

## **The Changing Influence of Underwriter Prestige on Initial Public Offerings**

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### **Abstract**

Existing research finds that underwriter prestige is related to underpricing among initial public offerings. However, the relation is not stable through time. This study finds that the relation changed from negative to positive in 1993. When the sample is divided by level of underwriter prestige, underpricing by high-prestige underwriters exceeded underpricing by low-prestige underwriters for 18 of 20 years following 1993. The difference in underpricing between high- and low-prestige underwriters peaked in 1999 but continued after the market correction in 2000. High-prestige underwriters are responsible for the shift in underpricing that occurred in 1993.

**JEL Classifications:** G14, G24, G32

**Keywords:** certification; IPO pricing; IPOs; partial adjustment; underpricing; underwriter reputation

### **1. Introduction**

Previous research documents that the prestige of the underwriter is related to the underpricing of initial public offerings (IPOs). However, the relation is not consistent through time. Table 1 shows the varied influence of underwriter prestige found in other research. Hanley (1993) and Lowry and Schwert (2004) find a negative relation between underwriter prestige and underpricing for IPOs from 1983–1987 and 1985–1997, respectively. Edelen and Kadlec (2005), Zhang (2012), and Cliff and Denis (2004) find a positive relation between underwriter prestige and underpricing for IPOs from 1985–2000, 1985–2006, and 1993–2000, respectively. Before 1990, most research shows a negative relation between underwriter prestige and underpricing. By 1998, the relation between underwriter prestige and underpricing turned positive.

**Table 1.** Relation between underwriter prestige and underpricing

<b>Author(s)</b>	<b>Sample Period</b>	<b>Relation</b>
Hanley (1993)	1983–1987	Negative
Lowry and Schwert (2004)	1985–1997	Negative
Edelen and Kadlec (2005)	1985–2000	Positive
Zhang (2012)	1985–2006	Positive
Cliff and Denis (2004)	1993–2000	Positive

The certification effect is commonly used to explain lower underpricing among prestigious underwriters. It argues that issuers select underwriters based on their pricing accuracy. Therefore, underwriters may lose future business when they underprice. Hanley (1993) finds that high-quality underwriters have reputational capital at risk and are more likely to accurately price the IPO. In addition, experience and resources allow prestigious underwriters to price new offerings more accurately. Therefore, prestigious underwriters certify that the offer price is appropriate and have lower underpricing than IPOs underwritten by less prestigious underwriters.

A few theories attempt to explain the positive relation between underpricing and underwriter prestige. Prospect theory, advanced by Loughran and Ritter (2002), argues that company executives focus on their personal wealth gains from the aftermarket stock price appreciation rather than on the losses from the low offer price. Therefore, issuer's anger about the money left on the table due to underpricing is eclipsed by the unexpected wealth gains due to stock price appreciation.

Loughran and Ritter (2004) argue that changing issuer objectives are responsible for the increased underpricing among prestigious underwriters. Company executives became more concerned with earning positive analyst coverage and were willing to accept greater underpricing. Therefore, issuers selected underwriters based on the quality of their analysts rather than pricing accuracy. Additionally, executives became more interested in receiving side payments from the underwriter in exchange for accepting greater underpricing. This spinning hypothesis argues that executives personally receive shares of other IPOs in return for their business.

Another factor that may have contributed to the increased underpricing among prestigious underwriters is the agreements in which investors agreed to purchase additional shares in the aftermarket, referred to as laddering. Investors were allowed to purchase IPO shares at the offer price if they agreed to purchase additional shares after it began trading. Aggarwal, Purnanandam, and Wu (2005) find that laddered IPOs had significantly higher underpricing.

A final factor that may have increased underpricing is that prestigious underwriters began underwriting smaller and riskier companies. Prestigious underwriters originally avoided small IPOs to maintain their reputation. Once issuers changed their objectives and no longer used pricing accuracy to select underwriters, prestigious underwriters were free to pursue lower quality IPOs. Loughran and Ritter (2004) find that prestigious underwriters began underwriting smaller and unprofitable IPOs in the late 1990s.

Numerous reasons may have led prestigious underwriters to increase their underpricing. Clearly, the negative relation between underwriter prestige and underpricing of the 1980s reversed at some point in the 1990s. Loughran and Ritter (2004) divide their sample into four periods: 1980–1989, 1990–1998, 1999–2000, and 2001–2003. Prestigious underwriters had lower underpricing in the first period, slightly higher underpricing in the second period, substantially higher underpricing in the third period, and returned to lower underpricing in the final period.

In the current study, the relation between underwriter prestige and underpricing through time is examined to determine an appropriate date of change. Beginning in 1993, prestigious underwriters increased their underpricing. This trend began to accelerate in 1998 and peaked in 1999. Prestigious underwriters continued to have greater underpricing through 2012.

Previous research shows that underwriter prestige significantly affects the level of underpricing. This study contributes to the literature by demonstrating the relation between underwriter prestige and underpricing changes through time. A more precise measure of this relationship allows for a more accurate examination of the influence of other factors on underpricing.

The rest of this article is as follows. Section 2 describes the data and presents preliminary evidence of the shift in influence of underwriter prestige. Section 3 describes the methodology and discusses the results. Section 4 concludes the paper and discusses the implications of the results.

## 2. Data

The sample of U.S. IPOs between January 1, 1985, and December 31, 2012, is from Thomson Financial's Securities Data Corporation (SDC) Global New Issues database. Stock prices used to calculate underpricing are from the Center for Research in Security Prices (CRSP) database. American Depository Receipts, closed-end funds, investment trusts, real estate investment trusts, unit offerings, offerings with warrants attached, banks, partnerships, mutual conversions, all issues with an offer price below \$5, and issues not listed on NYSE, AMEX, or NASDAQ are excluded. The resulting sample contains 6,509 IPOs.

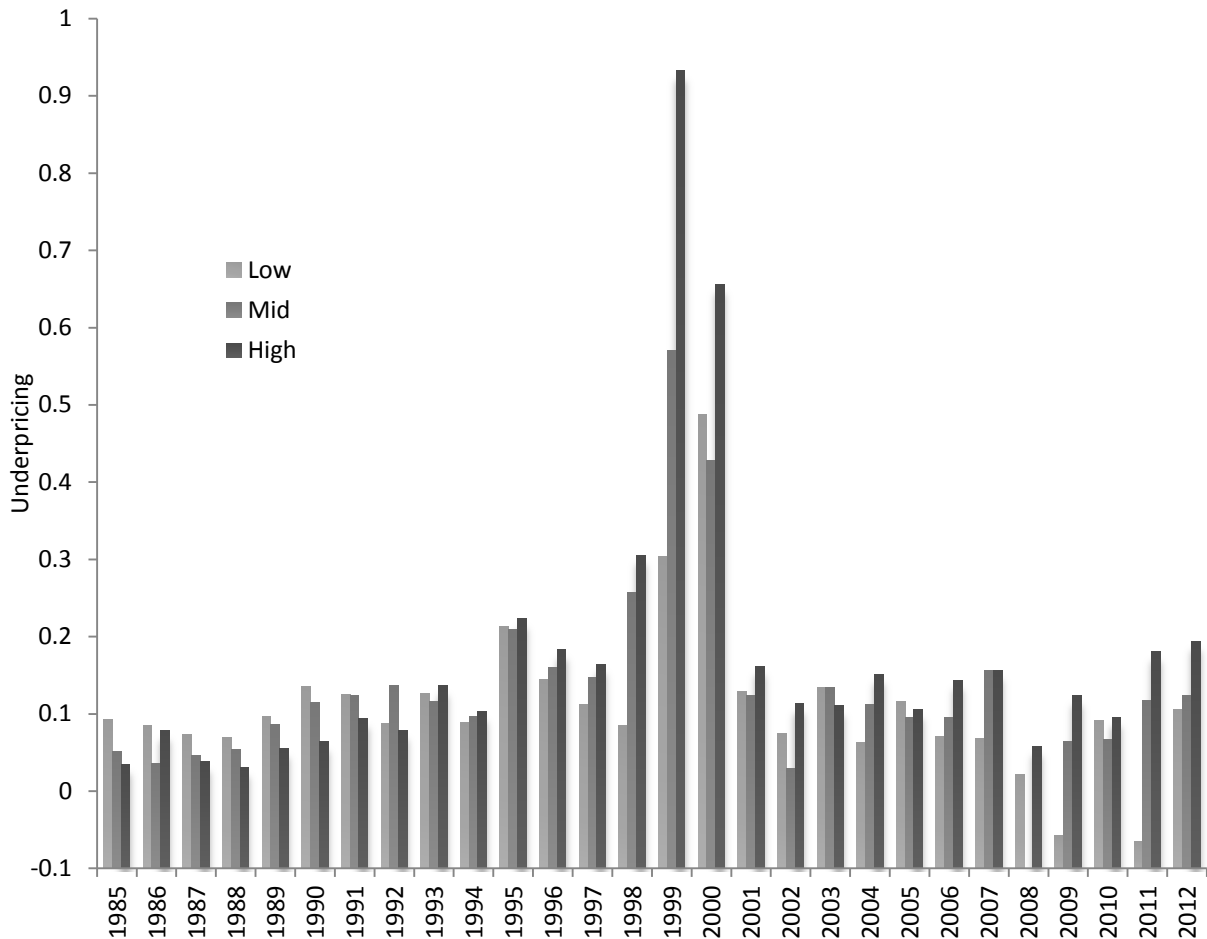
### 2.1. Descriptive Statistics

**Table 2.** Underpricing by year and underwriter prestige

Year	All Underwriters	Low Prestige	Mid Prestige	High Prestige	High-Low Prestige
1985	0.073	0.093	0.051	0.035	-0.058
1986	0.062	0.085	0.036	0.078	-0.007
1987	0.057	0.073	0.046	0.038	-0.035
1988	0.053	0.069	0.054	0.061	-0.039
1989	0.082	0.097	0.086	0.055	-0.041
1990	0.110	0.135	0.114	0.064	-0.072
1991	0.117	0.126	0.123	0.094	-0.032
1992	0.100	0.088	0.137	0.079	-0.009
1993	0.126	0.126	0.116	0.136	0.010
1994	0.094	0.088	0.097	0.103	0.014
1995	0.214	0.213	0.209	0.223	0.010
1996	0.161	0.145	0.160	0.183	0.038
1997	0.138	0.112	0.147	0.164	0.052
1998	0.218	0.084	0.257	0.305	0.221
1999	0.725	0.303	0.570	0.932	0.629
2000	0.583	0.457	0.428	0.656	0.169
2001	0.147	0.129	0.124	0.162	0.032
2002	0.093	0.075	0.029	0.113	0.038
2003	0.121	0.134	0.134	0.111	-0.023
2004	0.123	0.062	0.112	0.151	0.089
2005	0.107	0.117	0.095	0.106	-0.011
2006	0.122	0.071	0.095	0.143	0.073
2007	0.143	0.068	0.155	0.156	0.088
2008	0.053	0.022	--	0.058	0.036
2009	0.098	-0.057	0.064	0.123	0.181
2010	0.089	0.091	0.066	0.095	0.004
2011	0.138	-0.065	0.117	0.180	0.246
2012	0.174	0.105	0.123	0.194	0.089

The sample includes 6,509 IPOs between 1985 and 2012. Underpricing is the percentage change between the offer price and the first-day closing price. Underwriter prestige is measured using the Carter and Manaster (1990) rank as used in Loughran and Ritter (2004). Low-, mid-, and high-prestige underwriters have a rank of 0–7.9, 8.0–8.9, and 9.0, respectively.

Underwriters are separated into low-, mid-, and high-prestige underwriters based on the Carter and Manaster (1990) ranking system. Low-prestige underwriters have a rank below 8.0, mid-prestige underwriters have a rank of 8.0 to 8.9, and high-prestige underwriters have a rank of 9.0. Table 2 reports descriptive statistics for the sample with the annual underpricing separated by underwriter prestige. Figure 1 shows that the average annual underpricing is lower for high-prestige underwriters from 1985 through 1992. During this period, average annual underpricing by high-prestige underwriters was 3.66 percent lower than underpricing by low-prestige underwriters.



**Figure 1.** Underpricing by underwriter prestige groups

The sample consists of 6,509 IPOs between 1985 and 2012. Low-, mid-, and high-prestige underwriters have a Carter and Manaster (1990) rank of 0–7.9, 8.0–8.9, and 9, respectively.

Beginning in 1993, underpricing by high-prestige underwriters exceeded the underpricing of low prestige underwriters and continued for 18 of the next 20 years. In 1993–1998, average annual underpricing by high-prestige underwriters exceeded underpricing by low-prestige underwriters by 5.75 percent. Underpricing across all IPOs dramatically increased during the bubble period of 1999 and 2000. The underpricing difference between high- and low-prestige underwriters peaked in 1999. Following the bubble period, the difference between underwriter groups declined but the high-prestige group continued to have higher underpricing.

The underwriter market share is given in Table 3. Market share is calculated by percentage of proceeds underwritten. For the entire period, 92.37 percent of proceeds underwritten had at least

one managing underwriter that had a rank of 8.0 or higher. The market share of high-prestige underwriters increased substantially in 1993–2012. High-prestige underwriters increased their market share from 49.66 percent to 80.81 percent. The increase in high-prestige market share coincided with the increase in underpricing.

**Table 3.** Underwriter market share

Period	<i>N</i>	Underwriter Market Share		
		Underpricing	Mid and High Prestige	High Prestige
1985–2012	6,509	0.1921	0.9237	0.7725
1985–1992	1,837	0.0828	0.8746	0.4966
1993–2012	4,672	0.2351	0.9300	0.8081
1999–2000	807	0.6625	0.9422	0.8331

The sample includes 6,509 IPOs between 1985 and 2012. Underpricing is the percentage change between the offer price and the first-day closing price. Underwriter prestige is measured using the Carter and Manaster (1990) rank as used in Loughran and Ritter (2004). Mid- and high-prestige underwriters have a rank of 8.0–8.9 and 9.0, respectively. Market share is measured as a percentage of proceeds offered.

Table 4 examines the mean underpricing by underwriter prestige. The table introduces evidence that high-prestige underwriters had significantly lower underpricing before 1993 and significantly higher underpricing after 1993. From 1985 to 1992, the average underpricing of high-prestige underwriters was 1.59 percent lower than the average underpricing of low-prestige underwriters. From 1993 to 2012, underpricing was 12.18 percent higher for high-prestige underwriters. The 1993–2012 period was separated into three subperiods to determine whether the average was influenced by one of the subperiods. During the bubble period of 1999 and 2000, underpricing among high-prestige underwriters was 33.83 percent higher than underpricing among low-prestige underwriters. However, high-prestige underwriters had higher underpricing in the periods before and after the bubble period.

**Table 4.** Mean underpricing by underwriter prestige and period

Period	Low Prestige	High Prestige	Difference <i>t</i> -statistic
1985–2012	0.1305	0.2222	10.23***
1985–1992	0.0924	0.0765	-2.24**
1993–2012	0.1501	0.2719	10.11***
1993–1998	0.1311	0.1714	4.47***
1999–2000	0.3863	0.7246	5.24***
2001–2012	0.0777	0.1331	4.25***

The sample includes 6,509 IPOs between 1985 and 2012. Underpricing is the percentage change between the offer price and the first-day closing price. Underwriter prestige is measured using the Carter and Manaster (1990) rank as used in Loughran and Ritter (2004). Low- and high-prestige underwriters have a rank of 0–7.9 and 9.0, respectively.

\*\* Significant at the 5% level. \*\*\* Significant at the 1% level.

### 3. Method and Results

We use multivariate regression analysis to determine whether underpricing changed after controlling for other factors that may influence underpricing. The sample is reduced by 39 observations due to missing data. To test the robustness of the results, we separate the sample by time period and underwriter prestige.

#### 3.1. Control Variables

We control for the effects of other issue and issuer characteristics. Underwriters often adjust the price during the registration process, and research has shown a positive relation to underpricing. Loughran and Ritter (2002) argue that issuers permit a partial price adjustment because of their concern about wealth gains in the immediate aftermarket. They also suggest that a price increase sends a positive signal to investors, increasing demand for the IPO. Edelen and Kadlec (2005) find that firms partially adjust to decrease the probability of withdrawing the IPO. *Price adjustment* is the percentage change from the first registration midpoint price to the offer price.

Underpricing is greater when ownership retention is high. Aggarwal, Krigman, and Womack (2002) find that IPOs with high ownership retention have greater underpricing in order to generate increased research coverage and information momentum. Bradley and Jordan (2002), Loughran and Ritter (2004), and others find a positive relation between ownership retention and underpricing. *Overhang* is used to measure ownership retention and is the number of shares retained divided by the number of shares offered.

Larger offerings have been shown to have lower underpricing, which has been attributed to lower risk associated with larger companies (e.g., Jegadeesh, Weinstein, & Welch, 1993; Michaely and Shaw, 1994). *Size* is measured as the log of gross proceeds offered and is inflation adjusted. Loughran and Ritter (2002) find that underpricing is greater when the market return just prior to the offer date is high. *Market return* is measured as the return on the NASDAQ composite index during the 10 days prior to the offer date.

Loughran and Ritter (2002) find a high degree of autocorrelation associated with underpricing. *Prior underpricing* is the average underpricing for all IPOs in the 30 days prior to the offer date. IPOs listed on the NASDAQ exchange are associated with higher risk and greater underpricing. An indicator variable, *NASDAQ*, equal to one if the IPO lists on NASDAQ, and zero otherwise is used. Underpricing increased substantially from 1999 to 2000. An indicator variable, *Bubble*, equal to one if the IPO was issued in 1999 or 2000, and zero otherwise is used as a control.

We use multivariate regression analysis to determine whether the influence of underwriter prestige on underpricing changed significantly in 1993. Underpricing is the percentage change between the offer price and the first-day closing price. The extended regression model can be written as:

$$\begin{aligned}
 \text{Underpricing}_i = & \alpha + \beta_1 \text{Price Adjustment}_i + \beta_2 \text{Overhang}_i + \beta_3 \text{Size}_i \\
 & + \beta_4 \text{Market return}_i + \beta_5 \text{Prior underpricing}_i + \beta_6 \text{NASDAQ}_i \\
 & + \beta_7 \text{Bubble} + \beta_8 \text{Underwriter prestige}_i + \beta_9 \text{1993} \\
 & + \beta_{10} \text{Underwriter prestige} \times \text{1993}_i + \varepsilon_i
 \end{aligned} \tag{1}$$

#### 3.2. Underwriter Prestige Variables

The primary variables of interest are the underwriter prestige and the underwriter prestige interaction variables. The Carter and Manaster (1990) rank, as updated by Carter, Dark, and Singh

(1998) and Loughran and Ritter (2004), is used to measure underwriter prestige.<sup>1</sup> Loughran and Ritter (2004) argue that underwriters with a rank of 8.0 or higher are considered prestigious. Lower ranked underwriters range from quality regional or niche underwriters to underwriters associated with penny stocks and market manipulation. We separate the underwriters into three prestige categories based on the Carter and Manaster rank: low-prestige underwriters have a rank below 8.0, mid-prestige underwriters have a rank of 8.0 to 8.9, and high-prestige underwriters have a rank of 9.0.

An indicator variable, *1993*, is included in the model because previous analysis suggests underpricing changed at that time. It is equal to one if the IPO went public after January 1, 1993, and zero otherwise. An *Underwriter prestige* and *1993* interaction variable measures the change in underpricing due to underwriter prestige after 1993.

### 3.3. Results

A reduced model that omits the *Underwriter prestige* and *1993* interaction variable is used when the sample is separated by time periods. As shown in column 1 of Table 5, *Underwriter prestige* has a statistically significant negative relation to underpricing in 1985–1992. The relation reverses in 1993–2012. Column 2 shows a statistically significant positive relation between underwriter prestige and underpricing. This finding supports the previous analysis in this article that indicates the relation between underwriter prestige and underpricing changed beginning in 1993.

The results for the extended model for the entire period are shown in column 3 of Table 5. Underwriter prestige loses significance with the addition of the indicator and interaction variables. The 1993 indicator variable is not significant, indicating no overall change in underpricing. The interaction variable is positive and significant, suggesting that higher prestige underwriters have greater underpricing only during 1993–2012. These findings support the hypothesis that there was a change in the effect of underwriter prestige on underpricing after controlling for other effects beginning in 1993.

In examining the influence of the other characteristics, *Price adjustment* is positively related to underpricing and is significant at the 1 percent level, consistent with Hanley (1993) and Loughran and Ritter (2002). Inside ownership (*Overhang*) is positively and significantly related to underpricing. This is consistent with Aggarwal *et al.* (2002), Loughran and Ritter (2004), and others. The relation between size and underpricing is negative and significant, except in 1985–1992. This is consistent with previous research that finds less risk and lower underpricing with larger offerings.

Market return is positively related to underpricing and is significant at the 1 percent level, consistent with Loughran and Ritter (2002) and others. The average underpricing of IPOs in the 30 days prior to the offer date is positively and significantly related to underpricing, suggesting a high degree of autocorrelation, consistent with Loughran and Ritter (2002). We find a positive and significant relation between NASDAQ and underpricing, except in 1985–1992. This is consistent with previous research that finds more risk and greater underpricing for firms that list on NASDAQ. Underpricing is significantly higher for IPOs that went public in 1999 and 2000.

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<sup>1</sup> The Carter and Manaster ranking is updated and available on Jay Ritter's website, <http://bear.warrington.ufl.edu/ritter/ipodata.htm>.

Table 5. Determinants of underpricing

Variable	1985–1992	1993–2012	1985–2012
Intercept	0.069*** (8.421)	0.155*** (13.671)	0.151*** (8.354)
<i>Price adjustment</i>	0.393*** (15.536)	0.903*** (16.827)	0.849*** (17.972)
<i>Overhang</i>	0.002** (2.845)	0.028*** (5.531)	0.015*** (3.640)
<i>Size</i>	-0.001 (-0.315)	-0.036*** (-5.899)	-0.030*** (-6.447)
<i>Market return</i>	0.699*** (6.711)	0.662*** (4.722)	0.681*** (5.447)
<i>Prior underpricing</i>	0.162*** (2.790)	0.205*** (3.461)	0.201*** (3.559)
<i>NASDAQ</i>	0.012 (1.364)	0.052*** (4.831)	0.036*** (4.406)
<i>Bubble</i>		0.194*** (5.136)	0.228*** (6.120)
<i>Underwriter prestige</i>	-0.005** (-2.503)	0.015*** (4.575)	0.002 (0.975)
<i>1993</i>			0.029 (1.292)
<i>Underwriter prestige × 1993</i>			0.013*** (4.360)
<i>N</i>	1,833	4,637	6,470
<i>Adjusted R<sup>2</sup></i>	0.219	0.453	0.441
<i>F</i>	74.29	480.19	511.60

This table presents the regression results for underpricing. The dependent variable is *Underpricing*, the percentage change between the offer price and the first-day closing price. *Price adjustment* is the percentage change from the original mid-file price to the offer price. *Overhang* is the shares retained divided by shares issued. *Size* is the log of gross proceeds offered. *Market return* is the return on NASDAQ during the 10 days prior to the offer date. *Prior underpricing* is the average underpricing of all IPOs completed during the 30 days prior to the offer date. *NASDAQ* is an indicator variable equal to one if the IPO firm will be listed on NASDAQ, and zero otherwise. *Bubble* is an indicator variable equal to one if the IPO went public in 1999 or 2000, and zero otherwise. *Underwriter prestige* is the Carter and Manaster (1990) measure as used in Loughran and Ritter (2004). An indicator variable, *1993*, is equal to one if the IPO went public after January 1, 1993, and zero otherwise. *Underwriter prestige × 1993* is an interaction variable equal to *Underwriter prestige* multiplied by *1993*. The *t*-statistics use White's (1980) heteroskedasticity correction and are reported in parentheses.

\*\* Significant at the 5% level. \*\*\* Significant at the 1% level.

### 3.4. Additional Analysis

The sample is divided based on underwriter prestige to determine whether the shift in underpricing is due to a prestige group. Loughran and Ritter (2004) find that prestigious underwriters relaxed their standards, particularly during the Internet bubble period. We divide our sample into IPOs with an underwriter whose Carter and Manaster rank is 8.0 and higher (mid-high) and IPOs with an



underwriter whose rank is below 8.0 (low). The subsamples are examined for 1985–1992 and 1993–2012, and the results are presented in Table 6. Underwriter prestige has a negative and significant relation with underpricing for both prestige samples in 1985–1992. The remaining control variables are similar between samples and similar to the previous results.

**Table 6.** Determinants of underpricing

Variable	1985–1992		1993–2012	
	Low	Mid-High	Low	Mid-High
Intercept	0.058*** (4.408)	0.069*** (7.359)	0.094*** (4.754)	0.183*** (4.236)
<i>Price adjustment</i>	0.410*** (11.109)	0.394*** (12.377)	0.494*** (6.650)	0.986*** (16.028)
<i>Overhang</i>	0.004 (1.502)	0.002*** (3.282)	0.017** (2.520)	0.026*** (4.780)
<i>Size</i>	0.006 (0.723)	-0.004 (-0.819)	-0.009 (-1.043)	-0.048*** (-5.865)
<i>Market return</i>	0.739*** (3.808)	0.667*** (5.727)	0.213 (1.326)	0.821*** (4.513)
<i>Prior underpricing</i>	0.229** (2.090)	0.111* (1.710)	0.330*** (3.159)	0.182*** (2.680)
<i>NASDAQ</i>	0.031** (2.188)	0.005 (0.474)	0.059*** (2.955)	0.048*** (3.704)
<i>Bubble</i>			-0.001 (-0.015)	0.233*** (5.495)
<i>Underwriter prestige</i>	-0.005* (-1.883)	-0.019** (-1.968)	0.003 (0.380)	0.068*** (4.599)
<i>N</i>	724	1,109	1,407	3,230
Adjusted $R^2$	0.156	0.269	0.223	0.491
<i>F</i>	20.06	59.25	51.43	390.70

This table presents the regression results for underpricing with the sample separated by underwriter prestige and time period. Low-prestige underwriters have a Carter and Manaster rank of 0–7.9. Mid-High prestige underwriters have a Carter and Manaster rank of 8.0–9.0. The dependent variable is *Underpricing*, the percentage change between the offer price and the first-day closing price. *Price adjustment* is the percentage change from the original mid-file price to the offer price. *Overhang* is the shares retained divided by shares issued. *Size* is the log of the gross proceeds offered. *Market return* is the return on NASDAQ during the 10 days prior to the offer date. *Prior underpricing* is the average underpricing of all IPOs completed during the 30 days prior to the offer date. *NASDAQ* is an indicator variable equal to one if the IPO firm will be listed on NASDAQ, and zero otherwise. *Bubble* is an indicator variable equal to one if the IPO went public in 1999 or 2000, and zero otherwise. *Underwriter prestige* is the Carter and Manaster (1990) measure as used in Loughran and Ritter (2004). The *t*-statistics use White's (1980) heteroskedasticity correction and are reported in parentheses.

\* Significant at the 10% level. \*\* Significant at the 5% level. \*\*\* Significant at the 1% level.

Underwriter prestige is positively and significantly related to underpricing only for the higher prestige sample in 1993–2012. Underwriter prestige is not significant for the low-prestige sample. Similar to Loughran and Ritter (2004) who conclude that top-tier underwriters are associated with more underpricing in the 1990s, this suggests the switch to higher underpricing was driven by the

higher prestige underwriters. Additionally, the *Bubble* indicator variable is positive and significant for the higher prestige group and not significant for the lower prestige group. Only the higher prestige underwriters had significantly higher underpricing in the bubble years of 1999 and 2000 when other factors are controlled for. The remaining control variables in 1993–2012 are similar to previous analysis for both underwriter prestige samples.

**Table 7.** Determinants of Underpricing

Variable	Low	Mid-High
Intercept	0.087*** (3.707)	0.093*** (7.703)
<i>Price adjustment</i>	0.478*** (7.844)	0.930*** (16.945)
<i>Overhang</i>	0.008** (2.363)	0.014*** (3.015)
<i>Size</i>	-0.005 (-0.838)	-0.042*** (-6.566)
<i>Market return</i>	0.290** (2.069)	0.833*** (5.037)
<i>Prior underpricing</i>	0.316*** (3.268)	0.179*** (2.751)
<i>NASDAQ</i>	0.050*** (3.360)	0.030*** (3.049)
<i>Bubble</i>	0.016 (0.257)	0.268*** (6.367)
<i>Underwriter prestige</i>	-0.004 (-1.391)	-0.004 (-0.347)
<i>1993</i>	-0.009 (-0.326)	0.081*** (8.958)
<i>Underwriter prestige x 1993</i>	0.006 (1.290)	0.071** (4.147)
<i>N</i>	2,131	4,339
Adjusted <i>R</i> <sup>2</sup>	0.220	0.484
<i>F</i>	61.23	407.51

This table presents the regression results for underpricing with the sample separated by underwriter prestige. Low-prestige underwriters have a Carter and Manaster rank of 0–7.9. Mid-high prestige underwriters have a Carter and Manaster rank of 8.0–9.0. The dependent variable is *Underpricing*, the percentage change between the offer price and the first-day closing price. *Price adjustment* is the percentage change from the original mid-file price to the offer price. *Overhang* is the shares retained divided by shares issued. *Size* is the log of the gross proceeds offered. *Market return* is the return on NASDAQ during the 10 days prior to the offer date. *Prior underpricing* is the average underpricing of all IPOs completed during the 30 days prior to the offer date. *NASDAQ* is an indicator variable equal to one if the IPO firm will be listed on NASDAQ, and zero otherwise. *Bubble* is an indicator variable equal to one if the IPO went public in 1999 or 2000, and zero otherwise. *Underwriter prestige* is the Carter and Manaster (1990) measure as used in Loughran and Ritter (2004). An indicator variable, *1993*, is equal to one if the IPO went public after January 1, 1993, and zero otherwise. *Underwriter prestige × 1993* is an interaction variable equal to the *Underwriter prestige* variable multiplied by the *1993* variable. The *t*-statistics use White’s (1980) heteroskedasticity correction and are reported in parentheses.

\*\* Significant at the 5% level. \*\*\* Significant at the 1% level.

Table 7 presents the results for the two underwriter prestige samples for the entire sample period. The results confirm our previous analysis. The underwriter prestige interaction variable is positively and significantly related to underpricing for the higher prestige sample only. Additionally, only the higher prestige underwriter sample had higher underpricing during the bubble years of 1999 and 2000.

#### 4. Conclusion

Prior research shows that the influence of underwriter prestige on underpricing has changed through time. Before the 1990s, there was a negative relation between underwriter prestige and underpricing. The negative relation is generally attributed to the certification effect offered by prestigious underwriters. At some point in the 1990s, the relation between underwriter prestige and underpricing turned positive. Loughran and Ritter (2004) give two reasons for the change. First, issuers began paying for analyst coverage through increased underpricing. Second, executives of issuing firms began selecting underwriters based on side payments rather than pricing accuracy. Additionally, Aggarwal *et al.* (2005) argue that during the bubble years, investors were allowed to purchase IPO shares at the offer price only if they agreed to purchase additional shares after it began trading.

We extend the research on the influence of underwriter prestige on underpricing by determining a more exact time when the change occurred. Underpricing of high-prestige underwriters exceeded the underpricing of low-prestige underwriters beginning in 1993. Although the difference in underpricing peaked in 1999, underpricing was higher among high-prestige underwriters in 18 of the 20 years during 1993–2012.

When the sample is separated by underwriter prestige, the negative relation between underwriter prestige and underpricing exists for both groups before 1993. In 1993–2012, the relation between underwriter prestige and underpricing turned positive only for higher prestige underwriters. Underwriter prestige is not significantly related to underpricing for IPOs with an underwriter whose Carter and Manaster rank is below 8.0. Additionally, underpricing is significantly higher during the bubble years of 1999 and 2000 only for higher prestige underwriters. The switch in influence of underwriter prestige and the increase in underpricing during the bubble years is driven by the higher prestige underwriters.

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