An Investigation of IPO Long Run Underperformance of Sri Lankan Firms

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Introduction

In an Initial public offering (IPO), company ownership will be transferred to public from few private shareholders which mean the right to share the profits also moved to broadened ownership base[3]. Even though it can be found extensive literature in foreign equity markets, IPO is a least studied phenomenon in Sri Lankan context. Samarakoon (2010) and Peter (2007) are the two published studies in this area with respect to the Colombo Stock Exchange (CSE). Number of IPOs reported in CSE increased significantly, immediately after May 2009 where Island's three decade long war ended (9 and 13 IPOs reported in respectively in 2010 and 2011 compared to 2 IPOs each in 2008 and 2009 which are war affected years). There are three main anomalies associated with IPOs are IPO underpricing, IPO long run price underperformance and IPO operating underperformance. IPO underpricing is pricing the IPO share below its intrinsic value by IPO firm itself and long run price underperformance is that IPO share is trading below the respective benchmarks over long period of time. Operating underperformance is the depiction of poor operating and financial performance by IPO firms. This research abstract focuses on IPO long run underperformance in CSE due to limited number of published papers in this area.

Research question

Research question of the present paper is outlined as follows.

"Is there presence of IPO long run underperformance anomaly in CSE over a period of 2000 to 2012 and to measure it using different methodologies available in the literature?" It is important to investigate on IPO long run underperformance since it is vital to both IPO firm and its investors. It is because IPO long run underperformance acts as a hindrance to shareholder wealth maximization. Further related parties to the IPO such as issuing firms and investors should be thoroughly knowledgeable on IPO long run underperformance in order to overcome it.

Research objectives

Main objective of the research is to explain whether Sri Lankan IPOs are underperforming in the long run and identify major determinants of such underperformance. Further it tries to evaluate the

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[3] Leading financial publication, Financial Times Lexicon defines IPO as the first sale of company's shares to the public leading to a stock market listing known as floatation.

outcome of different methodologies such as event study techniques and calendar time techniques on the measurement of pricing underperformance of Sri Lankan IPOs.

Key theory and empirical evidence

IPO long run underperformance is known as subsequent step of underpricing anomaly. Ritter (1991) documented this using US data. Then many supporting studies emerged from various markets including developed and emerging economies. Brown (1999) for UK and Bossin and Sentis (2012) for France are few examples for IPO underperformance in developed markets. One of the examples for emerging market studies is Sahoo and Rajib (2010) for Indian IPO market. Peter (2007) found similar evidence on CSE where negative performance in IPO share price is reported in third year from the listing. However first two years' IPO share price performance is positive in Sri Lankan context suggested by Peter (2007).

There are two broad approaches in measuring long run IPO returns which are event study approach and calendar time approach. The most widely used methods under event study approach are Cumulative Abnormal Return (CAR) method and Buy and Hold Abnormal Return (BHAR) method. Most of the studies have followed event study approach and few are mentioned here as evidence. Leleux (1993) and Levis (1993) are good examples for CAR approach and Stehle, Ehrhardt and Przyborowsky (1999); Brau, Couch and Sutton (2012) have followed BHAR method. Calendar time approach uses mainly single factor and multi factor models to assess the IPO long run performance. However, there is less number of studies reported under this paradigm compared to event study approach. Further, there is a third approach called mixed approach which uses both event study and calendar time techniques. In this approach widely used technique was Fama and French three factor model (FF3). FF3 gained popularity after the publication of series of seminal research papers by Fama and French (1992, 1993, 1996). However now there are more advanced multifactor models augmented other factors such as momentum, liquidity, profitability and investment capability.

Data

The data used in this study consist of 51 initial public offerings issued in CSE between 2000 and 2012. The data are collected from variety of sources. The issue dates and offering prices of IPOs are taken from CSE web site and listing prospectuses. Monthly stock prices are obtained from CSE and adjusted by authors to dividends and other corporate actions such as bonus issues, right issues and share splits. All Share Price Index (ASPI) data are taken as market index and obtained from CSE. Factor data mainly obtained from company annual reports and CSE web site.

Methodology

Both event study and calendar time techniques were used to measure the IPO long run underperformance anomaly. In the event study analysis, both CAR and BHAR are used on both value

and equal weighted basis. It is used three well known asset pricing models to dissect the IPO long run price underperformance under calendar time paradigm. Those three asset pricing models are basic capital asset pricing model (CAPM), FF3 and Carhart 4 factor model (C4F) (Carhart,1997).

Findings

CAR and BHAR figures for five years from the IPO event are presented in below table.

Table 1: CAR and BHAR for Sri Lankan IPOs for five years from the IPO event

Month	No of IPOs	CAR EW[4]	CAR VW	BHAR EW	BHAR VW
12	51	-25.09%	-3.71%	-30.38%	0.07%
24	48	-40.12%	-7.94%	-49.81%	-8.49%
36	34	-48.52%	-29.27%	-60.48%	-58.22%
48	24	-50.07%	-56.43%	-83.76%	-101.15%
60	22	-53.22%	-51.18%	-131.72%	-132.37%

It is indicated that from above table, IPOs are negatively performing throughout the five years irrespective the measure used under event study technique. However it is interesting to see whether calendar time techniques result a similar output. Summary of the regression output used in 3 models under calendar time techniques are summarized in the Table 2.

Table 2: Test results of calendar time models

	Value weighted			Equal weighted		
Variable	**CAPM**	**FF3 model**	**C4F model**	**CAPM**	**FF3 model**	**C4F model**
A	-0.019 (-1.652)	-0.014 (-1.183)	-0.014 (-0.835)	-0.085*** (-4.761)	-0.084*** (-5.314)	-0.087*** (-3.525)
$R_m - R_f$	0.990*** (9.655)	1.036*** (9.789)	1.037*** (8.967)	0.378** (2.610)	0.411** (3.170)	0.407** (2.904)
SMB		-0.122 (-0.588)	-0.132 (-0.458)		0.908 (2.043)	0.958 (1.605)
HML		-0.301 (-1.451)	-0.306 (-1.270)		0.470 (1.109)	0.494 (1.026)
WML			-0.004 (-0.051)			0.025 (0.137)
Adj. R^2	0.885	0.888	0.874	0.326	0.471	0.406
F-stat.	93.21***	32.62***	21.75***	6.81**	4.56**	3.05*

[4] EW means equally weighted and VW means value weighted returns.

Note 1: Comments marked with *, ** and *** indicate significance at 10%, 5% and 1% level. Note 2: t statistics are reported in parentheses.

As presented above IPO portfolios are underperformed relative to the market portfolio which is similar to the outcome of event study method. Further, market beta was highlighted as the most significant factor while other factors are not statistically significant.

Conclusion

It is observed that IPO portfolios are underperforming in the long run under both event study and calendar time methodologies. Thus it suggests that investing in IPO stocks is not a financially sound decision and it doesn't payback investors after even five years from the IPO listing. Further additional factors in multi factor models in calendar time methodology are not statistically significant and traditional market beta still remains as the significant factor in Sri Lankan context.

References

1. Boissin, R and Sentis, P. (2014). Long run performance of IPOs and the role of financial analysts: Some French evidence. *The European Journal of Finance*. 20(2) pp 1-25.
2. Brau, J.C., Couch,R.B and Sutton, N.K. (2012). The desire to acquire and IPO long run underperformance. *Journal of Financial and Quantitative Analysis*. 47 (3), pp 493-510.
3. Brown, E. (1999). *Long run performance analysis of new sample of UK IPOs* . Available: http://www.econ.ed.ac.uk/papers/ipo.pdf. Last accessed 26th April 2015
4. Carhart, M.M. (1997). On persistence in mutual fund performance. *The Journal of Finance*. 52(1), pp 57-82.
5. Fama, E.F and French, K.R. (1992). The cross section of expected stock returns. *The Journal of Finance*. XLVII (2), pp 427-465.
6. Fama, E.F and French, K.R. (1993). Common risk factors in stock and bond returns. *Journal of Finance*. 33(3), pp 3-56.
7. Fama, E.F and French, K.R. (1996). Multifactor explanations of asset pricing anomalies. *The Journal of Finance*. 51 (1), pp 55-84.
8. Leleux, B. (1993). Post IPO performance: A French appraisal. *Finance*. 14, pp 79-106.
9. Levis, M. (1993). The long run performance of initial public offerings: The UK experience 1980-1988. *Financial Management*. 22 (1), pp 28-41.
10. Peter, S. (2007). Performance of initial public offerings and privatized offers: Evidence from a developing country. *Managerial Finance*. 33 (10), pp 798-809.
11. Ritter, J.R. (1991). The long run performance of initial public offerings. *The Journal of Finance*. 46 (1), pp 3-27.
12. Sahoo, S and Rajib, P. (2010). Aftermarket pricing performance of initial public offerings: Indian IPO market 2002-2006. Vikalpa. 35 (4), pp 27-43.

13. Samarakoon, L.P. (2010). The short run underpricing of initial public offerings in the Sri Lankan stock market. *Journal of Multinational Financial Management*. 20, pp 197-213.
14. Stehle, R., Ehrhardt, O. and Przyborowsky, R. (1999). *Long run stock performance of German initial public offerings and seasoned equity issues.* Available:http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.202.2770&rep=rep1&type=pdf. Last accessed 26th April 2015.