

The pricing and performance of IPOs for small-and-medium-sized enterprises: Emerging market evidence

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Background

- In Thailand and elsewhere small-and-medium-sized enterprises (SMEs) are an important mechanism for economic development and growth.
- SMEs play a significant role in selling their own products in the form of finished goods and services. They also act as subcontractors or suppliers of materials and are a major component of demand for the intermediate goods and services of larger enterprises.
- SMEs account for some 96 percent of all Thai businesses. They are especially important in manufacturing, wholesale and retail sales, and services.
- Following the 1996 economic crisis in Thailand, many businesses closed or downsized.
- One government response was to provide support to SMEs through the provision of advice and financial assistance, the promotion of entrepreneurship, and the recognition and creation of new markets.

- Starting in 2000, the Thai government enacted legislation for the central purpose of assisting, promoting and developing SMEs.
- Several offices created to facilitate process, including the Office of Small and Medium Enterprises Promotion, the Institute for Small and Medium Enterprises Development, and the transformation of the Small Industry Finance Cooperation to the Small and Medium Enterprise Development Bank of Thailand.
- Several financial institutions, including state-owned and commercial banks, also provided renewed support by the provision of credit facilities and advice to SMEs.
- Evidence suggests that close cooperation between the public and private sectors is required to systematically address some of the shortcomings faced by SMEs, including in marketing, labour supply, production technology, management, access to public services, and especially, a shortage of capital.

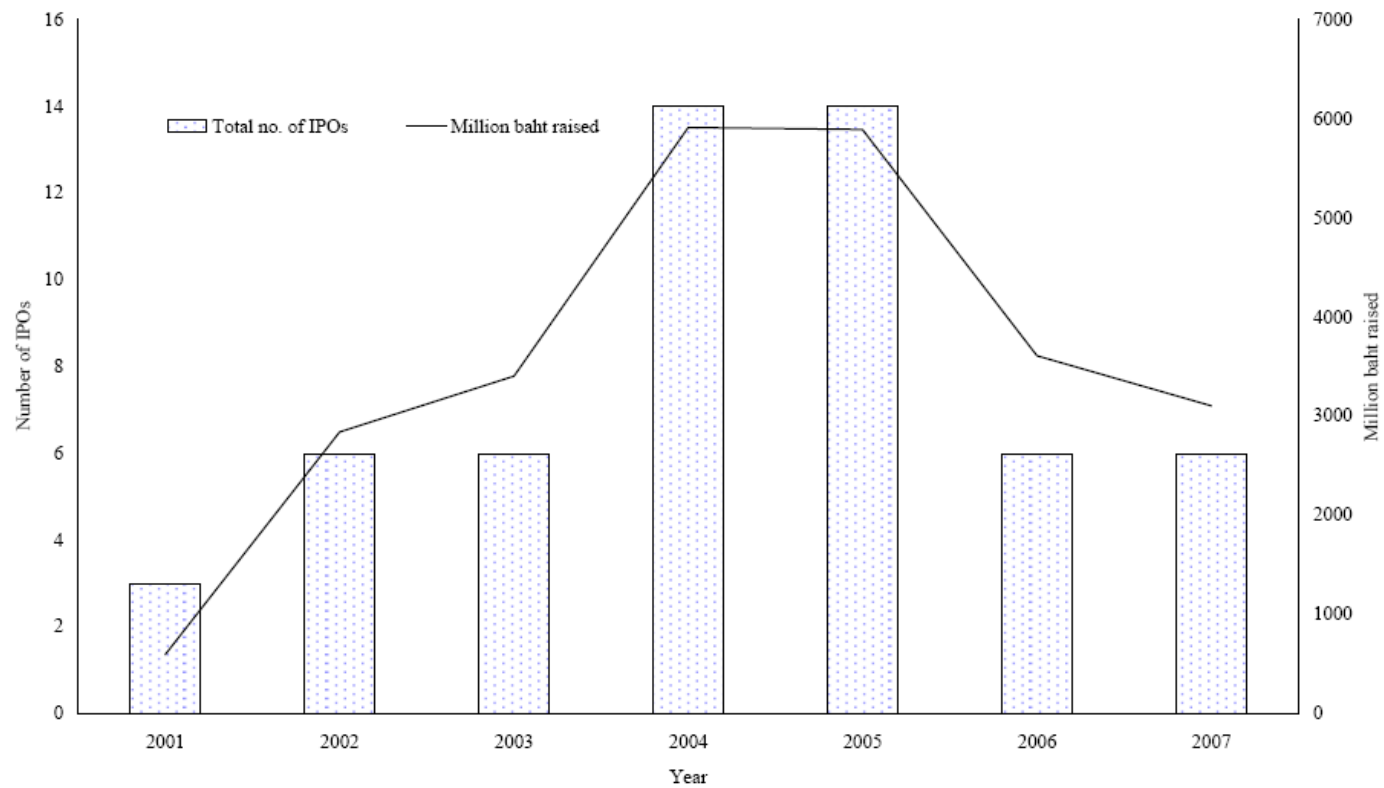
- Access to capital markets, especially equity, is a major requirement for the sustainability and ongoing development of the SME sector itself, and ultimately the evolution of at least some SMEs into larger, globally competitive enterprises.
- Unfortunately, it is where SMEs suffer an acute disadvantage through the lack of critical size, liquidity, information asymmetry, and the lack of suitable markets.
- Importantly, initial public offerings (IPO) on organised exchanges are an important step in the life cycle of new and start-up firms and provides important opportunities for access to new capital and the cashing out of entrepreneurs, private equity and venture capitalists alike.
- Many economies lack formalised exchanges accessible to SMEs.
- Even where exchange-traded opportunities exist for SMEs, as in Thailand, there is uncertainty about the ongoing firm performance needed to sustain these markets, and more importantly, their effectiveness in appropriately pricing the issuance of primary securities.

Thailand's Market for Alternative Investments (mai)

- Established under the Securities Exchange of Thailand (SET) Act on November 11, 1998, with operations officially commencing on June 21, 1999 and trading starting on September 17, 2001.
- Most recently, the mai has focused on the subset of young, high-growth, innovative and knowledge-based SMEs.
- Follows the same trading rules and settlement procedures as the SET, though the listing requirements for the mai are considerably more flexible.
- For instance, companies seeking listing on the mai must have capital of between 20 million baht and 300 million baht compared to a minimum of 300 million baht for the SET.
- Firms must comply with the same disclosure regulations as SET-listed companies, as well as regulations set by the Thai Securities and Exchange Commission (SEC).

- As a further incentive for SMEs to access capital markets, the government approved a program where firms listing on the mai through to the end of 2007 could qualify for corporate income tax rates of 20 percent for five years, compared to 25 percent for firms on the SET and 30 percent for unlisted companies.
 - By December 2007, 54 individual securities were listed on the mai, comprising 48 common stocks and 6 warrants.
 - At the time, the mai's market capitalisation had reached 38,268.98 million baht with an average daily turnover of 338.95 million baht.
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Figure 1. Number and value of IPOs for Thai SMEs, 2001–2007



Literature

- Relatively fewer studies concern IPO (under)pricing in Thailand, with all extant work focusing on the SET.
- Wethayavivorn and Koo-Smith (1991) studied 32 IPOs over the period 1988–1989 and found that the average initial return was 56.73%.
- Using a sample of 150 IPOs from 1985 to 1992, Allen et al. (1999) reported the average initial return was 63.49 percent, while Lonkani (2000) concluded that the average initial return was 46.70 percent using a sample of 292 IPOs from 1987 to 1997.
- In common with evidence from developed markets, these studies provide evidence that IPOs in Thailand are underpriced.
- Kim et al. (2004) suggest evidence of a long-term decline of operating performance for Thai IPO firms using 133 SET IPOs from 1987 to 1993.
- This paper is the first study of the IPO pricing and performance using a sample of SMEs listed on the mai.

Hypotheses

- In terms of pricing, we hypothesise that the IPOs for SMEs are underpriced.
- In order to test the first hypothesis, four complementary measures of underpricing are calculated: headline underpricing, underpricing issuer loss, underpricing loss by market value, and underpricing loss by issue price (Habib and Ljungqvist 1998; Silva Rosa et al. 2003).
- In terms of performance, we hypothesise that the IPOs for SMEs underperform post-listing.
- To test the second hypothesis, we calculate monthly average cumulative abnormal returns (CAR), buy-and-hold returns (BHR) and wealth relatives (WR).

Data and sample

- The sample comprises 53 of the 55 IPOs (96.36%) listed on the main board from September 2001 to December 2007.
- Excluded two IPOs because of incomplete data.
- Issue price and first-day closing price from the SETSMART (SET Market Analysis and Reporting Tool) to calculate the initial returns.
- Details of the IPO distribution (number of primary, secondary shares and total shares) is from the prospectus filing form (Form 69-1) submitted to the SEC.
- SET Fact Book series supplies remaining non-price data requirements, including the proportion of free float and strategic shareholders
- Individual stock prices and price index data for the SET and main board from SETSMART.

Empirical results on pricing

- Over the full sample period, 12.69% are headline underpriced, 5.01% are issuer loss underpriced, 4.74% are issuer price underpriced and 11.40% are market value loss underpriced.
- These results indicate that Thai IPOs are less underpriced than the evidence from most developed markets suggests.
- However, there is much variability in the underpricing over the sample period.
- For example, while the mean underpricing is statistically significant for the whole sample period 2001–2007, the only years where the mean underpricing is significantly different from zero is in 2003 (42.23%, overpriced) and 2004 (17.11%, overpriced).
- Only the mean underpricing for medium-sized IPOs is statistically significant at 15.74%, 6.46%, 6.67% and 14.13% for *UPH*, *UPIL*, *UPLMV* and *UPLIP*, respectively.

Table 2. IPO underpricing in percentages by gross proceeds of issue

Gross proceed	Underpricing	UPH	UPIL	UPLMV	UPLIP
Small-sized issues (13)	Mean	5.6028	2.2069	1.3123	4.8331
	Median	5.4545	1.3407	4.9181	5.1864
	t-stat	0.8752	0.7804	0.2824	0.8563
	p-value	0.3987	0.4503	0.7825	0.4086
	value-weighted	6.6550	0.3410	0.3338	0.9322
Medium-sized issues (30)	Mean	15.7476	6.4606	6.6708	14.1312
	Median	3.2778	1.1418	2.9031	2.9986
	t-stat	2.8055	2.3703	1.5217	2.7956
	p-value	0.0089	0.0246	0.1389	0.0091
	value-weighted	15.2545	3.4576	4.0523	7.9675
Large-sized issues (10)	Mean	12.7041	4.2955	3.3890	11.7659
	Median	-1.8452	-0.4707	-1.7771	-1.7341
	t-stat	1.0025	0.7546	0.4715	1.0370
	p-value	0.3423	0.4698	0.6485	0.3268
	value-weighted	30.7528	3.4688	3.3848	7.2724

Notes: Number of IPOs in brackets. Small-sized issues – gross proceeds less than 300 million baht, Medium-sized issues – gross proceeds between 300 and 600 million baht, Large-sized issues – gross proceeds greater than 600 million baht. UPH – headline underpricing, UPIL – underpricing issuer loss, UPLMV – underpricing loss by market value, and UPLIP – underpricing loss by issue price. *t*-statistics and *p*-values are tests of null hypothesis that means are equal to zero.

Empirical results on performance

- Cumulative benchmark-adjusted return is always > 0 until month 36.
- This suggests that Thai IPOs outperform the market benchmark.
- But substantial variation in the average performance of SMEs.
- The smallest IPOs have consistently negative CARs for the 36 month-observation period, medium-sized IPOs have consistently positive CARs for the same period, and large-sized IPOs have positive CARs for the first 12 months, at which time they become negative.
- The *BHAR* are only statistically significant for the first month following the listing month, after which there is no statistically significant difference in performance at the mean.
- For the wealth relatives, these are highest for the first 9 or so months after the listing month and then statistically insignificant.
- The only other statistically significant finding is that medium and large-sized IPOs have positive *BHARs* in their second year after issue.

Figure 2. Average and benchmark-adjusted returns and cumulative abnormal returns by post-IPO month

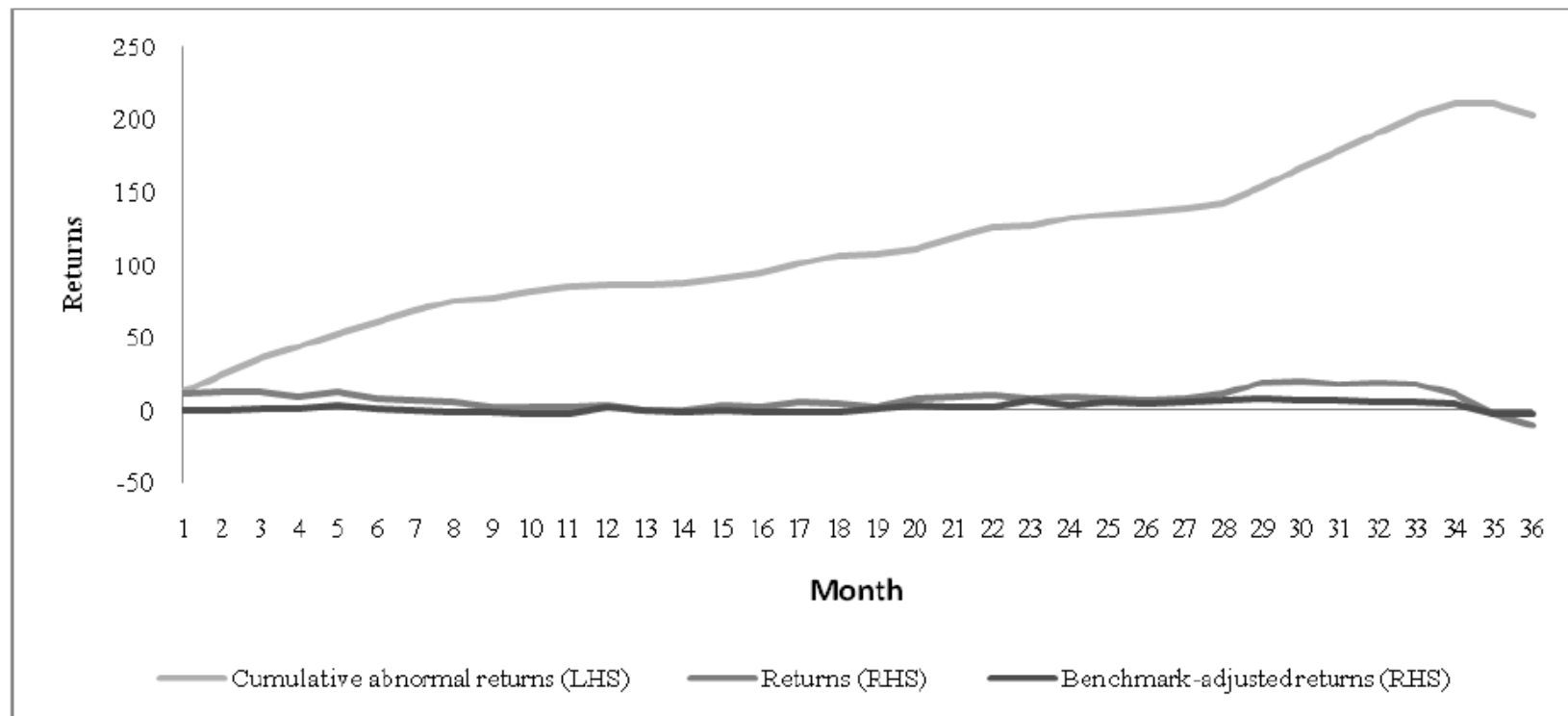
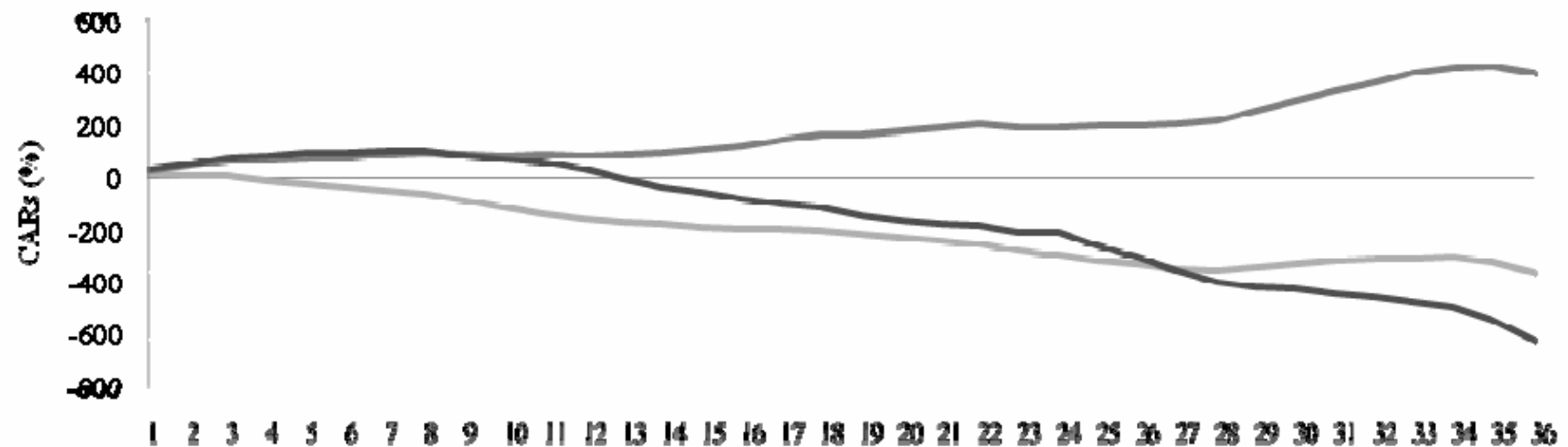


Figure 3. Monthly cumulative abnormal returns (CARs) by gross proceed of issue



Notes: Small-sized issues – gross proceeds less than 300 million baht, Medium-sized issues – gross proceeds between 300 and 600 million baht, Large-sized issues – gross proceeds greater than 600 million baht.

Table 4. Average and cumulative benchmark-adjusted returns by gross proceeds of issue at the end of years 1–3

Category	Size	\overline{AR}_{it}	Std dev	t-stat	p-value	$\overline{CAR}_{1,t}$	Std dev	t-stat	p-value
Year 1 (53)									
Small	13	-21.0667	0.5774	-1.3155	0.2129	-157.1311	0.5774	-9.8117	0.0000
Medium	30	19.4145	0.8240	1.2904	0.2071	242.8866	0.8240	16.1442	0.0000
Large	10	-24.5191	1.0013	-0.7744	0.4586	-56.0477	1.0013	-1.7701	0.1105
Year 2 (47)									
Small	12	-17.5076	0.7271	-0.8341	0.4220	-298.2367	0.7271	-14.2080	0.0000
Medium	28	16.2003	0.9584	0.8944	0.3790	488.5186	0.9584	26.9716	0.0000
Large	7	2.2335	1.7334	0.0341	0.9739	-397.0885	1.7334	-6.0608	0.0009
Year 3 (33)									
Small	8	-37.6053	0.7496	-1.4190	0.1988	-362.1141	0.7496	-13.6643	0.0000
Medium	21	12.5488	0.7729	0.7440	0.4655	761.5970	0.7729	45.1554	0.0000
Large	4	-51.7793	0.5397	-1.9188	0.1508	-1,023.9444	0.5397	-37.9454	0.0000

Notes: Small-sized issues – gross proceeds less than 300 million baht, Medium-sized issues – gross proceeds between 300 and 600 million baht, Large-sized issues – gross proceeds greater than 600 million baht.

Table 6. Average buy-and-hold returns, excluding initial return, categorized by gross proceeds of issue

Category	Size	p-value	\overline{BHAR}_{it}	Std dev	t-stat	p-value	WR_{it}	Minimum	Maximum
Year 1 (53)									
Small	13	0.7373	-17.3941	0.5611	-1.1176	0.2856	35.8452	-85.5446	152.41436
Medium	30	0.3710	19.0469	0.5431	1.9208	0.0646	0.7564	-57.7743	162.1944
Large	10	0.3054	-5.0475	0.6855	-0.2329	0.8211	-1.6645	-117.2736	130.3874
Year 2 (47)									
Small	12	0.4768	-13.5824	0.4588	-1.0255	0.3272	4.5457	-63.9272	105.7940
Medium	28	0.2518	13.5573	0.6020	1.1916	0.2438	0.5485	-65.7125	173.1557
Large	7	0.2941	-31.7368	0.6840	-1.2276	0.2656	0.5276	-135.5648	39.8776
Year 3 (33)									
Small	8	0.0131	-23.6888	0.4662	-1.4373	0.1938	2.6016	-73.4088	58.7556
Medium	21	0.0027	21.2567	0.5503	1.7702	0.0919	0.1899	-75.4317	150.5737
Large	4	0.3018	-29.4084	0.7125	-0.8255	0.4696	0.3622	-135.1121	15.6727

Notes: Small-sized issues – gross proceeds less than 300 million baht, Medium-sized issues – gross proceeds between 300 and 600 million baht, Large-sized issues – gross proceeds greater than 600 million baht.

Summary

- Modest level of underpricing on the main over the period 2001 to 2007. This contrast with evidence that underpricing is relatively more severe in smaller IPOs.
- However, this would appear to be primarily the results of very substantial underpricing in 2003 and 2004.
- Medium-sized SMEs account for most of the underpricing observed.
- While some measures of return performance are suggestive, SMEs only selectively outperform the market in their second year, after which their performance is indistinguishable for their compatriots.

Directions for future research

- Major limitation is that the monthly mai index used for the market benchmark is only available after 2003.
- The only alternative was the SET index, and as this draws on larger, more mature firms, it may be an unsuitable benchmark.
- No industry indexes are currently available for the mai.
- This means that some interesting insights using industry benchmarks are obtainable.
- Finally, as a new market we were only able to study the mai over a short sample period.
- This may mean the results are subject to relatively short-term impacts (for example, hot and cold markets, macroeconomic shocks) that limit our ability to extend our findings.

Questions and comments
