

# **Market Timing in Private Placements of Seasoned Equity**

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# 1. Introduction

- Different motivations: private placements VS public offerings
- Public offerings when stocks are overvalued.
  - Ritter (1991); Dong et al. (2012); Gomes and Phillips (2012)
- Private placements are motivated by different factors.
  - Signaling of undervaluation
    - Cronqvist and Nilsson (2005); Hertz and Smith (1993); Wu (2004)
  - Market inaccessibility
    - Akhigbe et al. (2006); Chen et al. (2010)
  - Cost minimization
    - (Chen et al. (2010); Wruck (1989)
  - Demand for monitoring
    - Kahan and Winton (1998); Wruck (1989)

# 1. Introduction

- **Another motivation may exist** for private placements in **different regulative environments**.
  - China: equity issuers need to wait for about one year from the initial announcement to final execution.
  - Regulation makes market timing in public offerings extremely difficult (Huang, Uchida, and Zha, 2016).
    - The offering price of shares placed publicly is based on the market prices at execution  $\implies$  uncertainty
  - The CSRC provides **guarantee for the offering price** of private placements.
    - No less than **90%** of the 20-day average market prices prior to the benchmark day (announcement).
  - The volume of private placements outnumbers public offerings dramatically.

# 1. Introduction

- Research questions
  - Does market timing motivate private placements of equity under specific regulatory environments?
    - Timing-seeking managers should choose private placements, if they encounter significant obstacles to issue overpriced shares in public offerings.
- What we do
  - Explore the possibility of market timing in private placements by using Chinese data.
    - Examine whether private placement firms are overvalued.
      - Use Rhodes-Kropf, Robinson, and Viswanathan(RKRV) (2005) to decompose market-to-book ratios
  - Investigate the impact of overvaluation on firms' equity issuance decisions.

# 1. Introduction

- Main results
  - Private placement firms have significantly greater market-to-book ratios than non-equity issuers.
  - RKRV's (2005) overvaluation measures are significant at the announcement and execution.
  - Actual issue prices are overvalued.
  - The discounts of private placements are significantly larger than public offerings.

# 1. Introduction

- For investors participating in private placements, one-year BHARs are significantly positive.
- Firms with larger overvaluation at the announcement are more likely to choose public offerings over private placements.
- Private issuers with large overvaluation can decrease discounts, while offering deep discount from the market prices at the announcement.

## 2. Hypothesis

- **Hypothesis:** *Firms announcing private placements of seasoned equity are overvalued.*
  - Extant studies suggest market timing as a common motive of public offerings (Baker and Wurgler, 2002; Graham and Harvey, 2001).
  - However, market timing in Chinese public offerings is extremely difficult due to long regulative process and the corresponding uncertainty at announcement (Huang, Uchida, and Zha, 2016).
  - Although long regulative process also exists for private placements, **uncertainty for issue price is limited.**
  - Identifying overvaluation, timers are likely to issue shares even in private placements.
  - **This hypothesis does not rule out market timing in public offerings.**

### 3. Sample selection and data

- Sample firms
  - Chinese firms that listed on SSE and/or SZSE, announced and issued seasoned equity
- Sample period
  - From Jan.1, 2006 to Dec.31,2014
- Data source
  - China Stock Market & Accounting Research (CSMAR)
  - China Securities Journal (China's WSJ)
- Sample selection
  - Exclude stock offers
  - Exclude financials and utilities
  - Exclude those whose necessary accountin information is missing
- A sample of 818 private placements and 97 public offerings of common shares.
- Our dataset also includes 16,229 firm-years that do not issue equities



# 3. Sample selection and data

- Sample distribution

H.-C. Chen et al. / Journal of Corporate Finance 16 (2010) 104–119

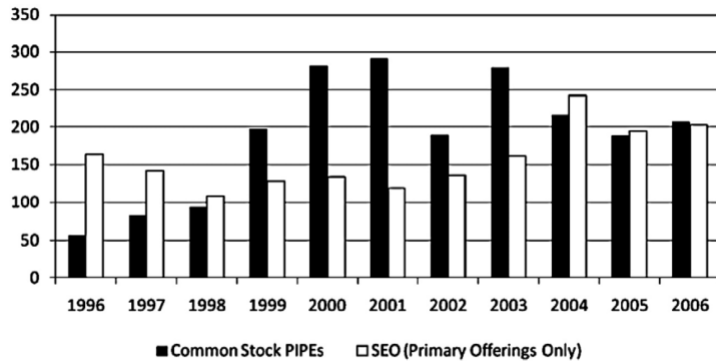


Fig. 1. The volume (number of transactions) of common stock PIPEs and SEOs (primary offerings only) 1996–2006.

Year	Private placements		Public offerings	
	Ann. Freq (%)	Issue Freq (%)	Ann. Freq (%)	Issue Freq (%)
2006	95 (11.61)	36 (4.40)	6 (6.19)	2 (2.06)
2007	58 (7.09)	78 (9.54)	50 (51.55)	27 (27.84)
2008	36 (4.40)	42 (5.13)	10 (10.31)	27 (27.84)
2009	110 (13.45)	61 (7.46)	8 (8.25)	12 (12.37)
2010	110 (13.45)	102 (12.47)	11 (11.34)	9 (9.28)
2011	113 (13.81)	97 (11.86)	6 (6.19)	8 (8.25)
2012	119 (14.55)	81 (9.90)	6 (6.19)	6 (6.19)
2013	144 (17.60)	141 (17.24)	0 (0.00)	5 (5.15)
2014	33 (4.03)	180 (22.00)	0 (0.00)	1 (1.03)
Total	818	818	97	97

VS

## 4. Empirical results

- (1) Are private placement firms overvalued?
  - M/B ratio as a proxy for misvaluation is criticized.
  - RKR (2005) propose a method to decompose the market-to-book ratio in misvaluation and growth components.
  - Many studies used RKR's method to measure misvaluation
    - Elliott et al. (2007, 2008); DeAngelo et al. (2010); Hertz and Li (2010)
  - We estimate the model 3 of Rhodes–Kropf et al. (2005)

$$\ln(M)_{it} = \alpha_{0jt} + \alpha_{1jt} \ln(B)_{it} + \alpha_{2jt} \ln(NI)_{it}^+ + \alpha_{3jt} I_{(<0)} \ln(NI)_{it}^+ + \alpha_{4jt} LEV_{it} + \varepsilon_{it}$$

$$\bar{\alpha}_j = \frac{1}{T_j} \sum_{t=1}^{T_j} \alpha_{jt} \quad \bar{\alpha} = \frac{1}{N} \sum_{j=1}^N \sum_{t=1}^{T_j} \frac{1}{T_j} \alpha_{jt}$$

- We adopt the aggregate misvaluation measure (**AggMv**) as our key overvaluation measure.
  - AggMv = firm specific misvaluation + sector-level misvaluation.

## 4. Empirical results

- Adjusting **M/B ratios** by industrial medians of non-issuers.

	Raw values		Adjusted values		N
	Mean	Median	Mean (T-value)	Median (Z-value)	
Panel A: M/B ratios before announcement					
AnnMonth -12	4.04	2.96	1.29*** (10.65)	0.32*** (9.39)	794
AnnMonth -6	3.8	2.96	1.09*** (10.93)	0.29*** (9.39)	797
AnnMonth -3	3.83	3.02	1.06*** (10.71)	0.34*** (9.46)	797
AnnMonth -2	3.8	3.03	1.04*** (10.85)	0.28*** (9.17)	792
AnnMonth -1	3.97	3.12	1.17*** (11.22)	0.35*** (9.84)	792
AnnMonth 0	4.2	3.31	1.36*** (12.48)	0.49*** (11.46)	811
Panel B: M/B ratios before issuance					
IssueMonth -12	3.9	3	1.19*** (11.24)	0.39*** (10.16)	801
IssueMonth -6	4.1	3.13	1.33*** (12.57)	0.44*** (11.04)	808
IssueMonth -3	4.35	3.41	1.47*** (13.21)	0.61*** (11.99)	812
IssueMonth -2	4.46	3.48	1.55*** (13.60)	0.66*** (12.63)	812
IssueMonth -1	4.59	3.61	1.63*** (13.82)	0.72*** (13.01)	812
IssueMonth 0	5.31	4.2	2.32*** (17.63)	1.26*** (17.39)	812



- Preliminary evidence of overvaluation.

## 4. Empirical results

- Adjusting **AggMV** by industrial medians of non-issuers.

	Raw values		Adjusted values		N
	Mean	Median	Mean (T-value)	Median (Z-value)	
Panel B: Aggregate misvaluation (AggMv) before announcement					
AnnMonth -12	0.20*** (8.97)	0.18*** (8.16)	0.17***(9.58)	0.12***(7.99)	770
AnnMonth -6	0.23*** (10.87)	0.22*** (9.82)	0.18***(10.74)	0.13***(9.18)	790
AnnMonth -3	0.28*** (13.85)	0.26*** (12.44)	0.19***(11.28)	0.15***(9.59)	796
AnnMonth -2	0.29*** (14.42)	0.26*** (12.87)	0.19***(11.29)	0.15***(9.59)	792
AnnMonth -1	0.32*** (16.04)	0.30*** (14.14)	0.21***(12.10)	0.16***(10.33)	792
AnnMonth 0	0.38*** (19.10)	0.36*** (16.27)	0.25***(14.23)	0.17***(12.13)	811
Panel D: Aggregate misvaluation (AggMv) before issuance					
IssueMonth -12	0.28*** (13.99)	0.26*** (12.32)	0.21***(12.44)	0.16***(10.59)	798
IssueMonth -6	0.35*** (17.40)	0.33*** (15.02)	0.24***(13.81)	0.16***(11.67)	808
IssueMonth -3	0.42*** (21.75)	0.38*** (17.83)	0.26***(14.76)	0.21***(12.61)	812
IssueMonth -2	0.45*** (23.19)	0.41*** (18.64)	0.27***(15.30)	0.21***(13.17)	812
IssueMonth -1	0.49*** (25.20)	0.44*** (19.80)	0.29***(15.95)	0.23***(13.73)	812
IssueMonth 0	0.64*** (33.11)	0.60*** (22.54)	0.43***(23.97)	0.37***(19.32)	812



- Private placement firms are overvalued.
- The overvaluation is higher than non-issuers.

## 4. Empirical results

- TO examine the impact of overvaluation on firm's decision to issue equity privately.
- Logit regression of the announcement of equity issuance (**private placements + public offerings**)
  - The dependent variable takes the value of one for **firm-years** with the ann.seasoned equity issues and zero otherwise.
  - AggMv takes value at the end of previous fiscal year.
  - Year and industry fixed effects controlled
- Firms are more likely to issue seasoned equity with higher misvaluation.
  - Consistent with the market timing hypothesis.

	(1)	(2)	(3)	(4)
M/B Ratio	0.022			
	-1.638			
AggMv		0.347***		0.347***
		-4.55		-4.568
Growth			-0.02	0.025
			(-0.132)	-0.172
Size	-0.007	-0.034	-0.029	-0.029
	(-0.206)	(-1.085)	(-0.633)	(-0.654)
Firm Age	-0.052***	-0.051***	-0.052***	-0.051***
	(-4.749)	(-4.660)	(-4.724)	(-4.643)
Leverage	2.049***	2.004***	2.122***	2.001***
	-8.991	-9.016	-9.413	-8.946
Profitability	-0.200*	-0.198*	-0.191	-0.200*
	(-1.722)	(-1.788)	(-1.544)	(-1.818)
Volatility	0.629	0.274	0.845	0.273
	-0.738	-0.291	-0.981	-0.291
State Owners	-0.005**	-0.005**	-0.004**	-0.005**
	(-2.187)	(-2.453)	(-2.118)	(-2.429)
AnalystDev	-0.099***	-0.103***	-0.099***	-0.102***
	(-4.272)	(-4.499)	(-4.225)	(-4.370)
Constant	-0.775	0.061	-0.323	-0.077
	(-1.079)	-0.091	(-0.297)	(-0.074)
Pseudo R <sup>2</sup>	0.058	0.061	0.057	0.061
N	8490	8490	8490	8490

## 4. Empirical results

- The aforementioned result can be driven by public offerings.
- Logit model for the announcement of **private placements**.
  - The dependent variable takes on one for **firm-years** with the ann. of private placements and zero for non-issues.
  - AggMv takes value at the end of previous fiscal year.
  - Year and industry fixed effects controlled
- Overvalued firms are more likely to announce private placements.
- No robust evidence on the impact of information asymmetry.

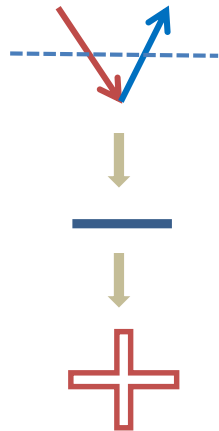
	(1)	(2)	(3)	(4)
M/B Ratio	0.015			
	-0.945			
AggMv		0.279***		0.279***
		-3.249		-3.256
Growth			-0.034	0.001
			(-0.207)	-0.008
Size	-0.022	-0.041	-0.042	-0.04
	(-0.572)	(-1.153)	(-0.813)	(-0.815)
Firm Age	-0.057***	-0.056***	-0.057***	-0.056***
	(-4.803)	(-4.741)	(-4.784)	(-4.728)
Leverage	2.302***	2.249***	2.357***	2.249***
	-9.315	-9.434	-9.72	-9.331
Profitability	-0.209	-0.206	-0.204	-0.206
	(-1.560)	(-1.604)	(-1.439)	(-1.598)
Volatility	0.838	0.583	0.97	0.583
	-0.983	-0.655	-1.129	-0.655
State Owner	-0.003	-0.003	-0.003	-0.003
	(-1.164)	(-1.375)	(-1.126)	(-1.361)
AnalystDev	-0.106***	-0.109***	-0.107***	-0.109***
	(-4.347)	(-4.514)	(-4.329)	(-4.436)
Constant	-0.766	-0.157	-0.343	-0.164
	(-0.972)	(-0.213)	(-0.288)	(-0.142)
Pseudo R <sup>2</sup>	0.063	0.065	0.063	0.065
N	8427	8427	8427	8427

## 4. Empirical results

- (2) Stock price movements surrounding the announcement of private placements
  - Market timing literature uses stock price movements as evidence of misvaluation.
  - Stock prices rise significantly preceding the announcement of public offerings and decline thereafter.
    - Asquith and Mullins (1986); Loughran and Ritter (1995); Mikkelsen and Partch (1986)
  - We investigate stock price movements surrounding the announcement of private placements.

## 4. Empirical results

- Stock price movement surrounding the announcement of private placements.



CARs	Statistics	Market-adjusted Return	Market Model	FF-3F Model
Panel A: Stock performance prior to announcement				
CAR(AnnYear -3, AnnDay -1)	Mean	20.01***	-0.33	8.16*
	Median	12.15***	1.28	-2.83
CAR(AnnYear -1, AnnDay -1)	Mean	9.47***	1.92	6.44***
	Median	4.67***	-0.03	3.68**
CAR(AnnMonth -6, AnnDay -1)	Mean	6.78***	2.92**	4.73***
	Median	4.15***	1.17	3.28***
CAR(AnnMonth -3, AnnDay -1)	Mean	4.86***	2.90***	3.89***
	Median	3.23***	2.31***	3.07***
CAR(AnnMonth -1, AnnDay -1)	Mean	4.30***	3.53***	3.75***
	Median	3.86***	3.18***	3.34***
CAR(AnnDay -5, AnnDay -1)	Mean	3.62***	3.40***	3.32***
	Median	2.96***	2.73***	2.77***
CAR(AnnDay -3, AnnDay -1)	Mean	3.10***	2.99***	2.91***
	Median	2.14***	2.02***	2.14***
CAR(AnnDay -2, AnnDay -1)	Mean	2.59***	2.52***	2.47***
	Median	1.80***	1.78***	1.75***

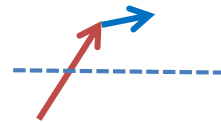
- The positive CARs are consistent with our market timing hypothesis.



# 4. Empirical results

- There is positive announcement effect

CARs	Statistics	Market-adjusted Return	Market Model	FF-3F Model
Panel B: Announcement effect				
CAR(AnnDay 0, AnnDay +1)	Mean	1.73***	1.68***	1.68***
	Median	0.81***	0.78***	0.78***
CAR(AnnDay 0, AnnDay +2)	Mean	1.84***	1.75***	1.75***
	Median	0.52***	0.44***	0.44***
CAR(AnnDay 0, AnnDay +3)	Mean	1.99***	1.87***	1.87***
	Median	0.80***	0.59***	0.59***
CAR(AnnDay 0, AnnDay +5)	Mean	1.93***	1.73***	1.73***
	Median	0.34***	0.03**	0.03**



- It seems inconsistent with our hypothesis.
- Management may use private placements to send a wrong signal that the firm is undervalued.
  - Ferreira and Brooks (1999) and Hertz and Smith (1993)
- Investors are subject a lock-up period
  - Janney and Folta (2003)
- Investors are overoptimistic about the prospects of firms issuing equity.
  - Hertz et al. (2002)
- Chinese investors failed to correct the overvaluation at least at the ann.

## 4. Empirical results

- (3) Post-execution long-term stock price performance
  - Market timing literature on SEO documents long-term underperformance in the post-SEO period.
    - Loughran and Ritter (1995); Spiess and Affleck-Graves, (1995); Kang et al. (1999)

Buy-and-hold abnormal returns (BHARs)	Industry and size adjusted returns			Industry, size and M/B adjusted returns		
	Mean	Median	N	Mean	Median	N
Panel A: BHARs for non-participating investors						
BHAR(IssueDay 0, IssueMonth +6)	-12.20*** (-5.43)	-8.27*** (-6.04)	717	-4.96** (-2.35)	-1.50** (-2.49)	688
BHAR(IssueDay 0, IssueMonth +12)	-18.42*** (-6.05)	-14.68*** (-7.83)	659	-10.51*** (-4.09)	-9.45*** (-5.33)	647
BHAR(IssueDay 0, IssueMonth +24)	-29.08*** (-7.36)	-22.08*** (-9.63)	512	-25.61*** (-6.75)	-16.19*** (-8.17)	494
BHAR(IssueDay 0, IssueMonth +36)	-39.70*** (-9.22)	-23.55*** (-9.79)	393	-36.00*** (-8.50)	-22.31*** (-9.14)	380

- The long-term stock price underperformance supports our view that stocks of private placement companies are overvalued at the execution.
- Taken all together, the results suggest that private placement firms are overvalued.

## 4. Empirical results

- Why are sophisticated investors willing to participate in overvalued private placements?
- Issuance costs
  - Discounts is the percentage difference between the closing price on the date before issuance and the offer price

Variables	Private placements			Public offerings		
	Mean	Median	N	Mean	Median	N
Discount: Issue (%)	29.37***	21.47***	813	6.74	5.27	97
Direct Cost (%)	3.01***	2.85***	790	3.63	3.16	97

- Private placement investors make excess return in the form of deep discounts.

## 4. Empirical results

- Compute BHARs for participating investors, by replacing the market price at execution by offering price.

Buy-and-hold abnormal returns (BHARs)	Industry and size adjusted returns			Industry, size and M/B adjusted returns		
	Mean	Median	N	Mean	Median	N
Panel B: BHARs for participating investors						
BHAR(IssueDay 0, IssueMonth +6)	19.58*** (6.40)	12.30*** (7.61)	712	26.03*** (8.60)	19.97*** (9.96)	683
BHAR(IssueDay 0, IssueMonth +12)	9.86** (2.57)	4.18** (2.36)	655	15.81*** (4.95)	10.47*** (5.09)	642
BHAR(IssueDay 0, IssueMonth +24)	-5.72 (-1.24)	-8.66** (-2.22)	508	-3.68 (-0.89)	-2.09 (-1.11)	490
BHAR(IssueDay 0, IssueMonth +36)	-16.18*** (-3.42)	-9.14*** (-3.22)	389	-12.56*** (-2.71)	-5.75*** (-2.74)	376
Panel C: BHARs of private placement firms relative to public offering controls						
BHAR(IssueDay 0, IssueMonth +6)	27.44*** (14.13)	22.29*** (13.84)	579	26.36*** (10.59)	22.15*** (10.19)	410
BHAR(IssueDay 0, IssueMonth +12)	30.72*** (8.87)	21.14*** (12.32)	490	29.03*** (9.76)	19.14*** (10.11)	374
BHAR(IssueDay 0, IssueMonth +24)	20.66*** (6.95)	13.81*** (7.69)	336	16.26*** (5.95)	9.79*** (5.97)	292
BHAR(IssueDay 0, IssueMonth +36)	17.25*** (5.94)	7.93*** (4.92)	323	9.35*** (3.16)	3.79** (2.35)	285

- Shares placed privately to non-controlling shareholders are required to be locked up for 12 months.
- If exiting in time after the lock-up period, **participating investors do not lose money or even make money.**
- Public offering firms are more overvalued than private placement companies.

## 4. Empirical results

- The large discount should substantially diminish attractiveness of private placement for market timing issuers
- Recalculate AggMv at the execution by replacing the market price with the actual issue price.

	Raw values		Adjusted values		N
	Mean	Median	Mean (T-value)	Median (Z-value)	
Panel E: Actual issue price					
IssuePrice/B Ratio	4.47	3.38	1.62*** (8.84)	0.61*** (11.15)	807
AggMv:IssuePrice	0.41*** (21.20)	0.39*** (17.71)	0.28*** (14.17)	0.22*** (12.61)	807

- AggMv is still positive and significant, and significantly greater than that of industry peers.
- Even incurring large discounts, **the actual issue prices are overvalued.**
- Taken all together, the results suggest that private placement issuers in China **successfully issued overpriced shares.**

## 4. Empirical results

- (4) Overvaluation and firms' choice between private placements and public offerings
  - What are the determinants of the overvalued firms' choice between public offerings and private placements?
  - Trade off large discounts for pricing guarantee.
  - Give the tradeoff problem, we predict that managers announce public offerings when they can expect that overvaluation will continue to execution.
  - Managers are likely to choose public offerings when overvaluation is particularly high.

# 4. Empirical results

- Logit regression of choosing private placements over public offerings
  - The dependent variable takes on one for firms conducting private placements and zero for those conducting public offerings.
- Managers identifying large overvaluation tend to announce public offerings at the next month rather than private placements.
- Near-term overvaluation matters more in the tradeoff.
  - Managers are prudent to announce public offerings due to timing difficulty

	All equity issuers		
	(1)	(2)	(3)
AggMv: Month -1	-1.718*** (-3.504)		
Growth: Month -1	-0.241 (-0.349)		
AggMv: Month -3		-1.488*** (-3.216)	
Growth: Month -3		-0.532 (-0.629)	
AggMv: Month -6			-0.717 (-1.551)
Growth: Month -6			-0.576 (-0.652)
Firm Size	-0.778*** (-3.026)	-0.858*** (-3.061)	-0.859*** (-2.857)
Firm Age	-0.016 (-0.214)	-0.032 (-0.422)	-0.073 (-1.011)
Profitability	-1.653* (-1.877)	-1.126 (-1.339)	-1.640** (-2.076)
Volatility	101.424*** -2.776	98.752*** -2.662	88.880*** -2.34
State Ownership	0.025** -2.435	0.024** -2.424	0.021** -2.038
Ln (InverseElasticity)	1.373*** -4.549	1.378*** -4.596	1.386*** -4.676
DirectCost	-0.650*** (-4.371)	-0.631*** (-4.082)	-0.558*** (-3.848)
AnalystDev	0.085 -0.601	0.087 -0.581	0.091 -0.639
ProbAnn	15.787 -1.428	11.558 -1.106	2.376 -0.221
Constant	-3.025 (-0.431)	-0.879 (-0.114)	0.815 -0.099
Pseudo R <sup>2</sup>	0.549	0.548	0.53
Market Timing in Private Placements	469	469	469

## 4. Empirical results

- The CSRC has requirements on the performance of private placement applicants.
- Include firms whose weighted ROE in the past 3 years is higher than 6%.
- Replicate the logit regressions.
- AggMV still carries similar coefficients.
- Robust overvaluation impact.

	Issuers who are eligible to public offerings		
	(4)	(5)	(6)
AggMv: Month -1	-1.358*** (-2.715)		
Growth: Month -1	0.295 -0.413		
AggMv: Month -3		-1.401*** (-2.877)	
Growth: Month -3		0.382 -0.45	
AggMv: Month -6			-0.607 (-1.336)
Growth: Month -6			0.347 -0.338
Firm Size	-0.613*** (-2.643)	-0.587** (-2.236)	-0.546* (-1.846)
Firm Age	-0.062 (-0.758)	-0.064 (-0.790)	-0.118 (-1.589)
Profitability	-0.812 (-1.076)	-0.041 (-0.052)	-0.585 (-0.866)
Volatility	79.334**	78.138**	66.957*
State Ownership	-2.208 0.020*		-2.166 0.016
Ln (InverseElasticity)	-1.913 1.412***		-2.011 1.443***
DirectCost	-3.907 -0.634***		-3.987 -0.568***
AnalystDev	0.027 -0.172	0.022 -0.144	0.02 -0.13
ProbAnn	12.08 -1.075	10.156 -0.947	-0.504 (-0.047)
Constant	-5.095 (-0.719)	-6.153 (-0.765)	-4.802 (-0.554)
Pseudo R <sup>2</sup>	0.549	0.555	0.537
Private Placements	365	365	362



## 4. Empirical results

- (5) Overvaluation and discount
  - TO examine **how overvaluation at the announcement affects discounts** that private placement firms pay.
  - Issuance price of private placements will never fall below 90% of market price at the announcement.
  - This price floor should help issuers reduce discounts.
  - We estimate an OLS regression of discounts for private placements.

## 4. Empirical results

- Regression of discount for private placements
  - Discount is the percentage difference between the closing price on the day before issuance and the offer price.
- AggMv and M/B ratio carry negative and significant coefficients.
- Private issuers incur relatively low discount costs if they announce private placements when overvaluation is high.
- Large overvaluation at announcement can significantly reduce discounts, either by inducing managers to choose public offerings or by propping by the pricing floor for private placements.

	Discount	
	(1)	(2)
M/B ratio: Month -1	-1.538***	
	(-3.063)	
AggMv: Month -1		-10.898***
		(-3.855)
Growth: Month -1		-3.666
		(-0.524)
FirmSize	-6.466***	-5.866***
	(-4.103)	(-2.876)
Leverage	8.502	6.813
	-1.069	-0.889
IssueSize	7.364***	8.263***
	-3.081	-2.721
Profitability	-2.349	-3.047
	(-0.511)	(-0.698)
Volatility	-23.162	-24.709
	(-1.132)	(-1.508)
State Ownership	-0.147	-0.143
	(-1.519)	(-1.480)
Constant	152.047***	133.016**
	-5.129	-2.361
Adjusted R <sup>2</sup>	0.13	0.134
N	681	681

## 4. Empirical results

- Investors may ask for high discount from the overvalued market prices at the announcement.
- Issuers can provide a larger discount given higher-valued benchmark prices.
- Regressions of **discount computed from the percentage difference between the closing price on the day before the announcement and the offer price**
- AggMv and M/B ratio carry positive and significant coefficients.
- Private issuers offer large discounts from the benchmark price, if they identify large overvaluation at the announcement

	Discount from the market price at the announcement	
	(3)	(4)
M/B ratio: Month -1	2.285**	
	-2.454	
AggMv: Month -1		17.294***
		-3.959
Growth: Month -1		-5.155
		(-0.926)
FirmSize	3.520**	0.636
	-2.118	-0.349
Leverage	-23.903***	-21.209**
	(-2.666)	(-2.519)
IssueSize	-1.467	-4.528*
	(-0.609)	(-1.730)
Profitability	-2.622	-0.146
	(-0.685)	(-0.054)
Volatility	-113.527***	-98.732***
	(-4.347)	(-3.415)
State Ownership	0.067	0.057
	-0.713	-0.614
Constant	-61.659**	27.108
	(-2.247)	-0.654
Adjusted R <sup>2</sup>	0.168	0.181
N	681	681

## 5. Conclusion

- Main findings
  - Private placement firms are overvalued at announcement and execution.
  - The overvaluation of private placements are higher than non-equity issuers.
  - The stock prices of private placement firms underperform in the long term after the execution.
  - Even with large discounts, actual issue prices are still overvalued.
  - Market timing is an important motive of private placements in China.
  - Firms pursue market timing whenever they can issue overpriced shares, irrespective of equity issue mode.

## 5. Conclusion

- Chinese firms need to trade off between pricing guarantee and discount costs.
- To avoid large discount costs, firms with substantial overvaluation tend to choose public offerings over private placements.
- Announcing private placements at overvaluation enables firms to substantially decrease discounts from the market price at execution, while offering generous discount from the (overvalued) benchmark price.
- Overvaluation at the announcement enables firms to decrease discounts either by choosing public offerings or using the overvalued stock price as the pricing benchmark for private placements.

# 5. Conclusion

- Contribution
  - The first to show robust evidence that firms conduct **private placement to take advantage of overvaluation**.
  - A mechanism through which overvalued firms issue equity privately by taking advantage of the Chinese institutional setting.
  - A novel **trade-off** regarding the choice between public offerings and private placements: **guarantee of issuance price versus discount costs**.
  - A convincing explanation on the fact that private placements dominate public offerings in China.

**Thank You Very Much !**

**Q&A**