000
Baird Patrick & Co Inc	4.100	3.500	4.100	7.100
Baker, Watts	3.000	6.000	-9.000	-9.000
Balis Zorn Gerard	-9.000	4.100	-9.000	-9.000
Banc of America Securities LLC	-9.000	-9.000	8.100	8.100
Banca Commerciale Italiana SpA	-9.000	-9.000	7.100	-9.000
BancAmerica Robertson Stephens	-9.000	-9.000	8.100	-9.000

Investment Banks	Rank 80-84	Rank 85-91	Rank 92-00	Rank 01-04
BancBoston Robertson Stephens	-9.000	-9.000	8.100	-9.000
Banco Santander de Negocios SA	-9.000	-9.000	7.100	-9.000
Bank Austria Investment Bank	-9.000	-9.000	6.100	-9.000
Bank J Vontobel & Co AG	-9.000	-9.000	6.100	-9.000
Banque Indosuez	-9.000	-9.000	7.100	-9.000
Banque Nationale de Paris{BNP}	-9.000	-9.000	8.100	-9.000
Banque Paribas Capital Markets	-9.000	-9.000	8.100	-9.000
Baraban Securities Inc	-9.000	-9.000	3.100	-9.000
Barclay Investments, Inc.	-9.000	5.100	7.100	-9.000
Barclays de Zoete Wedd Ltd	-9.000	-9.000	7.100	-9.000
Baring Brothers & Co Ltd	-9.000	7.100	-9.000	-9.000
Baring Securities Inc	-9.000	-9.000	7.100	-9.000
Barington Capital Group LP	-9.000	-9.000	2.100	-9.000
Barits Securities	-9.000	-9.000	3.100	-9.000
Barron Chase Securities	-9.000	-9.000	2.100	-9.000
Bateman Eichler Hill Richards	5.000	5.833	-9.000	-9.000
BB&T Capital Markets	-9.000	-9.000	7.100	7.100
BC Financial	-9.000	2.100	-9.000	-9.000
Bear Stearns & Co Inc	8.000	8.750	8.100	8.100
Bear Stearns International	-9.000	-9.000	8.100	-9.000
Becker Paribas Incorporated	7.500	7.100	-9.000	-9.000
Berkeley International Capital	-9.000	-9.000	2.100	-9.000
Berkeley Securities Corp.	-9.000	-9.000	2.100	-9.000
Berry-Shino Securities, Inc.	-9.000	-9.000	3.100	-9.000
Berthel Fisher & Co Financial	-9.000	-9.000	3.100	-9.000
Best Investors Group, Inc.	-9.000	2.100	-9.000	-9.000
Beuret	-9.000	2.100	-9.000	-9.000
BHF-Bank AG, New York Branch	-9.000	-9.000	6.100	-9.000
Biltmore Securities	-9.000	-9.000	1.100	-9.000
Birr, Wilson	2.500	6.500	-9.000	-9.000
Black & Co Inc	-9.000	-9.000	4.100	-9.000
Blackstock	2.100	5.500	-9.000	-9.000
Blaylock & Partners LP	-9.000	-9.000	5.100	-9.000
Blech (D.) & Co, Inc.	-9.000	-9.000	1.100	-9.000
Blinder, Robinson	1.000	1.100	-9.000	-9.000
Bluestone Capital Partners LP	-9.000	-9.000	2.100	-9.000
Blunt Ellis & Loewi Inc	5.000	7.167	-9.000	-9.000

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Investment Banks	Rank 80-84	Rank 85-91	Rank 92-00	Rank 01-04
Blunt Ellis & Simmons	5.100	-9.000	-9.000	-9.000
Blyth Eastman Paine Webber	6.000	2.500	-9.000	-9.000
BMO Nesbitt Burns Inc	-9.000	-9.000	6.100	7.100
BMO Nesbitt Thomson Ltd	-9.000	-9.000	6.100	-9.000
BNP Paribas SA	-9.000	-9.000	7.100	-9.000
BOCI Asia	-9.000	-9.000	4.100	-9.000
Boening & Scattergood	-9.000	-9.000	4.100	-9.000
Boettcher	5.000	6.000	-9.000	-9.000
Bond, Richman	2.100	2.100	-9.000	-9.000
Boston Group	-9.000	-9.000	3.100	-9.000
Bozano Simonsen Securities Inc	-9.000	-9.000	5.100	-9.000
Brauer & Associates	-9.000	-9.000	3.100	-9.000
Brean Murray & Co Inc	4.100	4.100	4.100	-9.000
Brenner Securities	-9.000	-9.000	3.100	-9.000
Breuer Capital Corporation	-9.000	2.100	-9.000	-9.000
Broadband Capital Management	-9.000	-9.000	-9.000	1.100
Broadchild Securities	2.100	2.100	-9.000	-9.000
Brodie Securities	1.000	-9.000	-9.000	-9.000
Brookhill Equities, Inc.	-9.000	-9.000	3.100	-9.000
Brooks Weinger Robbins & Leeds	-9.000	2.100	-9.000	-9.000
Brooks, Hamburger, Satnick	2.100	-9.000	-9.000	-9.000
Brown Knapp	-9.000	2.100	-9.000	-9.000
BT Alex Brown Inc	-9.000	-9.000	8.100	-9.000
BT Securities Corp	-9.000	7.100	7.100	-9.000
Buchanan	-9.000	2.100	-9.000	-9.000
Bunker Securities	2.100	-9.000	-9.000	-9.000
Burgess & Leith	1.000	4.100	-9.000	-9.000
Burnham Securities Inc	-9.000	-9.000	5.100	-9.000
Burns, Pauli	4.100	-9.000	-9.000	-9.000
Bursamex SA de CV	-9.000	-9.000	5.100	-9.000
Butcher & Singer Inc	5.000	6.750	-9.000	-9.000
Buys - MacGregor - MacNaughton	-9.000	6.100	-9.000	-9.000
BZW/Barclays PLC	-9.000	-9.000	7.100	-9.000
C.J. Lawrence/Deutsche Bank	-9.000	-9.000	7.100	-9.000
Cable, Howse & Ragen	4.000	6.750	-9.000	-9.000
CA-IB Investmentbank AG	-9.000	-9.000	5.100	-9.000
Cambridge Securities	-9.000	-9.000	3.100	-9.000



Investment Banks	Rank 80-84	Rank 85-91	Rank 92-00	Rank 01-04
Camelot Investment Corp	-9.000	-9.000	3.100	-9.000
Canadian Imperial Bk Commerce	-9.000	-9.000	6.100	-9.000
Cantor, Fitzgerald & Co., Inc.	-9.000	-9.000	6.100	6.100
Capital Shares	-9.000	2.100	-9.000	-9.000
Capital West Securities	-9.000	-9.000	3.100	-9.000
Cardinal Capital Management	-9.000	-9.000	3.100	-9.000
Carleton, McCreary, Holmes	-9.000	-9.000	4.100	-9.000
Carolina Securities	1.500	4.250	-9.000	-9.000
Carr Sebag	1.500	-9.000	-9.000	-9.000
Caspian Securities	-9.000	-9.000	7.100	-9.000
Cazenove & Co	-9.000	7.333	8.100	-9.000
Cazenove Inc	-9.000	-9.000	8.100	-9.000
CE Unterberg Towbin	-9.000	-9.000	6.100	6.100
Cenpac Securities	-9.000	2.100	-9.000	-9.000
Centennial State Securities	2.100	-9.000	-9.000	-9.000
Centex Securities Inc	-9.000	-9.000	3.100	-9.000
CGF Securities LLC	-9.000	-9.000	-9.000	1.100
Chapin, Davis	-9.000	2.100	-9.000	-9.000
Chapman Company	-9.000	-9.000	5.100	-9.000
Charles Schwab & Co Inc	-9.000	-9.000	8.100	-9.000
Charles Webb & Company	-9.000	-9.000	4.100	-9.000
Charterhouse Japhet PLC	5.100	-9.000	-9.000	-9.000
Chase H&Q	-9.000	-9.000	8.100	-9.000
Chase Manhattan Bank NA	-9.000	-9.000	8.100	-9.000
Chase Securities Inc	-9.000	-9.000	8.100	-9.000
Chatfield Dean	-9.000	3.100	3.100	-9.000
Chemical Securities Inc	-9.000	-9.000	7.100	-9.000
Chesley and Dunn	1.100	-9.000	-9.000	-9.000
Chicago Corp	3.000	6.100	6.100	-9.000
Chicago Dearborn	-9.000	-9.000	6.100	-9.000
China Development Finance (HK)	-9.000	-9.000	4.100	-9.000
China International Capital Co	-9.000	-9.000	5.100	5.100
Cial	-9.000	-9.000	3.100	-9.000
CIBC Oppenheimer	-9.000	-9.000	8.100	-9.000
CIBC Wood Gundy Securities	-9.000	-9.000	8.100	-9.000
CIBC World Markets	-9.000	-9.000	8.100	8.100
Citicorp Securities Inc	-9.000	-9.000	8.100	-9.000

Investment Banks	Rank 80-84	Rank 85-91	Rank 92-00	Rank 01-04
Citigroup	-9.000	-9.000	-9.000	9.100
Citigroup Global Markets Inc	-9.000	-9.000	-9.000	9.100
Citigroup/Salomon Smith Barney	-9.000	-9.000	-9.000	9.100
Citiwide Securities	2.100	2.100	-9.000	-9.000
CL King & Associates Inc	-9.000	-9.000	5.100	-9.000
Cleary Gull Reiland & McDevitt	-9.000	-9.000	6.100	-9.000
Cleary Gull Reiland McDevitt	-9.000	-9.000	6.100	-9.000
Coburn & Meredith, Inc	-9.000	-9.000	4.100	-9.000
Cohig & Associates	-9.000	5.100	5.100	-9.000
Coleman & Company	-9.000	-9.000	3.100	-9.000
Columbia Group Inc	-9.000	-9.000	4.100	-9.000
Columbine Securities	2.100	-9.000	-9.000	-9.000
Comiteau Levine	3.100	3.100	-9.000	-9.000
Commerzbank AG	-9.000	-9.000	7.100	-9.000
Commonwealth Associates	-9.000	4.500	2.100	-9.000
Commonwealth Securities, Utah	-9.000	3.100	3.100	-9.000
Commonwealth Ventures	3.100	-9.000	-9.000	-9.000
Comprehensive Capital	-9.000	-9.000	2.100	-9.000
Comvest Partners	-9.000	-9.000	3.100	-9.000
Conning & Co	-9.000	-9.000	6.100	-9.000
Conning & Co	-9.000	-9.000	6.100	-9.000
Continental Broker-Dealer Corp	-9.000	2.100	2.100	-9.000
Corporate Securities Group, In	-9.000	2.100	2.100	-9.000
Coughlin and Company	4.100	-9.000	-9.000	-9.000
County NatWest Limited	-9.000	7.100	-9.000	-9.000
County NatWest Securities Ltd	-9.000	-9.000	7.100	-9.000
Covey	1.000	2.100	-9.000	-9.000
Cowen	-9.000	5.500	7.100	-9.000
Craig-Hallum, Inc.	4.000	4.500	4.100	-9.000
Cralin	1.000	-9.000	-9.000	-9.000
Credit Agricole Indosuez	-9.000	-9.000	7.100	-9.000
Credit Lyonnais SA	-9.000	-9.000	7.100	-9.000
Credit Lyonnais Securities USA	-9.000	-9.000	7.100	-9.000
Credit Suisse FB (Europe)	-9.000	-9.000	9.100	-9.000
Credit Suisse First Boston	-9.000	-9.000	9.100	9.100
Credit Suisse First Boston Int	-9.000	-9.000	9.100	-9.000
Crowell Weedon & Co	-9.000	5.250	6.100	-9.000

Investment Banks	Rank 80-84	Rank 85-91	Rank 92-00	Rank 01-04
Cruttenden & Co. Inc.	-9.000	2.500	3.100	-9.000
Cruttenden Roth Inc	-9.000	-9.000	3.100	-9.000
CS First Boston	-9.000	-9.000	9.100	-9.000
Culver Financial Management	-9.000	-9.000	3.100	-9.000
Culver, Slatery Securities, In	-9.000	4.100	-9.000	-9.000
D. H. Blair	4.100	4.100	4.100	-9.000
D. H. Blair Investment Banking	-9.000	-9.000	4.100	-9.000
D. H. Wallach	4.100	4.100	-9.000	-9.000
D.E. Wine Investments	-9.000	-9.000	3.100	-9.000
DA Davidson & Co Inc	5.100	4.375	5.100	-9.000
Daewoo Securities Co Ltd	-9.000	-9.000	7.100	-9.000
Dai-Ichi Kangyo Bank	-9.000	-9.000	8.100	-9.000
Dain Bosworth Inc	5.000	7.625	7.100	-9.000
Dain Rauscher Corp	-9.000	-9.000	7.100	7.100
Dain Rauscher Wessels	-9.000	-9.000	7.100	7.100
Dain, Kalman & Quail	-9.000	-9.000	7.100	-9.000
Daiwa Securities	-9.000	-9.000	8.100	-9.000
Daiwa Securities (New York)	-9.000	-9.000	8.100	-9.000
Daiwa Securities America	-9.000	8.125	8.100	-9.000
Dakin Securities Corp.	-9.000	-9.000	2.100	-9.000
Dalton Kent Securities Group	-9.000	-9.000	3.100	-9.000
Daniels & Associates Inc	-9.000	-9.000	3.100	-9.000
Datek Securities	-9.000	1.100	-9.000	-9.000
Davenport	-9.000	4.875	6.100	-9.000
David A. Noyes	-9.000	5.100	5.100	-9.000
Davy Stockbrokers	-9.000	-9.000	5.100	-9.000
Dean Witter	-9.000	-9.000	8.100	-9.000
Dean Witter Capital Markets	-9.000	8.100	-9.000	-9.000
Dean Witter Distributors Inc.	-9.000	-9.000	8.100	-9.000
Dean Witter Reynolds Inc	8.000	8.500	8.100	-9.000
Denton	-9.000	2.100	-9.000	-9.000
Deutsche Banc Alex Brown	-9.000	-9.000	9.100	9.100
Deutsche Bank AG	-9.000	-9.000	9.100	9.100
Deutsche Bank AG (London)	-9.000	-9.000	9.100	-9.000
Deutsche Bank AG (New York)	-9.000	-9.000	9.100	-9.000
Deutsche Bank Capital (NY)	-9.000	9.100	-9.000	-9.000
Deutsche Bank Securities Corp	-9.000	-9.000	9.100	9.100

Investment Banks	Rank 80-84	Rank 85-91	Rank 92-00	Rank 01-04
Deutsche Morgan Grenfell	-9.000	-9.000	9.100	-9.000
Dickinson & Co	3.500	5.500	5.100	-9.000
Dickinson, Rothbart	-9.000	-9.000	2.100	-9.000
Diehl, Speyer & Brown	2.100	-9.000	-9.000	-9.000
Dillon, Read & Co Inc	8.100	8.625	8.100	-9.000
Dillon-Gage Securities	-9.000	-9.000	2.100	-9.000
Dirks & Company Inc	-9.000	-9.000	4.100	-9.000
DKB Securities Co Ltd	-9.000	-9.000	8.100	-9.000
DLJdirect	-9.000	-9.000	8.100	-9.000
Donald & Co. Securities	0.500	3.100	3.100	-9.000
Donaldson Lufkin & Jenrette	7.000	8.750	9.100	-9.000
Dougherty Summit Securities	-9.000	-9.000	3.100	-9.000
Douglas Bremen	3.100	-9.000	-9.000	-9.000
Douglas, Stewart, Maguire & Parkh.	-9.000	2.100	-9.000	-9.000
Drake Capital Securities	-9.000	-9.000	4.100	-9.000
Dresdner Bank AG	-9.000	-9.000	7.100	-9.000
Dresdner Kleinwort Benson	-9.000	-9.000	7.100	-9.000
Dresdner Securities (USA) Inc	-9.000	-9.000	7.100	-9.000
Drexel Burnham Lambert	7.000	8.100	-9.000	-9.000
Duke & Company, Inc.	-9.000	-9.000	2.100	-9.000
E*Offering Corp	-9.000	-9.000	7.100	-9.000
E*Trade Securities Inc	-9.000	-9.000	7.100	-9.000
E. C. Farnsworth	2.100	-9.000	-9.000	-9.000
E. G. Frances	2.100	-9.000	-9.000	-9.000
E. W. Smith	3.100	-9.000	-9.000	-9.000
Earlybirdcapital Inc	-9.000	-9.000	-9.000	1.100
Eastern Capital	2.100	-9.000	-9.000	-9.000
Eastern Capital Securities	-9.000	2.100	-9.000	-9.000
Eastlake Securities	-9.000	2.100	-9.000	-9.000
Eberstadt Fleming	-9.000	6.100	-9.000	-9.000
EBI Securities Corp	-9.000	-9.000	3.100	-9.000
Edgar M. Norris & Co	-9.000	-9.000	5.100	-9.000
Edward A. Viner	5.100	5.100	-9.000	-9.000
Edward D Jones & Co	5.100	5.250	6.100	-9.000
EF Hutton & Co Inc	8.000	8.000	-9.000	-9.000
Elliot Allen & Co., Inc.	-9.000	-9.000	3.100	-9.000
Emanuel	-9.000	2.100	2.100	-9.000

Investment Banks	Rank 80-84	Rank 85-91	Rank 92-00	Rank 01-04
Emerson Bennett & Assoc.	-9.000	-9.000	3.100	-9.000
Emmett A. Larkin	1.000	4.000	-9.000	-9.000
Engler & Budd Company	1.100	6.000	-9.000	-9.000
English Trust Co Ltd	-9.000	4.100	-9.000	-9.000
Enskilda Securities	-9.000	6.100	6.100	-9.000
Epoch Capital Corp	-9.000	-9.000	5.100	-9.000
Eppler Guerin & Turner Inc	5.000	6.250	-9.000	-9.000
Equitable Securities Corp	6.100	6.100	6.100	-9.000
Equitable Securities, New York	-9.000	5.500	6.100	-9.000
Equity Securities Trading	0.000	2.100	2.100	-9.000
Ernst	-9.000	2.500	-9.000	-9.000
Espirito Santo Sociedade Inv	-9.000	-9.000	3.100	-9.000
EuroAtlantic Securities, Inc.	-9.000	-9.000	3.100	-9.000
EuroPartners Securities	-9.000	7.500	-9.000	-9.000
European Community Capital Ltd	-9.000	-9.000	2.100	-9.000
Evans	-9.000	6.500	-9.000	-9.000
Evans Llewellyn Securities, In	1.000	-9.000	-9.000	-9.000
EVEREN Securities Inc	-9.000	-9.000	5.100	-9.000
F. Eberstadt	5.000	7.100	-9.000	-9.000
F. N. Wolf	2.100	2.100	-9.000	-9.000
FAC/Equities	-9.000	-9.000	2.100	-9.000
Faherty & Faherty	1.500	-9.000	-9.000	-9.000
Faherty & Swartwood	2.100	-9.000	-9.000	-9.000
Fahnestock & Co	-9.000	4.250	5.100	-9.000
Farrell	-9.000	-9.000	3.100	-9.000
FB Gemini	-9.000	-9.000	3.100	-9.000
fbr.com	-9.000	-9.000	5.100	-9.000
Fechtor, Detwiler	-9.000	-9.000	4.100	-9.000
Feltl & Co	-9.000	-9.000	-9.000	4.100
Ferris & Company	5.100	5.130	5.100	-9.000
Ferris, Baker Watts	-9.000	-9.000	5.100	5.100
Fidelity Capital Markets	-9.000	-9.000	7.100	-9.000
Fieldstone	-9.000	-9.000	4.100	-9.000
Fieldstone Private Capital Grp	-9.000	-9.000	4.100	-9.000
Fifth Third/The Ohio Co.	-9.000	-9.000	5.100	-9.000
Financial First Securities	-9.000	6.000	-9.000	-9.000
Fin-Atlantic Securities	-9.000	-9.000	3.100	-9.000

Investment Banks	Rank 80-84	Rank 85-91	Rank 92-00	Rank 01-04
Fine Equities Inc	-9.000	-9.000	3.100	-9.000
First Affiliated Securities	2.500	5.000	-9.000	-9.000
First Alabama Securities	3.100	-9.000	-9.000	-9.000
First Albany	4.000	6.000	5.100	-9.000
First Allied Securities, Inc.	-9.000	-9.000	1.100	-9.000
First Analysis Securities	-9.000	5.500	6.100	-9.000
First Asset Management, Inc.	-9.000	-9.000	3.100	-9.000
First Birmingham Securities	-9.000	4.100	-9.000	-9.000
First Boston Corp	9.000	9.000	9.100	-9.000
First Cambridge Securities Co	-9.000	-9.000	3.100	-9.000
First Colonial Securities Grp	-9.000	-9.000	3.100	-9.000
First Colorado Invests & Secs	0.000	-9.000	-9.000	-9.000
First Equity Corp	4.000	4.000	2.100	-9.000
First Florida Securities	2.100	2.100	-9.000	-9.000
First Hanover Securities Inc	-9.000	2.667	2.100	-9.000
First Heritage	-9.000	2.100	-9.000	-9.000
First Interregional Equity	-9.000	2.100	-9.000	-9.000
First Jersey Securities	1.500	1.100	-9.000	-9.000
First Liberty Investment Group	-9.000	-9.000	3.100	-9.000
First London Securities Corp	-9.000	-9.000	3.100	-9.000
First Marathon (U.S.A.) Inc.	-9.000	-9.000	3.100	-9.000
First Metropolitan Securities	-9.000	-9.000	3.100	-9.000
First Midwest Securities, Inc	-9.000	-9.000	3.100	-9.000
First Montauk Securities	-9.000	-9.000	2.100	-9.000
First New England Securities	1.100	-9.000	-9.000	-9.000
First of Michigan Corp	5.000	5.625	5.100	-9.000
First Securities Corp. of NC	-9.000	-9.000	4.100	-9.000
First Security Van Kasper & Co	-9.000	-9.000	6.100	-9.000
First Southwest	-9.000	-9.000	6.100	-9.000
First Union Capital Markets	-9.000	-9.000	5.100	-9.000
First Union National Bancorp	-9.000	-9.000	5.100	-9.000
First Union Securities Inc	-9.000	-9.000	5.100	-9.000
First United Equities	-9.000	-9.000	1.100	-9.000
First United Securities Group	-9.000	2.100	-9.000	-9.000
First Wilshire Securities Mgt	1.500	-9.000	-9.000	-9.000
Fitzgerald, DeArman & Roberts	1.500	1.100	-9.000	-9.000
Flagstone Securities Inc	-9.000	-9.000	-9.000	6.100

Wen Wen ♦ What Has Explained IPO Underpricing?

Investment Banks	Rank 80-84	Rank 85-91	Rank 92-00	Rank 01-04
Fleet Boston Corp	-9.000	-9.000	7.100	7.100
FleetBoston Robertson Step Int	-9.000	-9.000	8.100	-9.000
Fleming Martin	-9.000	-9.000	4.100	-9.000
Foley Mufson Howe & Company	-9.000	-9.000	4.100	-9.000
Forum Capital Markets LP	-9.000	-9.000	5.100	-9.000
Foster & Co. Equities	2.100	-9.000	-9.000	-9.000
Foster & Marshall	5.000	4.500	-9.000	-9.000
Foster & Marshall//Am Ex	6.100	-9.000	-9.000	-9.000
Fox-Pitt Kelton Inc	-9.000	5.667	5.100	-9.000
Franklin-Lord, Inc.	-9.000	-9.000	3.100	-9.000
Frederick	4.100	4.333	4.100	-9.000
Freehling	4.100	4.100	-9.000	-9.000
Friedman Billings Ramsey & Co	-9.000	-9.000	-9.000	5.100
Friedman Billings Ramsey Group	-9.000	-9.000	5.100	5.100
Friedman Manger	-9.000	-9.000	-9.000	-9.000
Furman Selz LLC	-9.000	-9.000	7.100	-9.000
Furman Selz Mager Dietz Birney	6.100	6.375	7.100	-9.000
G. H. Securities	-9.000	2.100	-9.000	-9.000
G. K. Scott	2.100	2.100	-9.000	-9.000
Gabelli & Co Inc	-9.000	-9.000	7.100	-9.000
Gaines, Berland	-9.000	4.100	2.100	-9.000
Gallagher Capital	-9.000	4.750	-9.000	-9.000
Gallant Securities	2.100	-9.000	-9.000	-9.000
Gattini	2.100	-9.000	-9.000	-9.000
Genesis Capital	-9.000	-9.000	4.100	-9.000
Genesis Merchant Group Secs	-9.000	-9.000	2.100	-9.000
George K Baum & Co	-9.000	5.167	5.100	-9.000
Gerard Klauer Mattison & Co	-9.000	-9.000	5.100	-9.000
Gilford Securities	1.100	2.000	1.100	1.100
Gintel	3.000	-9.000	-9.000	-9.000
GKN Securities Corp	-9.000	2.500	1.100	-9.000
Glaser Capital Corp	-9.000	-9.000	3.100	-9.000
Global America Incorporated	-9.000	2.100	-9.000	-9.000
Global Equities Group	-9.000	-9.000	2.100	-9.000
Global Financial Group	-9.000	-9.000	3.100	-9.000
Globus	1.100	-9.000	-9.000	-9.000
Glore Securities	-9.000	2.100	-9.000	-9.000

Investment Banks	Rank 80-84	Rank 85-91	Rank 92-00	Rank 01-04
Goepel Shields	-9.000	-9.000	3.100	-9.000
Goldis Financial Group, Inc.	-9.000	-9.000	4.100	-9.000
Goldman Sachs & Co	9.000	9.000	9.100	9.100
Goldman Sachs Asia	-9.000	-9.000	-9.000	9.100
Goldman Sachs International	-9.000	-9.000	9.100	9.100
Good Morning Securities	-9.000	-9.000	5.100	-9.000
Goodbody Stockbrokers	-9.000	-9.000	4.100	-9.000
Gordon Capital Corp	-9.000	2.500	4.100	-9.000
Gradison	4.100	-9.000	-9.000	-9.000
Grady and Hatch	-9.000	4.100	4.100	-9.000
Graystone Nash	-9.000	2.100	-9.000	-9.000
Greentree Securities	-9.000	2.100	-9.000	-9.000
Greenway Capital Corporation	-9.000	-9.000	2.100	-9.000
Grey, Randolph & Abbott	-9.000	2.100	-9.000	-9.000
Groupe CAIB Auxifer SA	-9.000	-9.000	5.100	-9.000
Gruntal & Co Inc	-9.000	5.875	5.100	-9.000
Grupo Banco Bilbao Vizcaya	-9.000	-9.000	7.100	-9.000
Gulfstream Financial Assoc	-9.000	4.000	-9.000	-9.000
Gunn & Company	-9.000	-9.000	3.100	-9.000
GunnAllen Financial Inc	-9.000	-9.000	3.100	3.100
H. D. Brous	-9.000	-9.000	3.100	-9.000
Haas Securities	-9.000	6.100	-9.000	-9.000
Hacker/Modesitt Investments	2.100	-9.000	-9.000	-9.000
Hambrecht & Quist	6.000	8.000	8.100	-9.000
Hamilton Investments	-9.000	-9.000	4.100	-9.000
Hamilton, Grant	-9.000	3.100	-9.000	-9.000
Hampshire Securities Corp	-9.000	-9.000	3.100	-9.000
Hanifen Imhoff & Samford	4.000	5.000	-9.000	-9.000
Hanifen Imhoff Inc	4.000	5.000	5.100	-9.000
Hanover Sterling & Company	-9.000	-9.000	1.100	-9.000
Harriman Group	-9.000	-9.000	2.100	-9.000
Hartley Poynton Ltd	-9.000	-9.000	4.100	-9.000
Hayne, Miller, Swearingen & GI	-9.000	2.100	2.100	-9.000
Hays Securities	-9.000	3.100	-9.000	-9.000
HC Wainwright & Co Inc	-9.000	-9.000	5.100	-9.000
HCFP Brenner Securities LLC	-9.000	-9.000	5.100	-9.000
Heiner & Stock	-9.000	4.100	-9.000	-9.000



Wen Wen ♦ What Has Explained IPO Underpricing?

Investment Banks	Rank 80-84	Rank 85-91	Rank 92-00	Rank 01-04
Henry F. Swift	-9.000	3.100	-9.000	-9.000
Herbert Young Securities	-9.000	2.100	-9.000	-9.000
Herzfeld & Stern	1.000	4.100	-9.000	-9.000
HGI Incorporated	-9.000	-9.000	2.100	-9.000
Hibbard & O'Connor Securities	-9.000	4.100	-9.000	-9.000
Hibbard Brown & Company	-9.000	4.100	4.100	-9.000
Hickey, Kober	2.100	2.100	-9.000	-9.000
Hinkle & LaMear	2.100	-9.000	-9.000	-9.000
HJ Meyers & Co	1.100	1.100	1.100	-9.000
Hoak Breedlove Wesneski & Co	-9.000	-9.000	5.100	-9.000
Hoak Securities Corp	-9.000	-9.000	3.100	-9.000
Hobbs Melville Securities	-9.000	-9.000	3.100	-9.000
Hoefer & Arnett Inc	-9.000	-9.000	4.100	-9.000
Homestead Securities	-9.000	2.100	-9.000	-9.000
Hopper Soliday	4.100	4.500	-9.000	-9.000
Hornblower & Weeks Hemphill No	-9.000	-9.000	7.100	-9.000
Hornblower Weeks Noyes & Trask	-9.000	-9.000	7.100	-9.000
Houchin, Adamson	-9.000	2.100	-9.000	-9.000
Howard Weil Labouisse Freid	5.000	5.750	5.100	-9.000
Howe Barnes Investments	-9.000	-9.000	3.100	-9.000
Howe Barnes Investments Inc.	-9.000	-9.000	3.100	-9.000
HSBC	-9.000	-9.000	8.100	-9.000
HSBC Investment Banking Ltd	-9.000	-9.000	8.100	-9.000
HSBC James Capel & Co	-9.000	-9.000	8.100	-9.000
HSBC Securities Inc	-9.000	-9.000	8.100	9.100
Huberman, Margaretten & Straus	-9.000	3.100	3.100	-9.000
I. M. Simon	-9.000	3.100	-9.000	-9.000
I.A. Rabinowitz & Co.	-9.000	2.100	2.100	-9.000
IAR Securities Corp	-9.000	-9.000	3.100	-9.000
I-Bankers Securities Inc	-9.000	-9.000	3.100	2.100
Illinois	4.100	-9.000	-9.000	-9.000
Independence Securities	2.100	-9.000	-9.000	-9.000
Individual's Securities	-9.000	2.100	-9.000	-9.000
ING	-9.000	-9.000	-9.000	7.100
ING Baring Furman Selz LLC	-9.000	-9.000	7.100	-9.000
ING Barings	-9.000	-9.000	7.100	7.100
Ingham, Becker	-9.000	3.100	-9.000	-9.000

Investment Banks	Rank 80-84	Rank 85-91	Rank 92-00	Rank 01-04
Institutional Equity	2.500	-9.000	4.100	-9.000
Institutional Equity Holdings	-9.000	-9.000	3.100	-9.000
Interacciones Casa de Bolsa	-9.000	-9.000	5.100	-9.000
Interacciones Global, Inc.	-9.000	-9.000	5.100	-9.000
International Finance Corp	-9.000	8.100	-9.000	-9.000
International Securities	2.100	-9.000	-9.000	-9.000
International Securities Group	-9.000	2.100	-9.000	-9.000
Interstate Securities	4.000	5.100	5.100	-9.000
Interstate/Johnson Lane Inc	-9.000	-9.000	5.100	-9.000
Interstate/Johnson Lane Inc	-9.000	6.000	5.100	-9.000
Invermed Associates Inc	6.100	6.500	6.100	-9.000
Invercaixa	-9.000	-9.000	4.100	-9.000
InverMexico SA de CV	-9.000	-9.000	5.100	-9.000
Investec Bank	-9.000	-9.000	-9.000	7.100
Investment Corporation	-9.000	6.000	-9.000	-9.000
Investors Associates	-9.000	-9.000	2.100	-9.000
Investors Financial Services	2.100	-9.000	-9.000	-9.000
ISG Capital Markets	-9.000	-9.000	3.100	-9.000
J Henry Schroder & Co Ltd	-9.000	-9.000	7.100	-9.000
J Henry Schroder Wagg & Co Ltd	-9.000	7.100	-9.000	-9.000
J. Alexander Securities	1.100	-9.000	-9.000	-9.000
J. B. Oxford	-9.000	-9.000	2.100	-9.000
J. Daniel Bell	1.100	-9.000	-9.000	-9.000
J. E. Sheehan	1.000	2.100	-9.000	-9.000
J. Edmund & Co.	-9.000	-9.000	3.100	-9.000
J. Gregory & Company	-9.000	2.100	2.100	-9.000
J. W. Gant & Associates	-9.000	2.100	2.100	-9.000
J.E. Gant & Associates	-9.000	2.100	-9.000	-9.000
J.T. Moran	-9.000	1.100	-9.000	-9.000
J.W. Barclay	-9.000	-9.000	3.100	-9.000
James J. Duane	2.000	3.100	-9.000	-9.000
Janda & Garrington LLC	-9.000	-9.000	3.100	-9.000
Janney Montgomery Scott Inc	5.000	6.000	7.100	7.100
Janssen-Meyers Associates	-9.000	-9.000	3.100	-9.000
Jardine Fleming	-9.000	-9.000	7.100	-9.000
Jay W. Kaufmann	2.100	-9.000	-9.000	-9.000
JB Sutton Group, Inc.	-9.000	-9.000	2.100	-9.000

Investment Banks	Rank 80-84	Rank 85-91	Rank 92-00	Rank 01-04
JB Were & Son	-9.000	-9.000	7.100	-9.000
JC Bradford & Co	5.000	7.375	7.100	-9.000
Jefferies & Co Inc	-9.000	5.333	5.100	5.100
Jensen Securities	-9.000	-9.000	4.100	-9.000
Jerold Securities	1.000	2.100	-9.000	-9.000
Jersey Capital Markets Group	-9.000	2.100	-9.000	-9.000
Jesup & Lamont Securities	0.000	4.100	-9.000	-9.000
JJB Hilliard WL Lyons Inc	-9.000	5.125	5.100	-9.000
John G Kinnard & Co	5.100	5.100	5.100	-9.000
John Muir	3.000	-9.000	-9.000	-9.000
John Nuveen Co	-9.000	-9.000	7.100	-9.000
Johnson Bowles	1.100	-9.000	-9.000	-9.000
Johnson Rice & Co	-9.000	4.100	4.100	-9.000
Johnson, Lane, Space, Smith	5.000	5.250	-9.000	-9.000
Johnston Lemon & Co Inc	1.500	4.875	-9.000	-9.000
Jonathan Alan & Co., Inc.	-9.000	2.100	-9.000	-9.000
Joseph Charles & Associates	-9.000	-9.000	2.100	-9.000
Joseph Dillon & Co Inc	-9.000	-9.000	3.100	-9.000
Joseph Gunnar & Co., LLC	-9.000	-9.000	4.100	-9.000
Joseph Roberts & Co	-9.000	-9.000	3.100	-9.000
Joseph Sebag	2.100	-9.000	-9.000	-9.000
Joseph Stevens & Company	-9.000	-9.000	3.100	-9.000
Josephthal & Co Inc	-9.000	5.375	2.100	-9.000
Josephthal Lyons & Ross Inc	-9.000	3.100	2.100	-9.000
JP Morgan	-9.000	-9.000	9.100	9.100
JP Morgan Securities Inc	-9.000	9.100	9.100	9.100
JP Turner & Co	-9.000	-9.000	3.100	-9.000
June S. Jones	5.100	-9.000	-9.000	-9.000
JW Charles Securities	-9.000	2.100	2.100	-9.000
JW Charles/CSG	-9.000	-9.000	2.100	-9.000
JW Charles-Bush Securities	-9.000	2.100	-9.000	-9.000
K S Securities GmbH	-9.000	3.100	-9.000	-9.000
K. A. Knapp	-9.000	2.100	-9.000	-9.000
Kashner Davidson Securities	-9.000	3.100	3.100	3.100
Kaufman Brothers LP	-9.000	-9.000	4.100	-9.000
KB Securities NV	-9.000	-9.000	4.100	-9.000
KBC Securities	-9.000	-9.000	5.100	-9.000

Wen Wen ♦ What Has Explained IPO Underpricing?

Investment Banks	Rank 80-84	Rank 85-91	Rank 92-00	Rank 01-04
Keane Securities	-9.000	3.000	3.100	-9.000
Keefe Bruyette & Woods Inc	-9.000	8.333	7.100	7.100
Kemper Securities	-9.000	4.100	6.100	-9.000
Kennedy, Mathews, Landis	-9.000	2.100	2.100	-9.000
Kennedy-Peterson	-9.000	2.100	-9.000	-9.000
Kenneth Jerome & Co. Inc.	-9.000	-9.000	3.100	-9.000
Kensington Securities, Inc.	-9.000	-9.000	3.100	-9.000
Kensington Wells	-9.000	-9.000	2.100	-9.000
Kesselman	-9.000	2.100	-9.000	-9.000
Keycorp/McDonald Investments	-9.000	-9.000	-9.000	5.100
Kidder Peabody & Co Inc	8.000	8.833	8.100	-9.000
Kirkpatrick, Pettis, Smith, Po	-9.000	-9.000	5.100	-9.000
Kirlin Securities Inc.	-9.000	-9.000	3.100	3.100
Kitcat, Aitken & Safran	6.100	-9.000	-9.000	-9.000
Klein Maus and Shire Inc.	-9.000	-9.000	3.100	-9.000
Kleinwort Benson Ltd	8.100	6.750	-9.000	-9.000
Kleinwort Benson North America	-9.000	-9.000	8.100	-9.000
Kleinwort Benson Securities	-9.000	-9.000	8.100	-9.000
Klenner-Skoumal GmbH	-9.000	2.100	-9.000	-9.000
Koonce Securities	-9.000	3.100	-9.000	-9.000
KSH Investment Group, Inc.	-9.000	-9.000	3.100	-9.000
Kureen & Cooper	-9.000	2.100	-9.000	-9.000
L. C. Wegard	2.100	2.100	2.100	-9.000
L. L. Fane	2.100	-9.000	-9.000	-9.000
L.H. Alton & Co.	-9.000	-9.000	4.100	-9.000
L.H. Friend	-9.000	-9.000	4.100	-9.000
L.H. Friend, Weinress&Frankson	-9.000	-9.000	4.100	-9.000
La Jolla Securities	-9.000	-9.000	3.100	-9.000
Ladenburg Thalmann & Co	5.000	6.000	6.100	6.100
Laidlaw Adams & Peck	4.000	6.500	-9.000	-9.000
Laidlaw Equities Inc	-9.000	3.100	3.100	-9.000
Laidlaw Global Securities	-9.000	-9.000	4.100	-9.000
Laidlaw-Coggeshall	-9.000	-9.000	4.100	-9.000
Landesbank Rheinland Pfalz	-9.000	-9.000	5.100	-9.000
Landmark International	-9.000	-9.000	3.100	-9.000
Langheinrich & Fender	2.100	-9.000	-9.000	-9.000
L'Argent Equities	-9.000	2.100	-9.000	-9.000

Investment Banks	Rank 80-84	Rank 85-91	Rank 92-00	Rank 01-04
L'Argent Securities	-9.000	2.100	-9.000	-9.000
LaSalle Street Securities Inc	-9.000	-9.000	4.100	-9.000
Lazard	-9.000	-9.000	9.100	9.100
Lazard Freres & Co LLC	8.000	8.750	9.100	9.100
Lazard Freres et Cie	-9.000	-9.000	9.100	-9.000
Lazard Houses	-9.000	-9.000	9.100	-9.000
Leerink Swann & Co.	-9.000	-9.000	4.100	-9.000
Legacy Securities Corp	-9.000	-9.000	5.100	-9.000
Legg Mason Wood Walker	5.000	7.125	7.100	7.100
Legg, Mason	6.100	-9.000	7.100	7.100
Lehman Brothers	-9.000	9.100	9.100	8.100
Lehman Brothers International	-9.000	-9.000	9.100	8.100
Lehman Brothers Kuhn Loeb	8.000	7.500	-9.000	-9.000
Levco Securities	-9.000	7.100	-9.000	-9.000
Lew Lieberbaum & Co.	-9.000	-9.000	2.100	-9.000
Lexington Securities	-9.000	-9.000	2.100	-9.000
LF Rothschild Unterberg Towbin	7.100	7.100	-9.000	-9.000
LG Investment & Securities	-9.000	-9.000	5.100	-9.000
LG Securities Co Ltd	-9.000	-9.000	-9.000	7.100
LH Friend, Weinress, Frankson	-9.000	-9.000	4.100	-9.000
Life Planning	-9.000	3.100	-9.000	-9.000
Lloyd Securities	-9.000	2.100	-9.000	-9.000
Loeb Partners	-9.000	-9.000	5.100	-9.000
Lombard Street Securities	-9.000	2.100	-9.000	-9.000
London Freedland	-9.000	4.100	-9.000	-9.000
Lovett Mitchell Webb Garrison	-9.000	5.500	-9.000	-9.000
Lovett Underwood Neuhaus	-9.000	4.750	-9.000	-9.000
Lowell H. Listrom	-9.000	3.100	-9.000	-9.000
LT Lawrence & Co Inc	-9.000	-9.000	2.100	-9.000
M Kane & Co	-9.000	-9.000	4.100	-9.000
M. H. Meyerson	-9.000	1.100	1.100	-9.000
M. H. Novick	2.100	-9.000	-9.000	-9.000
M. S. Wien	2.000	-9.000	-9.000	-9.000
Mabon Nugent & Co	-9.000	5.500	5.100	-9.000
Mabon Securities Corp	-9.000	-9.000	5.100	-9.000
MacDonald, Krieger, Bowyer & B	3.100	-9.000	-9.000	-9.000
Macquarie Bank	-9.000	-9.000	5.100	-9.000

Wen Wen ♦ What Has Explained IPO Underpricing?

Investment Banks	Rank 80-84	Rank 85-91	Rank 92-00	Rank 01-04
Madison Securities	-9.000	-9.000	3.100	-9.000
Mahler & Emerson	2.100	-9.000	-9.000	-9.000
Maidstone Financial, Inc.	-9.000	-9.000	2.100	-9.000
Malone & Associates	2.100	2.100	-9.000	-9.000
Manchester Rhone Securities	-9.000	3.100	-9.000	-9.000
Manley, Bennett, McDonald	2.000	-9.000	-9.000	-9.000
Marantette	-9.000	3.000	-9.000	-9.000
Marche Securities	-9.000	-9.000	3.100	-9.000
Marion Bass Securities	-9.000	-9.000	3.100	-9.000
Marketfield Securities	-9.000	3.100	-9.000	-9.000
Marleau Lemire Inc	-9.000	-9.000	3.100	-9.000
Marshall & Co. Securities	-9.000	5.100	-9.000	-9.000
Mason Hill & Co Inc	-9.000	-9.000	2.100	-9.000
Mathews, Holmquist & Assoc.	-9.000	-9.000	3.100	-9.000
Matthew R. White Investment	2.100	-9.000	-9.000	-9.000
Matthews & Wright Capital	-9.000	4.100	-9.000	-9.000
Maxim Group LLC	-9.000	-9.000	-9.000	2.100
Maxwell Capital	-9.000	-9.000	3.100	-9.000
May Davis Group Inc	-9.000	-9.000	5.100	-9.000
McClees Investments	-9.000	2.100	-9.000	-9.000
McClurg Capital Corporation	-9.000	-9.000	3.100	-9.000
McDonald Investments	6.100	6.100	6.100	5.100
McGinn, Smith & Co Inc	-9.000	-9.000	4.100	-9.000
McKewon & Timmins	-9.000	6.100	-9.000	-9.000
McKinley Allsopp Inc	-9.000	4.500	-9.000	-9.000
McLarty	4.100	-9.000	-9.000	-9.000
McMahan Securities Co., LP	-9.000	-9.000	4.100	-9.000
Mediobanca	-9.000	-9.000	8.100	-9.000
Meridian Capital Markets	-9.000	-9.000	3.100	-9.000
Merit Capital Associates, Inc	-9.000	-9.000	2.100	4.100
Merrill Lynch & Co Inc	-9.000	9.100	9.100	9.100
Merrill Lynch Capital Markets	9.100	9.100	-9.000	-9.000
Merrill Lynch Far East Ltd	-9.000	-9.000	9.100	-9.000
Merrill Lynch International	-9.000	-9.000	9.100	9.100
Merrill Lynch Private Ltd Sing	-9.000	-9.000	-9.000	9.100
Merrill Lynch White Weld Cptl	9.000	8.875	-9.000	-9.000
Merrill Lynch, Pierce, Fenner	-9.000	-9.000	9.100	9.100

Investment Banks	Rank 80-84	Rank 85-91	Rank 92-00	Rank 01-04
Mesirow	-9.000	4.750	-9.000	-9.000
Mesirow Financial Corp	-9.000	-9.000	6.100	-9.000
Meuse Rinker Chapman Endres &	-9.000	4.100	-9.000	-9.000
Meyers Pollock Robbins Inc.	-9.000	-9.000	4.100	-9.000
Midland Walwyn Inc	-9.000	-9.000	5.100	-9.000
Midwest Discount Securities	2.100	-9.000	-9.000	-9.000
Mikal	-9.000	2.100	-9.000	-9.000
Millenium Securities Corp.	-9.000	-9.000	3.100	-9.000
Millennium Financial Group	-9.000	-9.000	3.100	-9.000
Miller, Johnson & Kuehn, Inc.	-9.000	3.100	3.100	-9.000
Mills Financial Services Inc	-9.000	-9.000	3.100	-9.000
Milwaukee	-9.000	4.100	-9.000	-9.000
Monarch Funding	2.100	-9.000	-9.000	-9.000
Monness, Crespi, Hardt	-9.000	3.100	3.100	-9.000
Monroe Parker Securities	-9.000	-9.000	2.100	-9.000
Montano Securities	3.100	-9.000	-9.000	-9.000
Montgomery Securities	5.500	8.750	8.100	-9.000
Moore & Schley, Cameron	1.100	6.500	-9.000	-9.000
Moors & Cabot Inc	4.100	-9.000	4.100	-9.000
Morgan Keegan Inc	7.100	6.625	7.100	7.100
Morgan Schiff	-9.000	4.100	4.100	-9.000
Morgan Stanley	-9.000	-9.000	-9.000	9.100
Morgan Stanley & Co	9.000	8.875	9.100	9.100
Morgan Stanley Dean Witter	-9.000	-9.000	9.100	9.100
Morgan Stanley International	-9.000	-9.000	9.100	-9.000
Morgan, Olmstead, Kennedy	-9.000	4.100	-9.000	-9.000
Moseley Securities Corporation	-9.000	4.100	-9.000	-9.000
Moseley, Hallgarten, Estabrook	5.000	5.750	-9.000	-9.000
Mostel & Taylor Securities	-9.000	2.100	-9.000	-9.000
MR Beal & Co	-9.000	-9.000	5.100	-9.000
Muller & Co	1.000	5.000	-9.000	-9.000
Murchison Investment Bankers	-9.000	-9.000	3.100	-9.000
Murphey Favre	-9.000	4.100	-9.000	-9.000
Murphey Marseilles Smith	-9.000	-9.000	4.100	-9.000
N. Donald	7.000	-9.000	-9.000	-9.000
National Bank Financial Inc	-9.000	-9.000	5.100	-9.000
National City Investments	-9.000	-9.000	4.100	-9.000

Investment Banks	Rank 80-84	Rank 85-91	Rank 92-00	Rank 01-04
National Securities (Taiwan)	-9.000	-9.000	3.100	-9.000
National Securities Corp	-9.000	-9.000	2.100	-9.000
NationsBanc Montgomery Sec	-9.000	-9.000	8.100	-9.000
Nationwide Securities, Inc.	-9.000	-9.000	3.100	-9.000
NatWest Securities	-9.000	-9.000	8.100	-9.000
Needham & Co Inc	-9.000	6.000	5.100	5.100
Neidiger, Tucker, Bruner Inc.	3.100	2.500	3.100	3.100
Nelson Securities	-9.000	2.100	-9.000	-9.000
Nesbitt Burns Corp	-9.000	-9.000	7.100	-9.000
Nesbitt Burns Inc	-9.000	-9.000	7.100	-9.000
Nesbitt Burns Securities	-9.000	-9.000	7.100	-9.000
Network 1 Financial Securities	-9.000	-9.000	3.100	-9.000
Network Capital Corp	-9.000	-9.000	2.100	-9.000
Neuberger Berman Inc	-9.000	-9.000	6.100	-9.000
New Court Securities Corp.	4.000	-9.000	-9.000	-9.000
New York & Foreign Securities	-9.000	3.100	-9.000	-9.000
New York Broker	-9.000	-9.000	3.100	-9.000
Newbridge Securities	-9.000	-9.000	-9.000	2.100
Newcomb Capital	2.100	-9.000	-9.000	-9.000
Newhard, Cook	4.000	6.250	-9.000	-9.000
Nichols, Safina, Lerner & Co	-9.000	-9.000	1.100	-9.000
Nikko Securities (Europe)	-9.000	-9.000	7.100	-9.000
Nikko Securities (New York)	-9.000	-9.000	7.100	-9.000
Nikko Securities Co Ltd	-9.000	-9.000	7.100	-9.000
NM Rothschild & Smith New Ct	-9.000	-9.000	7.100	-9.000
NM Rothschild & Sons Ltd	-9.000	-9.000	7.100	-9.000
Noble International Investment	-9.000	-9.000	3.100	-9.000
Noble Investment Co	-9.000	3.100	3.100	-9.000
Noble Securities	2.100	2.100	-9.000	-9.000
Nolan Securities Corp.	-9.000	-9.000	3.100	-9.000
Nomura International Limited	-9.000	-9.000	9.100	-9.000
Nomura Secs Intl	-9.000	-9.000	9.100	-9.000
Nomura Securities	-9.000	8.250	9.100	-9.000
Nomura Securities New York Inc	-9.000	9.100	9.100	-9.000
Norbay Securities	2.100	-9.000	-9.000	-9.000
Norcross Securities, Inc.	-9.000	-9.000	3.100	-9.000
Nordberg Capital Inc	-9.000	-9.000	5.100	-9.000



Investment Banks	Rank 80-84	Rank 85-91	Rank 92-00	Rank 01-04
Normandy Securities	-9.000	2.100	-9.000	-9.000
Norris & Hirshberg	-9.000	2.100	-9.000	-9.000
North American Investment	-9.000	3.100	-9.000	-9.000
North Country Securities	-9.000	3.100	-9.000	-9.000
Northeast Securities Inc.	-9.000	-9.000	4.100	-9.000
Northington Capital Markets	-9.000	-9.000	5.100	-9.000
Novatech Capital	-9.000	2.100	-9.000	-9.000
Nutmeg Securities Ltd	-9.000	-9.000	4.100	-9.000
Oak Ridge Investments	-9.000	-9.000	3.100	-9.000
Oakes Fitzwilliams & Co	-9.000	-9.000	3.100	-9.000
Oberweis Securities	-9.000	3.750	-9.000	-9.000
OBSA International	-9.000	5.100	-9.000	-9.000
Oddo Finance	-9.000	-9.000	3.100	-9.000
Ohio Co	5.000	5.100	5.100	-9.000
onlinetradinginc.com corp.	-9.000	-9.000	3.100	-9.000
Oppenheimer & Co Inc	7.500	7.875	8.100	-9.000
Ord Minnett Group	-9.000	-9.000	6.100	-9.000
Orians Investment	2.100	-9.000	-9.000	-9.000
Ormes Capital Markets Inc	-9.000	-9.000	5.100	-9.000
Oscar Gruss & Son Inc	-9.000	-9.000	3.100	-9.000
Oslo Finans AS	-9.000	2.100	-9.000	-9.000
OTC Net	1.500	-9.000	-9.000	-9.000
P. K. Hickey	-9.000	2.100	-9.000	-9.000
Pacific Crest Securities Inc	-9.000	-9.000	1.100	-9.000
Pacific Growth Equities Inc	-9.000	-9.000	1.100	4.100
Pactual Capital Corporation	-9.000	-9.000	-9.000	7.100
Pagel	2.100	2.100	-9.000	-9.000
PaineWebber	8.000	8.100	8.100	-9.000
PaineWebber International	-9.000	-9.000	8.100	-9.000
Paradise Valley Securities Inc	-9.000	-9.000	1.100	-9.000
Paragon Capital	-9.000	2.100	2.100	-9.000
Paribas Capital Markets	-9.000	-9.000	7.100	-9.000
Paribas Capital Markets Group	-9.000	-9.000	7.100	-9.000
Paribas Corporation	-9.000	7.100	7.100	-9.000
Paribas SA	-9.000	7.100	7.100	-9.000
Park Avenue Securities	4.100	-9.000	-9.000	-9.000
Parker-Hunter Inc	-9.000	4.875	5.100	-9.000

Wen Wen ♦ What Has Explained IPO Underpricing?

Investment Banks	Rank 80-84	Rank 85-91	Rank 92-00	Rank 01-04
Parliament Hill Capital	-9.000	2.100	-9.000	-9.000
Patten Securities	2.100	2.100	-9.000	-9.000
Patterson Travis Inc	-9.000	-9.000	2.100	-9.000
Pauli Johnson Capital & Resch	-9.000	-9.000	4.100	-9.000
Paulson Investment Co	4.000	5.000	3.100	3.100
PCM Securities Ltd	-9.000	-9.000	3.100	-9.000
Peacock Hislop Staley & Given	-9.000	-9.000	4.100	-9.000
Pendrick Reeves Associates,	3.100	-9.000	-9.000	-9.000
Pennsylvania Co	-9.000	-9.000	5.100	-9.000
Pennsylvania Merchant Group	-9.000	3.833	5.100	-9.000
Peregrine Brokerage Ltd	-9.000	-9.000	6.100	-9.000
Peregrine Capital Ltd	-9.000	-9.000	6.100	-9.000
Peterson Brothers Securities	-9.000	-9.000	2.100	-9.000
Peterson, Diehl, Quirk	2.100	-9.000	-9.000	-9.000
Petrie Parkman & Co Inc	-9.000	-9.000	5.100	-9.000
Philips, Appel & Walden	3.100	-9.000	-9.000	-9.000
Piper Jaffray & Hopwood Inc	7.100	7.100	7.100	-9.000
Piper Jaffray Cos	-9.000	-9.000	-9.000	7.100
Piper Jaffray Inc	-9.000	-9.000	7.100	-9.000
Pittock Financial	2.100	2.100	-9.000	-9.000
Porcari, Fearnow & Associates	-9.000	2.100	-9.000	-9.000
Prescott Ball & Turben Inc	5.000	7.500	-9.000	-9.000
Prestige Investors	-9.000	2.100	-9.000	-9.000
Prime Charter Ltd	-9.000	-9.000	4.100	-9.000
Princeton Securities	-9.000	-9.000	3.100	-9.000
Principal Financial Securities	-9.000	-9.000	4.100	-9.000
Principal/Eppler, Guerin	-9.000	-9.000	6.100	-9.000
Probusa International Inc	-9.000	-9.000	5.100	-9.000
Professional Brokerage Service	-9.000	3.100	-9.000	-9.000
Profile Investments	-9.000	2.100	-9.000	-9.000
Providence Securities	2.100	2.100	-9.000	-9.000
Prudential Securities Inc	-9.000	6.100	6.100	7.100
Prudential Vector Healthcare	-9.000	-9.000	8.100	-9.000
Prudential Volpe Technology Gr	-9.000	-9.000	8.100	-9.000
Prudential-Bache Capital Fund	-9.000	8.750	-9.000	-9.000
Prudential-Bache Securities	8.100	8.100	-9.000	-9.000
Punk Ziegel & Knoell	-9.000	-9.000	6.100	-9.000

Investment Banks	Rank 80-84	Rank 85-91	Rank 92-00	Rank 01-04
Punk, Ziegel & Company	-9.000	-9.000	6.100	4.100
Quantum Capital Group	2.100	-9.000	-9.000	-9.000
Quinn	0.000	3.100	-9.000	-9.000
R. B. Marich	-9.000	3.100	-9.000	-9.000
R. C. Stamm	-9.000	2.100	-9.000	-9.000
R. D. White & Co.	-9.000	-9.000	3.100	-9.000
R. D. White & Company	-9.000	-9.000	3.100	-9.000
R. E. Bolton	3.100	-9.000	-9.000	-9.000
R. F. Lafferty	-9.000	2.100	2.100	-9.000
R. G. Dickinson	3.500	4.100	-9.000	-9.000
R. J. Steichen	-9.000	2.100	2.100	-9.000
R.H. Damon & Co., Inc.	-9.000	3.100	-9.000	-9.000
R.H. Investments, Inc.	-9.000	-9.000	3.100	-9.000
R.T.G. Richards & Co., Inc.	-9.000	-9.000	2.100	-9.000
Rademaker, MacDougall	2.100	-9.000	-9.000	-9.000
RAF Financial	-9.000	3.100	3.100	-9.000
Raffensperger, Hughes	5.100	5.100	5.100	-9.000
Ragen MacKenzie Group Inc	-9.000	-9.000	5.100	-9.000
RAS Securities Corporation	-9.000	-9.000	3.100	-9.000
Rauscher Pierce Refsnes Inc	3.000	6.250	7.100	-9.000
Rauscher Pierce Securities	7.100	7.100	-9.000	-9.000
Raymond James & Associates Inc	4.000	5.625	7.100	7.100
RBC Capital Markets	-9.000	-9.000	-9.000	7.100
RBC Dominion Securities	-9.000	-9.000	7.100	-9.000
RBC Dominion Securities Corp	-9.000	-9.000	7.100	-9.000
RC Securities, Inc.	-9.000	-9.000	5.100	-9.000
Redstone Securities	-9.000	-9.000	3.100	-9.000
Redwine & Company Inc	-9.000	-9.000	4.100	-9.000
Regency Group	-9.000	-9.000	3.100	-9.000
Reich	-9.000	4.000	4.100	-9.000
Reinheimer and Company	-9.000	-9.000	4.100	-9.000
Reinheimer Nordberg	-9.000	3.100	4.100	-9.000
Renaissance Capital Partners	-9.000	-9.000	3.100	-9.000
Renaissance Financial Secs	-9.000	-9.000	3.100	-9.000
Reynolds Dewitt Securities	-9.000	2.100	-9.000	-9.000
Richard Christman Lavigne	-9.000	2.100	-9.000	-9.000
Richards, Lynch & Pegher	-9.000	2.100	-9.000	-9.000

Wen Wen ♦ What Has Explained IPO Underpricing?

Investment Banks	Rank 80-84	Rank 85-91	Rank 92-00	Rank 01-04
Richter & Co., Inc.	-9.000	-9.000	2.100	-9.000
Richter, Cohen	-9.000	-9.000	3.100	-9.000
Rickel	-9.000	-9.000	2.100	-9.000
Rickel & Associates	-9.000	-9.000	2.100	-9.000
RLR Securities Group	2.100	2.100	-9.000	-9.000
Roan Capital Partners, L.P.	-9.000	-9.000	3.100	-9.000
Robert Ainbinder	-9.000	2.100	-9.000	-9.000
Robert Fleming Holdings PLC	-9.000	-9.000	7.100	-9.000
Robert Fleming Inc	-9.000	-9.000	7.100	-9.000
Robert S.C. Peterson	2.100	-9.000	-9.000	-9.000
Robert Todd Financial Corp.	-9.000	3.100	3.100	-9.000
Robert W Baird & Co Inc	6.500	5.750	7.100	-9.000
Robertson Securities	2.100	-9.000	-9.000	-9.000
Robertson Stephens & Co	-9.000	8.750	8.100	-9.000
Robertson, Colman & Stephens	5.100	8.750	-9.000	-9.000
Robinson-Humphrey (Old)	4.000	7.375	6.100	-9.000
Robinson-Humphrey Co	-9.000	-9.000	6.100	-9.000
Robinson-Humphrey/American Exp	6.100	6.100	-9.000	-9.000
Rockefeller Securities Group	-9.000	-9.000	2.100	-9.000
Rocky Mountain Securities&Inv.	2.100	-9.000	2.100	-9.000
Rodman & Renshaw Inc	-9.000	5.500	2.100	-9.000
Roney & Co	-9.000	4.750	5.100	-9.000
Roney Capital Markets	-9.000	-9.000	6.100	-9.000
Rooney, Pace	3.000	6.375	-9.000	-9.000
Rosenblum, Levin Securities	2.100	-9.000	-9.000	-9.000
Rosenkrantz, Ehrenkrantz, Lyon	0.100	5.000	-9.000	-9.000
Ross Stebbins	3.100	-9.000	-9.000	-9.000
Rotan Mosle Inc	5.000	5.667	-9.000	-9.000
Roth Capital Partners Inc	-9.000	-9.000	4.100	4.100
Rothschild Group	-9.000	-9.000	7.100	-9.000
Rothschild Inc.	5.000	7.167	-9.000	-9.000
Round Hill Securities, Inc.	-9.000	-9.000	3.100	-9.000
Royal Bank of Canada	-9.000	-9.000	7.100	7.100
Royce Investment Group Inc	-9.000	-9.000	4.100	-9.000
Russo Securities	-9.000	2.100	-9.000	-9.000
RvR Securities Corp	-9.000	-9.000	3.100	-9.000
Ryan Beck & Co	-9.000	7.000	5.100	5.100

Investment Banks	Rank 80-84	Rank 85-91	Rank 92-00	Rank 01-04
S. D. Cohn	0.000	2.100	2.100	-9.000
S. W. Ryan & Company	-9.000	-9.000	3.100	-9.000
Sable Capital Markets, Inc.	-9.000	3.100	-9.000	-9.000
Salomon Brothers	9.000	9.000	9.100	-9.000
Salomon Smith Barney	-9.000	-9.000	9.100	9.100
Salomon Smith Barney Interntl	-9.000	-9.000	9.100	-9.000
Samsung Securities Co	-9.000	-9.000	6.100	-9.000
San Diego Securities	3.100	5.500	-9.000	-9.000
Sanders Morris Harris Inc	-9.000	-9.000	-9.000	5.100
Sanders Morris Mundy Inc	-9.000	-9.000	5.100	-9.000
Sandler O'Neill Partners	-9.000	-9.000	8.100	8.100
Sands Brothers & Co Ltd	-9.000	4.100	4.100	-9.000
Sanford C Bernstein & Co Inc	-9.000	6.625	8.100	-9.000
Santa Barbara Securities	4.100	-9.000	-9.000	-9.000
Santander Investment Bank	-9.000	-9.000	7.100	-9.000
Santander Investment(London)	-9.000	-9.000	7.100	-9.000
Santander Securities PR	-9.000	-9.000	7.100	-9.000
SBC Warburg	-9.000	-9.000	8.100	-9.000
SBC Warburg Dillon Read Inc	-9.000	-9.000	8.100	-9.000
SBCI Swiss Bank Corp Inv Bkng	-9.000	-9.000	8.100	-9.000
Schaenen, Fellerman, Peck	2.100	-9.000	-9.000	-9.000
Schneider Bernet & Hickman Inc	5.000	6.000	-9.000	-9.000
Schneider Securities, Inc.	-9.000	3.100	3.100	3.100
Schroder & Co Inc	-9.000	-9.000	8.100	-9.000
Schroder Salomon Smith Barney	-9.000	-9.000	9.100	-9.000
Schroder Wertheim & Co	-9.000	-9.000	8.100	-9.000
Schweitzer	-9.000	2.100	-9.000	-9.000
Scotia Capital Inc	-9.000	-9.000	7.100	-9.000
Scotia Capital Markets	-9.000	-9.000	7.100	-9.000
ScotiaMcLeod (USA) Inc	-9.000	-9.000	7.100	-9.000
ScotiaMcLeod Inc	-9.000	-9.000	7.100	-9.000
Scott & Stringfellow Financial	4.100	5.500	6.100	-9.000
Seaboard Planning	-9.000	3.100	3.100	-9.000
Seaboard Securities	-9.000	-9.000	3.100	-9.000
Securities First	-9.000	2.100	-9.000	-9.000
Security Capital Markets Group	-9.000	-9.000	3.100	-9.000
Security Capital Trading Inc	-9.000	-9.000	3.100	-9.000

Investment Banks	Rank 80-84	Rank 85-91	Rank 92-00	Rank 01-04
Seidler Amdec Securities Inc	3.100	5.125	-9.000	-9.000
Seidler Corp	-9.000	-9.000	4.100	-9.000
Seidler, Arnett & Spillane	4.100	-9.000	-9.000	-9.000
Sentra Securities	-9.000	-9.000	3.100	-9.000
Serfin Securities Inc	-9.000	-9.000	5.100	-9.000
SG Cowen Securities Corp	-9.000	-9.000	6.100	6.100
SG Warburg & Co Inc (SZ)	-9.000	-9.000	7.100	-9.000
SG Warburg & Co. Ltd.	-9.000	-9.000	7.100	-9.000
SG Warburg Securities	-9.000	7.100	7.100	-9.000
Shamrock Partners, Ltd.	-9.000	-9.000	3.100	-9.000
Shamus Group, Inc	-9.000	-9.000	2.100	-9.000
Sharpe Capital	-9.000	-9.000	3.100	-9.000
Shearson Lehman Brothers	-9.000	8.833	9.100	-9.000
Shearson Lehman Hutton	-9.000	9.100	-9.000	-9.000
Shearson Lehman/American Exp	9.000	9.100	-9.000	-9.000
Shearson Loeb Rhoades Inc	9.100	-9.000	-9.000	-9.000
Shearson/American Express Inc	9.100	9.100	-9.000	-9.000
Shelter Rock Securities	2.100	-9.000	-9.000	-9.000
Shemano Group	-9.000	-9.000	-9.000	4.100
Sherwood Capital	-9.000	2.100	-9.000	-9.000
Sherwood Securities	1.000	3.100	-9.000	-9.000
Shochet Securities	-9.000	-9.000	3.100	-9.000
Shoenberg, Hieber	1.000	2.100	2.100	-9.000
Simmons & Co	-9.000	-9.000	5.100	-9.000
Simmons & Co International	-9.000	-9.000	5.100	-9.000
Smetek, Van Horn & Cormack	-9.000	3.100	-9.000	-9.000
Smith Barney Inc	-9.000	-9.000	8.100	-9.000
Smith Barney Shearson	-9.000	-9.000	8.100	-9.000
Smith Barney, Harris Upham	8.000	8.750	8.100	-9.000
Smith, Moore	-9.000	-9.000	4.100	-9.000
Societe Generale	-9.000	-9.000	7.100	-9.000
Societe Generale Securities	-9.000	-9.000	7.100	-9.000
Sogen Securities	-9.000	7.500	-9.000	-9.000
Somerset Financial Group Inc	-9.000	-9.000	-9.000	3.100
Soundview Financial Group Inc	-9.000	-9.000	7.100	-9.000
Soundview Technology Group	-9.000	-9.000	7.100	-9.000
South Richmond Securities	-9.000	-9.000	2.100	-9.000

Investment Banks	Rank 80-84	Rank 85-91	Rank 92-00	Rank 01-04
Southcoast Capital	-9.000	3.100	4.100	-9.000
Southeast Research Partners	-9.000	-9.000	4.100	-9.000
Southwest Securities	5.100	5.100	5.100	-9.000
Sovereign Equity Management	-9.000	-9.000	3.100	-9.000
Spectrum Securities	2.100	2.100	-9.000	-9.000
Spelman & Co.	-9.000	-9.000	3.100	-9.000
Spencer Edwards	-9.000	-9.000	3.100	3.100
Spencer Trask	-9.000	-9.000	5.100	-9.000
Sperber Adams	-9.000	5.500	-9.000	-9.000
SPP Capital Partners Inc	-9.000	-9.000	4.100	-9.000
Ssangyong Securities America	-9.000	-9.000	5.100	-9.000
Starr Securities	1.100	6.000	3.100	-9.000
State Street Capital Markets	-9.000	-9.000	3.100	-9.000
State Street Securities	2.100	-9.000	-9.000	-9.000
Steinberg & Lyman	-9.000	2.100	-9.000	-9.000
Steiner Diamond	3.100	5.000	-9.000	-9.000
Stephens Inc	5.100	6.750	7.100	7.100
Sterling Financial Corp	-9.000	-9.000	3.100	-9.000
Sterling Foster	-9.000	-9.000	1.100	-9.000
Stern Brothers	2.100	6.500	-9.000	-9.000
Sterne Agee & Leach Inc	-9.000	4.100	5.100	5.100
Stifel Nicolaus & Co Inc	3.000	5.750	6.100	5.100
Stonegate Securities	-9.000	-9.000	3.100	-9.000
Strasbourg Pearson Tulcin	-9.000	5.500	5.100	-9.000
Stratton Oakmont Inc.	-9.000	1.100	1.100	-9.000
Stuart, Coleman & Co Inc	-9.000	2.100	2.100	-9.000
Stuart-James	-9.000	2.100	-9.000	-9.000
Summit Investment	1.500	2.100	2.100	-9.000
Summit Systems	-9.000	2.100	-9.000	-9.000
Sunkyong Securities	-9.000	-9.000	5.100	-9.000
Sunrise Capital	-9.000	2.100	-9.000	-9.000
Sunrise Securities	-9.000	-9.000	-9.000	1.100
SunTrust Equitable Securities	-9.000	-9.000	6.100	-9.000
SunTrust Robinson Humphrey	-9.000	-9.000	-9.000	6.100
SunTrust Securities, Inc.	-9.000	-9.000	6.100	-9.000
Suppes Securities, Inc.	-9.000	-9.000	3.100	-9.000
Sutro & Co Inc	5.000	6.000	6.100	-9.000

Investment Banks	Rank 80-84	Rank 85-91	Rank 92-00	Rank 01-04
Swartwood, Heese & Levine	1.500	2.100	-9.000	-9.000
Swergold Chefitz & Sinsabaugh	-9.000	5.750	-9.000	-9.000
Swiss Bank International	-9.000	-9.000	4.100	-9.000
Synalgest	-9.000	2.100	-9.000	-9.000
Tamaron Investments, Inc	-9.000	-9.000	3.100	-9.000
Tasin & Company	-9.000	-9.000	3.100	-9.000
TD Securities Inc	-9.000	-9.000	7.100	-9.000
Tejas Securities Inc	-9.000	-9.000	4.100	-9.000
Tennessee Capital	2.100	-9.000	-9.000	-9.000
Texas Capital Securities Inc	-9.000	-9.000	3.100	-9.000
Texas Securities Inc	-9.000	-9.000	3.100	-9.000
The Thornwater Company L.P.	-9.000	-9.000	3.100	-9.000
Thomas James Associates	-9.000	1.100	1.100	-9.000
Thomas Weisel Partners LLC	-9.000	-9.000	8.100	8.100
Thomson McKinnon Securities	6.500	7.750	-9.000	-9.000
Tidd, Lackey	-9.000	2.100	-9.000	-9.000
Toluca Pacific	-9.000	-9.000	2.100	-9.000
Trautman Kramer & Co.	-9.000	-9.000	3.100	-9.000
Trident Securities	-9.000	-9.000	4.100	-9.000
Trinity Capital Securities Ltd	-9.000	-9.000	3.100	-9.000
Troster Singer Stevens Rothsch	4.100	-9.000	-9.000	-9.000
Tucker Anthony Cleary Gull	-9.000	-9.000	5.100	-9.000
Tucker Anthony Inc	7.000	7.000	6.100	-9.000
Tuschner & Company	-9.000	-9.000	3.100	-9.000
UBS	-9.000	-9.000	-9.000	8.100
UBS AG	-9.000	-9.000	8.100	-9.000
UBS Investment Bank	-9.000	-9.000	-9.000	8.100
UBS Ltd	-9.000	-9.000	8.100	-9.000
UBS Securities Inc	-9.000	-9.000	8.100	-9.000
UBS Warburg	-9.000	-9.000	8.100	8.100
Underwood, Neuhaus	5.000	7.000	-9.000	-9.000
Unified Securities	2.100	-9.000	-9.000	-9.000
Union Bank of Switzerland	-9.000	-9.000	8.100	-9.000
Universal Heritage Investments	2.100	-9.000	-9.000	-9.000
UNKNOWN	-9.000	-9.000	-9.000	-9.000
Unterberg Harris	-9.000	4.000	5.100	-9.000
Unterberg Harris De Santis	-9.000	-9.000	5.100	-9.000



Investment Banks	Rank 80-84	Rank 85-91	Rank 92-00	Rank 01-04
US Bancorp Piper Jaffray	-9.000	-9.000	7.100	7.100
Utendahl Capital Partners	-9.000	-9.000	6.100	-9.000
Value Investing Partners, Inc.	-9.000	-9.000	4.100	-9.000
Van Kasper & Co	4.100	3.500	5.100	-9.000
Vanderbilt Securities	-9.000	2.100	-9.000	-9.000
Vantage Securities	-9.000	1.500	3.100	-9.000
Vector Securities Intl	-9.000	1.500	5.100	-9.000
Vectormex Inc	-9.000	-9.000	5.100	-9.000
VECTORMEX Inc.	-9.000	-9.000	5.100	-9.000
Viceroy International Securiti	-9.000	2.100	-9.000	-9.000
Volpe & Covington	-9.000	5.000	7.100	-9.000
Volpe Brown Whelan & Co	-9.000	-9.000	7.100	-9.000
Volpe Welty & Co	-9.000	5.000	7.100	-9.000
VTR Capital, Inc	-9.000	-9.000	2.100	-9.000
W. E. Kaufman	-9.000	-9.000	4.100	-9.000
W. H. Newbold's Son	4.100	4.100	-9.000	-9.000
W.B. McKee Securities	-9.000	-9.000	2.100	-9.000
W.I.G. Securities	-9.000	-9.000	4.100	-9.000
W.J. Gallagher	-9.000	-9.000	4.100	-9.000
W.J. Nolan & Company, Inc.	-9.000	-9.000	3.100	-9.000
W.R. Hambrecht & Company	-9.000	-9.000	7.100	7.100
Wachovia Bank	-9.000	-9.000	7.100	-9.000
Wachovia Capital Markets	-9.000	-9.000	-9.000	7.100
Wachovia Securities Inc	-9.000	-9.000	7.100	7.100
Wachtel	3.100	3.100	-9.000	-9.000
Wakefield Financial	-9.000	2.100	-9.000	-9.000
Waldron & Co	-9.000	-9.000	4.100	-9.000
Walford & Company	-9.000	-9.000	3.100	-9.000
Walford, DeMaret	2.100	-9.000	-9.000	-9.000
Wall Street West	-9.000	1.100	-9.000	-9.000
Walsh Manning Securities, Inc.	-9.000	-9.000	3.100	-9.000
Warburg Dillon Read	-9.000	-9.000	8.100	-9.000
Warburg Paribas Becker Inc	7.500	6.667	-9.000	-9.000
Wasserstein Perella Securities	-9.000	-9.000	8.100	-9.000
Weatherly Securities Corp	-9.000	-9.000	3.100	-9.000
Weber Hall Sale & Associates	3.000	3.000	-9.000	-9.000
Wedbush Morgan Securities	-9.000	5.000	5.100	-9.000

Investment Banks	Rank 80-84	Rank 85-91	Rank 92-00	Rank 01-04
Wedbush Securities	-9.000	5.100	5.100	-9.000
Wedbush, Noble, Cooke	3.500	4.000	4.100	-9.000
Weeden & Co., Incorporated	-9.000	2.000	-9.000	-9.000
Weinrich-Zitzmann-Whitehead	1.500	-9.000	-9.000	-9.000
Werbel-Roth Securities	1.500	4.000	4.100	-9.000
Wertheim	8.000	8.830	-9.000	-9.000
Wertheim Schroder	-9.000	8.830	8.100	-9.000
Wessels Arnold & Henderson LLC	-9.000	5.333	7.100	-9.000
West Park Capital	-9.000	-9.000	4.100	-9.000
Westdeutsche Landesbank Giro	-9.000	-9.000	5.100	-9.000
Westfield Financial Corp	-9.000	-9.000	3.100	-9.000
Westminster Securities	-9.000	2.100	2.100	-9.000
Westonka Investments	-9.000	2.100	2.100	-9.000
Westport Resources Investment	-9.000	-9.000	3.100	-9.000
Whale Securities Inc	3.100	3.333	2.100	-9.000
Wheat First Butcher & Singer	-9.000	6.100	6.100	-9.000
Wheat First Securities Inc	5.000	7.750	7.100	-9.000
Wheat First Union	-9.000	-9.000	5.100	-9.000
White Rock Partners & Co., Inc	-9.000	-9.000	3.100	-9.000
Wiley Bros.	-9.000	4.100	-9.000	-9.000
William Blair & Co	5.000	7.875	7.100	7.100
William K Woodruffe & Co Inc	-9.000	4.100	4.100	-9.000
William R. Hough	-9.000	-9.000	7.100	-9.000
William Scott & Co	-9.000	-9.000	2.100	-9.000
William Sword	-9.000	5.100	-9.000	-9.000
Williams Securities Group	-9.000	5.167	-9.000	-9.000
Wilson-Davis	2.100	-9.000	-9.000	-9.000
Win Capital Corp.	-9.000	-9.000	3.100	-9.000
Wit Capital Group Inc	-9.000	-9.000	7.100	-9.000
Wit Soundview Group Inc	-9.000	-9.000	7.100	-9.000
Wm. C. Roney	4.100	4.100	4.100	-9.000
Wood Gundy (New York)	5.000	-9.000	-9.000	-9.000
Woodman, Kirkpatrick Gilbreath	4.000	5.100	-9.000	-9.000
Woolcott	-9.000	3.750	-9.000	-9.000
Yamaichi Intl (America) Inc	-9.000	-9.000	8.100	-9.000
Yamaichi Securities New York	-9	5.100	-9	-9.000
Yee, Desmond, Schroeder, Allen	-9.000	-9.000	3.100	-9.000

## Wen Wen ♦ What Has Explained IPO Underpricing?

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Investment Banks	Rank 80-84	Rank 85-91	Rank 92-00	Rank 01-04
Yorke McCarter Owen & Bartles	-9.000	3.000	-9.000	-9.000
Yorkton Capital Mkts Overseas	-9.000	-9.000	4.100	-9.000
Yorkton Securities Inc	-9.000	-9.000	3.100	-9.000
Young, Smith & Peacock	-9.000	4.100	-9.000	-9.000
Yves Hentic	-9.000	2.100	-9.000	-9.000
Yves Hentic Investment Secs	-9.000	2.100	-9.000	-9.000