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IPO Price Performance and Signaling

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***Abstract*—**This study examines the credibility of the signaling as explanation for IPO initial underpricing. Findings reveal the initial underpricing and the long-term underperformance of IPOs in Taiwan. However, we only find weak support for signaling as explanation of IPO underpricing.

***Keywords*—**Signaling, IPO initial underpricing, IPO long-term underperformance, Taiwan's stock market.

I. Introduction

THE offer price of initial public offerings (IPOs) represents both the potential wealth of pre-issue shareholders and the opportunity costs to the issuing firm. When investors accept an offer price it dramatically increases the issuing firm's reputation and this facilitates IPO sales. Managers and pre-issue shareholders often allow underwriters to set a relatively low offer price (i.e., less than the IPO's intrinsic value) and after listing this causes a dramatic rise in the stock price; often referred to as the "IPO honeymoon period". Studies examine the honeymoon period through the short-term price performance of IPOs after listing. These studies conclude that as a result of IPOs' initial underpricing, IPOs have significantly positive abnormal returns and outperform their benchmarks shortly after listing [1]-[8]).

One of the reasons for initial underpricing of IPOs is that firms issuing IPOs distinguish themselves as ones with better quality by underpricing offer prices [3], [9]. This indicates that issuing firms like to underprice IPO offers to signal their intrinsic value to the market (i.e., signaling explanation). This also implies a greater magnitude of underpricing for IPOs with better fundamentals.

This study investigates the feasibility of signaling as the explanation for IPO issuing firms to underprice their offer and the reaction of investors to this. We also examine the IPO short- and long-term price performance after listing. We find weak evidence that supports signaling as the explanation for Taiwan's IPO underpricing. However, the signaling explanation doesn't fully account for underpricing by the IPO issuing firms. We suggest that the psychological factors may dominate the IPO issuing firm's pricing decision and the investor's reaction to an offer price.

The structure of this paper is as follows: Section II investigates short- and long-term price performance of IPOs after listing. Section III examines signaling as the explanation for IPO underpricing. We draw conclusions in Section IV.

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II. IPO Price Performance

To explore IPO price performance after public listing we use data from the Taiwan Economic Journal (TEJ) and the IPO prospectus of issuing firms between January 1, 1981 and August 31, 2008. After removing the incomplete data, there are 1,245 and 1,105 IPOs for the short- and long-term price performance examination, respectively. Studies typically use event studies to investigate IPO price performance. Following both [1] and [10], we also use an event study to examine the price performance of IPOs after public listing. Notably, McDonald and Fisher's [1] event study utilizes a market index return that evaluates market risk as a benchmark. However, [8] indicates that in consideration of the similarity with operating risk, the industry index is more suitable than the market index for this purpose. Therefore, this study adopts the Chang's [8] proposal by using the IPO issuer's industry index as a benchmark.

In this study we define day 1 (month 1) as the first-day (first-month) after public listing. Following Levis [11], the period from month 2 to month 37 is used as the longest event period for examining IPO's long-term price performance. For examining IPO's short-term price performance we treat day 1 to 21 as the longest event period. Moreover, we define the abnormal return of stock i on day t (month k) as equal to the return of stock i on day t (month k) minus the return of the industry index of stock i on day t (month k). This expresses as follows:

$$AR_{i,t} = R_{i,t} - R_{I,t},\ t = 1,2,3,\ldots\ldots,21, \quad (1)$$

$$AR_{i,k} = R_{i,k} - R_{I,k},\ k = 2,3,4,\ldots\ldots,37, \quad (2)$$

where $R_{i,t}$ ($R_{i,k}$) is the return of stock i on day t (month k); $R_{I,t}$ ($R_{I,k}$) is the return of the industry index of stock i on day t (month k); $AR_{i,t}$ ($AR_{i,k}$) refers to the abnormal return of stock i on day t (month k).

Next, we calculate the average abnormal return on day t (month k) for all IPOs after their public listing and use the t-test of McDonald and Fisher [1] to investigate whether the average abnormal return on a certain day (month) are significantly different from zero. The calculations are as follows:

$$H_0 : AAR_t = 0 \ (AAR_k = 0)$$
$$H_1 : AAR_t \neq 0 \ (AAR_k \neq 0)$$

$t = \frac{AAR_t\sqrt{N_t}}{S_t}$ ($t = \frac{AAR_k\sqrt{N_k}}{S_k}$), the degree of freedom of *t*-distribution is N_t (N_k)-1, (3)

$$AAR_t = \frac{1}{N_t}\sum_{i=1}^{N_t} AR_{i,t} \ (AAR_k = \frac{1}{N_k}\sum_{i=1}^{N_k} AR_{i,k}),$$

$$t = 1,2,\ldots,21 \ (k = 2,3,\ldots,37), \quad (4)$$

where AAR_t (AAR_k) is the average abnormal return on day t (month k) for all IPOs; $S_t^2 = \frac{1}{N_t - 1}\sum_{i=1}^{N_t}(AR_{i,t} - AAR_t)^2$; $S_k^2 = \frac{1}{N_k - 1}\sum_{i=1}^{N_k}(AR_{i,k} - AAR_k)^2$; N_t and N_k are the number of IPOs for the short- and long-term price performance, respectively.

Finally, we calculate the cumulative average abnormal return of IPOs from day 1 to day *t* (from month 2 to month *k*) and following Ritter [10] establishes whether the cumulative average abnormal return during a specific period (from day 1 to day *t* or from month 2 to month *k*) is significantly different from zero. The calculations are as follows:

$$H_0 : CAAR_{1,t} = 0 \ (CAAR_{2,k} = 0)$$
$$H_1 : CAAR_{1,t} \neq 0 \ (CAAR_{2,k} \neq 0)$$

$$t = \frac{CAAR_{1,t}\sqrt{N_t}}{\sqrt{t \times var + 2 \times (t-1) \times cov}}$$

$$(\ t = \frac{CAAR_{2,k}\sqrt{N_k}}{\sqrt{(k-1) \times VAR + 2 \times (k-2) \times COV}}), \quad (5)$$

$$CAAR_{1,t} = \sum_{j=1}^{t} AAR_j \ (CAAR_{2,k} = \sum_{l=2}^{k} AAR_l), \quad (6)$$

where $CAAR_{1,t}$ is the cumulative average abnormal return of IPOs from day 1 to day *t*; $var = \frac{\sum_{t=1}^{21} S_t^2}{21}$; *cov* is the first-order autocovariance of the series AAR_t; $CAAR_{2,k}$ is the cumulative average abnormal return of IPOs from month 2 to month *k*; $VAR = \frac{\sum_{k=2}^{37} S_k^2}{36}$; *COV* is the first-order autocovariance of the series AAR_k.

Table I displays that the average abnormal returns (*AAR*s) of the IPOs from day 1 to day 14 are all significantly positive and the *AAR* of the IPOs on the first day reaches a maximum of 6.55%. This indicates the initial underpricing in the IPO market in Taiwan. Previous literature ascribed the possible reasons for IPO underpricing to, attempts to reduce information asymmetry by underpricing the IPO's offer price [12], [13], signalling the motivation of an issuer [3], [9] or the mental accounting of IPOs' issuer that a big gain and a minor loss are integrated into the same mental account [14], [15].

TABLE I
THE SHORT-TERM PRICE PERFORMANCE OF IPOS AFTER PUBLIC LISTING

t	AAR_t	$CAAR_{1,t}$	*t*-statistic (AAR_t)	*t*-statistic ($CAAR_{1,t}$)
1	0.0655	0.0655	15.0537*	45.6680*
2	0.0258	0.0913	16.4679*	44.2136*
3	0.0179	0.1092	12.1052*	42.9182*
4	0.0152	0.1244	11.0492*	42.2211*
5	0.0137	0.1381	10.3123*	41.8534*
6	0.0118	0.1499	8.6978*	41.4349*
7	0.0109	0.1608	9.2047*	41.1128*
8	0.0071	0.1680	6.1596*	40.1412*
9	0.0042	0.1722	3.8845*	38.7754*
10	0.0041	0.1763	3.8985*	37.6441*
11	0.0026	0.1789	2.5934*	36.4156*
12	0.0036	0.1825	3.6583*	35.5576*
13	0.0027	0.1852	2.8180*	34.6535*
14	0.0029	0.1880	3.0752*	33.9091*
15	0.0008	0.1888	0.8745	32.8893*
16	0.0014	0.1902	1.5707	32.0788*
17	0.0012	0.1914	1.3517	31.3143*
18	-0.0002	0.1914	-0.0232	30.4253*
19	0.0005	0.1919	0.5511	29.6828*
20	0.0006	0.1924	0.6537	29.0121*
21	0.0006	0.1930	0.6579	28.3918*

Note: "*" refers to significant at the 5% significance level. *t*-statistic (AAR_t) and *t*-statistic ($CAAR_{1,t}$) are the *t*-statistic for AAR_t and $CAAR_{1,t}$, respectively.

TABLE II
THE LONG-TERM PRICE PERFORMANCE OF IPOS AFTER PUBLIC LISTING

k	AAR_k	$CAAR_{2,k}$	*t*-statistic (AAR_k)	*t*-statistic ($CAAR_{2,k}$)
2	-0.0008	-0.0008	-0.1940	-0.2168
3	-0.0112	-0.0121	-2.8958*	-2.1987*
4	-0.0048	-0.0168	-1.2225	-2.5010*
5	-0.0075	-0.0244	-2.0575*	-3.1311*
6	-0.0063	-0.0307	-1.5874	-3.5264*
7	0.0005	-0.0301	0.1428	-3.1615*
8	-0.0096	-0.0397	-2.5162*	-3.8545*
9	-0.0049	-0.0446	-1.2431	-4.0470*
10	-0.0015	-0.0460	-0.3561	-3.9426*
11	-0.0030	-0.0490	-0.7539	-3.9841*
12	-0.0006	-0.0496	-0.1410	-3.8427*
13	-0.0066	-0.0562	-1.7534	-4.1689*
14	-0.0061	-0.0623	-1.4455	-4.4407*
15	-0.0118	-0.0741	-3.1328*	-5.0859*
16	-0.0045	-0.0786	-1.1674	-5.2126*
17	-0.0030	-0.0816	-0.7928	-5.2385*
18	-0.0067	-0.0884	-1.7993	-5.5018*
19	-0.0067	-0.0950	-1.6764	-5.7490*
20	-0.0015	-0.0965	-0.3943	-5.6828*
21	-0.0004	-0.0968	-0.0902	-5.5589*
22	0.0022	-0.0947	0.5885	-5.3005*
23	0.0016	-0.0931	0.4359	-5.0917*
24	-0.0051	-0.0982	-1.3890	-5.2518*
25	-0.0069	-0.1051	-1.7166	-5.4994*
26	-0.0070	-0.1120	-1.8209	-5.7460*
27	-0.0056	-0.1176	-1.4314	-5.9170*
28	-0.0033	-0.1210	-0.8703	-5.9711*
29	0.0001	-0.1209	0.0210	-5.8598*
30	-0.0045	-0.1254	-1.1455	-5.9737*
31	-0.0051	-0.1305	-1.3283	-6.1118*
32	-0.0070	-0.1375	-1.7204	-6.3330*
33	-0.0036	-0.1411	-0.9076	-6.3953*
34	-0.0058	-0.1468	-1.4328	-6.5526*
35	-0.0057	-0.1525	-1.5075	-6.7017*
36	-0.0056	-0.1581	-1.4919	-6.8459*
37	0.0006	-0.1575	0.1323	-6.7263*

Note: "*" refers to significant at the 5% significance level. *t*-statistic (AAR_k) and *t*-statistic ($CAAR_{2,k}$) are the *t*-statistic for AAR_k and $CAAR_{2,k}$, respectively.

Notably, the first-day abnormal IPO returns reached 28.50% in the USA [1], 57.56% in Korea 16] and 9.15% in UK [6]. In comparison, we find Taiwan's IPOs have a lower level of underpricing. In Taiwan daily price limits imposed before March 1, 2005 mean that underpricing of the IPO offer price should not reflect in adjustments in daily prices within one day. More business days may be required to make an adjustment. In addition, the impact of daily price limits is also reflected in the cumulative average abnormal return (*CAAR*). In Table I *CAAR* shows a significant positive value in the event period of 21 continuous business days.

In terms of IPOs' long-term price performance, Table II shows that the *AAR*s of IPOs in months 3, 5, 8, and 15 as well as the *CAAR*s of IPOs, except for $CAAR_{2,2}$, are significantly less than zero. This not only indicates the long-term underperformance in the IPO market in Taiwan but also is consistent with those of [10], [11], [16]-[18]. Investors may suffer from cognitive bias that sustains their inappropriate short-term reaction to the information shocks (i.e., short-term underreaction), but after in the movement to the long-term this abates and this leads to a fair price amendment (i.e., long-term overreaction). Our findings of initial underpricng and long-term underperformance, as shown in Tables I and II, support the arguments of investor's short-term underreaction and long-term overreaction to the IPO underpricing.

For the reasons of IPO underpricing, theory in finance asserts that issuing firms underprice an IPO offer price to reduce information asymmetry between insiders and external investors or as a signal of their quality to the market. Behavioral finance uses mental accounting to explain the motivation of issuing firms to underprice the IPO offer. The theory of mental accounting indicates that the satisfaction as an IPO's price rises after listing rapidly compensates for the discontent caused by the initial underpricing; i.e., the loss from underpricing of the IPO is offset by the larger cumulative returns from the IPO after listing. This contributes to the IPO issuer's willingness to leave money on the table. The above arguments adopt different prospects to explain the IPO issuer's motivation of underpricing offer prices. There is also support for the information asymmetry [12], [19], signaling [3], [9], or mental accounting [15] as an explanation of IPO underpricing. Therefore, there is a need to further examine why Taiwan's issuing firms want to underprice IPO's offer.

III. Signaling Explanation for IPO Underpricing

The signaling explanation for IPO underpricing argues that the issuer has a stronger motivation for underpricing when an IPO is of better quality. We examine the effect of IPO issuer's fundamentals on the first-day abnormal returns after public listing to examine whether signaling plays a significant role in IPO underpricing in Taiwan. Signals of firm's quality are sent to the market in different forms, for example, in credit rating announcements [20], [19], dividend policies [21]-[23] and financing policy [24]-[26]). Hingorani et al. [27] report share demand and return on equity (ROE) positively relate in the Czech voucher scheme while [28] reveal that the first-day returns of China's IPOs positively relate to their ROE at the fiscal year end before public listing. Drawing on insights from these previous studies we consider the influence of dividend payout ratio, debt-to-equity ratio, ROE, and credit rating level of the IPO issuing firm on the IPO's first-day abnormal returns. The calculations are as follows:

$$AR_{i,1} = \alpha + \alpha_1 Div_i + \alpha_2 Leverage_i + \alpha_3 ROE_i + \alpha_4 RAT_i + e_i , \quad (7)$$

where $AR_{i,1}$ is the first-day abnormal return of Company *i* after listing. Div_i is dividend payout ratio of Company *i* in the quarter prior to listing. $Leverage_i$ is debt-to-equity ratio of Company *i* in the quarter prior to listing. ROE_i is ROE of Company *i* in the quarter prior to listing. RAT_i refers to a dummy variable with the value of 10, 9, 8,…, and 1 indicating respectively that the rating sequences of Company *i* before listing are TEJ-1, TEJ-2, TEJ-3,……, and TEJ-10. α_0 refers to intercept. α_1, α_2, α_3, and α_4 are regression coefficient. e_i refers to error term.

We collected data from the TEJ databank between January 1, 1981 and August 31, 2008. A total of 638 remain after removing IPOs with incomplete financial statements or credit rating information and those from the finance industry. The TEJ databank reports credit rating data as ten levels: TEJ-1 to 4 are low risk, TEJ-5 to 6 as middle risk and TEJ 7-10 as high risk.

If the signaling explanation for IPO underpricing is valid then we anticipate those IPOs with better issuers' fundamentals have an incentive to underprice their offer and reveal an extremely positive first-day abnormal return after listing. The results of regression models 3 and 5 in Table III show that the coefficient of *ROE* is significantly greater than zero. This indicates that the IPO of issuing firm with higher profitability before being listed has higher first-day abnormal returns after being listed. This is consistent with the argument of signaling explanation for IPO underpricing and infers that an IPO with superior issuer's profitability before being listed distinguishes itself as attractive by underpricing its offer.

TABLE III
The Estimated Coefficients of the Regression Models for the Signaling Explanation of IPO Underpricing

Variables	Model 1	Model 2	Model 3	Model 4	Model 5
Intercept	0.067 (9.6)*	0.065 (2.7)*	0.006 (0.6)	0.084 (2.9)*	-0.009 (-0.2)
Div	0.001 (0.4)				0.001 (0.6)
Leverage		-0.005 (-0.1)			0.007 (0.2)
ROE			1.072 (6.5)*		1.087 (6.4)*
RAT				-0.004 (-0.8)	0.002 (0.4)
F-statistic	0.14	0.02	42.00	0.60	10.58*
R^2	0.13	0.13	0.18	0.13	0.18
Adj-R^2	0.00	0.00	0.06	0.00	0.06

Note: The number in parentheses is the *t*-statistic. "*" refers to significant at the 5% significance level. "R^2" and "Adj-R^2" refer to the coefficient of determination and the adjusted coefficient of determination, respectively.

However, the coefficients of *Div*, *Leverage*, and *RAT*, in Table III, in all five regression models are insignificantly

different from zero. This reveals that firms with higher dividends payout, more sound financial structures or lower credit risk do not have higher first-day abnormal returns after being listed. This indicates the discouraging evidence of signaling explanation for Taiwan's IPO underpricing.

IV. Conclusions

Using data from the IPO market in Taiwan we investigate both the short- and long-term price performance after listing and the original decision about the IPO offer price. In contrast to prior studies we focus on the feasibility of signaling as explanation for IPO underpricing.

Our results confirm findings of prior studies that both initial underpricing and long-term underperformance exist in the IPO market in Taiwan. However, we only find weak support for signaling as explanation of IPO underpricing. According to our findings, this study suggests that some less rational explanations of IPO issuer's behavior may be significant. Researchers propose a range of variables that may account for less rational behavior that include, excess optimism [29], overconfidence [30], social comparison [8] and anchoring [31]. Further research can usefully examine these less rational explanations of IPO issuing firms' managers (or pre-issue shareholders) in IPO underpricing.

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References

[1] J. G. McDonald and A. K. Fisher, "New-issue stock price behavior," *Journal of Finance*, vol. 27, pp. 97-102, 1972.
[2] R. G. Ibbotson, "Price performance of common stock new issues," *Journal of Financial Economics*, vol. 2, pp. 235-272, 1975.
[3] F. Allen and G. Faulhaber, "Signaling by underpricing in the IPO Market," *Journal of Financial Economics*, vol. 23, pp. 303-323, 1989.
[4] T. Loughran and J. R. Ritter, "Why has IPO underpricing changed over time?" *Financial Management*, vol. 33, pp. 5-37, 2004.
[5] F. Kerins, K. Kutsuna, and R. Smith, "Why are IPOs underpriced? Evidence from Japan's hybrid auction-method offerings," *Journal of Financial Economics*, vol. 85, pp. 637-666, 2007.
[6] D. Chambers and E. Dimson, "IPO underpricing over the very long run," *Journal of Finance*, vol. 64, pp. 1407-1443, 2009.
[7] G. C. Friesen and C. Swift, "Overreaction in the thrift IPO aftermarket," *Journal of Banking and Finance*, vol. 33, pp. 1285-1298, 2009.
[8] C.-H. Chang, "IPO underpricing: A social comparison perspective," *International Review of Economics and Finance*, vol. 20, pp. 367-375, 2011.
[9] I. Welch, "Seasoned offerings, imitation costs, and the underpricing of initial public offerings," *Journal of Finance*, vol. 44, pp. 421-449, 1989.
[10] J. R. Ritter, "The long-run performance of initial public offerings," *Journal of Finance*, vol. 46, pp. 3-27, 1991.
[11] M. Levis, "The long-run performance of initial public offerings: The UK experience 1980-1988," *Financial Management*, vol. 22, pp. 28-41, 1993.
[12] K. Rock, "Why new issues are underpriced," *Journal of Financial Economics*, vol. 15, pp. 187-212, 1986.
[13] L. M. Benveniste and P. A. Spindt, "How investment bankers determine the offer price and allocation of new issues," *Journal of Financial Economics*, vol. 24, pp. 343-361, 1989.
[14] R. Thaler, "Mental accounting and consumer choice," *Marketing Science*, vol. 4, pp. 199-214, 1985.
[15] T. Loughran and J. R. Ritter, "Why don't issuer get upset about leaving money on the table in IPOs?" *Review of Financial Studies*, vol. 15, pp. 413-443, 2002.
[16] J. B. Kim, I. Krinsky, and J. Lee, "The aftermarket performance of initial public offerings in Korea," *Pacific-Basin Finance Journal*, vol. 3, pp. 429-448, 1995.
[17] R. B. Carter, F. H. Dark, and A. K. Singh, "Underwriter reputation, initial returns, and the long-run performance of IPO stocks," *Journal of Finance*, vol. 53, pp. 285-311, 1998.
[18] K. Kutsuna, J. K. Smith, and R. L. Smith, "Public information, IPO price formation, and long-run returns: Japanese evidence," *Journal of Finance*, vol. 64, pp. 505-546, 2009.
[19] H. An and K. C. Chan, "Credit ratings and IPO pricing," *Journal of Corporate Finance*, vol. 14, pp. 584-595, 2008.
[20] L. P. Hsueh and Y. A. Liu, "Market anticipation and the effect of bond rating changes on common stock prices," *Journal of Business Research*, vol. 24, pp. 225-239, 1992.
[21] A. Kalay, "Signaling, information content, and the reluctance to cut dividends," *Journal of Financial and Quantitative Analysis*, vol. 15, pp. 855-869, 1980.
[22] K. John and J. Williams, "Dividends, dilution, and taxes: A signaling equilibrium," *Journal of Finance*, vol. 40, pp. 1053-1070, 1985.
[23] M. Miller and K. Rock, "Dividend policy under asymmetric information," *Journal of Finance*, vol. 40, pp. 1031-1051, 1985.
[24] S. Ross, "The determination of financial structure: The incentive-signaling approach," *Bell Journal of Economics*, vol. 8, pp. 23-40, 1977.
[25] E. Talmor, "Asymmetric information, signaling, and optimal corporate financial decisions," *Journal of Financial and Quantitative Analysis*, vol. 16, pp. 413-435, 1981.
[26] K. John, "Risk-shifting incentives and signaling through corporate capital structure," *Journal of Finance*, vol. 42, pp. 623-641, 1987.
[27] A. Hingorani, K. Lehn, and A. K. Makhija, "Investor behavior in mass privatization: The case of the Czech voucher scheme," *Journal of Financial Economics*, vol. 44, pp. 349-396, 1997.
[28] Y.-L. Cheung, Z. Ouyang, and W. Tan, "How regulatory changes affect IPO underpricing in China," *China Economic Review*, vol. 20, pp. 692-702, 2009.
[29] S. Paleari and S. Vismara, "Over-optimism when pricing IPOs," *Managerial Finance*, vol. 33, pp. 352-367, 2007.
[30] Y. Hsu and C.-Y. Shiu, "The overconfidence of investors in the primary market," *Pacific-Basin Finance Journal*, vol. 18, pp. 217-239, 2010.
[31] E. C. Chang, Y. Luo, and J. Ren, "Cross-listing and pricing efficiency: The informational and anchoring role played by the reference price," *working paper*, *University of Hong Kong*, 2011.

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