

# Initial and after market performance of initial public offerings (IPOS): New evidence from Colombo Stock Exchange (CSE)

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## Abstract

*This paper examined the phenomena of IPO underpricing in a frontier stock market of Sri Lanka. The period of investigation covers 1992 to 2014 IPOs in Sri Lankan market. It is observed that there has been 143 IPOs during this period and this paper covers 74 IPOs. These firms represent 15 sectors. To accomplish the main objective of this paper initial underpricing was measured by using Initial Returns (IR) and Market Adjusted Initial Returns (MAIR). For the purpose of measuring the aftermarket performance the Market Adjusted Average Abnormal Returns (MAAAR) for three windows such as seven days, one month and three months were measured. Findings suggest that IPOs in Sri Lankan market are underpriced 68% and 72% on IR and MAIR respectively. It is observed that within seven days MAAAR is higher than one month and three month MAAAR. Moreover, it is revealed higher percentage of IPO underpricing in post war periods in CSE compared to other periods in the sample.*

**Keywords:** *IPO, Underpricing, After market performance*

## 1. Introduction

The IPO underpricing and after market performances has gained much interest among the researchers in the recent past. The meaning of the IPO underpricing is that the difference between the offer price and the first day trading price of the shares. If the first day trading price is more than the offer price that particular stock is considered to be underpriced. In other words, pricing of an initial public offering is below its market value. IPO underpricing has several implications; one benefit of underpricing is it enhances the liquidity of the stocks. Booth and Chua suggest that the underpricing is one of the ways of attracting more investors and contended

that more dispersed ownership obtained by underpricing the issue would lead to more liquidity in the market. The researchers have also focused on the short run excess returns and long run bad returns after the IPO. In the recent past the IPOs in the emerging markets and frontier markets has become popular among investors. Sri Lankan frontier market has now a unique environment to investigate this phenomenon as it was exposed to civil war for nearly 30 years and now prevailing peaceful situation in the country. According to capital market sources the CSE has gained much popularity among investors locally and internationally as a lucrative avenue for the investment in the recent past. These features of the market warrant more research based

evidences for various policy decisions. There is sufficient number of literature in the developed markets on the IPO anomalies. Still the research evidences in frontier markets are very vague and inconclusive or sometimes limited to some popular markets. Therefore, a number of competing theoretical models have been developed to explain the initial underpricing of stocks.

The main theories found in the IPO literature are the winner's curse hypothesis, book building theories, the principal-agent hypothesis, signaling theories, the law-suit avoidance hypothesis, the ownership and control hypothesis and the investor sentiment theory. These theories have been subjected to academic studies in several markets in the world. In case of Sri Lanka research evidences on this subject emerged very recently. Importantly, Samarakoon (2010) examined the short run IPO underpricing in Sri Lankan stock market and his sample includes 105 IPOs covering the period 1987 to 2008. As he points out this study contributes to the existing literature by providing very convincing and interesting evidence on the inter-relationship between issue size on the one hand, and investor sentiment and privatization on the other hand with regard to under pricing of IPOs.

The current study further extends the existing literature focusing war and post war experiences of IPO underpricing. This paper also examines the impact of industry type of the IPO on underpricing and after market performance. Moreover, this paper documents the theoretical explanations behind the IPO underpricing to gain a wider understanding in the phenomenon of IPO underpricing. Another important novelty of this is the analysis of IPOs during war periods and post war periods.

The rest of this paper is organized as

follows. The section 2 states the theoretical justification of IPO underpricing. The previous empirical review of the research is expanded in section 3. The overview of IPO market in Sri Lanka is presented under section 4. The description of the data and the sample period of the study are summarized in section 5. In section 6 statistical models and justification for the methodology is perused. The results are presented and analyzed in section 7. Finally, the concluding remark is given in section 8.

## **2.Theoretical background of IPO under pricing**

It is important to examine the theoretical contributory factors for the IPO underpricing in a wider framework before moving to empirical explanations. The theoretical models suggest mainly three reasons for IPO underpricing such as Asymmetric information, Market monopoly of the investment bankers and Lawsuits avoidance. Large theoretical and empirical evidences contend that information asymmetry is the most attributable reason for the IPO underpricing. The empirical review of this paper mainly focuses on these theoretical foundations. Thus, it is important to construct the reader conformability with a brief explanation to the theoretical background of the study.

One of the most pervasive theories is asymmetric information theory. This concept is highly debated topic in finance theory by the practitioners and the academicians globally. This suggests that there are two groups of investors in the investment world. First the investors who have accessibility to the valuable information that relevant for the investment decision and the second are the investors who have no valuable information towards their investment decision. Another possible reason for underpricing of IPOs

is the monopoly power of the investment banker over the issuing firm. They usually, use their power to increase both the spread between the offer price and bid price. The monopolist investment banker tends to underprice the IPO as he can minimize the risk of not being sold all the issued shares. The other important theory is lawsuit avoidance hypothesis which suggests that underpricing reduces the possibility of future legal liability for the issuers and underwriters and underpricing is considered as a litigation assurance for these parties. Therefore, the issuers purposely underprice the IPO to avoid the future legal actions taken by the investors. The potential link between IPO underpricing and litigation risk was first proposed by Logue and Ibbotson 1975 . These theories have been tested with the real data in several markets.

### **3. Previous empirical studies**

The IPO underpricing is very common phenomena in capital markets as suggested in the previous literature. The historical evolution of this concept goes back to 40 decades. Much of the empirical studies have been carried out in developed markets particularly with the US data. One seminal study of Ritter(1984) analyzed hot market of 1980 the 15 – month period starting from January 1980 to March 1981 during that period the average return for new issues of common stock was 48.4%. In the UK Dimson , Buckland, Herbert and Yeomans and Levis documented that the average returns ranging between 8.5% and 17%. Further, Loughran, Ritter, & Rydqvist, (1994) examined short run and long run performance in many countries including Sri Lanka and they looked at three dimensions such as binding regulation, contractual mechanism and the characteristics of firm going public. The evidences presented

that the companies successfully time their offerings for periods when valuations are high and when investors receive low reruns in long run.

However, studies pertinent to emerging markets very limited in the previous literature. It is more limited when it comes to Asian markets. The available previous studies have examined this phenomenon by adopting various methodologies and have documented varying conclusions. On the other hand several theoretical models have been used to explain this phenomenon. For example, Ahmad-Zaluki and Kect (2012) examined the short run and long run IPO performance in MESDAQ in Malaysia and they used market adjusted initial returns to measure the short run IPO performance and in measuring long run IPO performance the cumulative abnormal returns (CAR) and buy-and–hold return methods were applied. They suggested that investors who invested on IPOs in MESDAQ gained positive returns in short run while do not fare well in long run. Another study in Malaysia Younesi, Mahdavi Ardekani and Hashemijoo (2012) investigated the IPO underpricing and return determinants for the period 2007 – 2010 and contended that underpricing exists in the market and dramatically decreased in compared to other studies. Also they concluded that return determinants such as age, size, total unit offered, offering price and KLCI index performance not influence on return determinates of IPO firms.

Moreover, some have argued the main causes of underpricing of IPOs. For instance, Agathee, Sannasse and Brooks (2012) examined the impact of aftermarket risk level and auditor's reputation on initial returns of IPO firms in Mauritius market and showed significant influence of these two factors on initial returns of the firms. In addition, Beatty and Ritter

(1986) examined the underpricing and ex ante uncertainty and established a positive relationship between underpricing and ex ante uncertainty. On the other hand, some have attempted to validate theories as the leading causes of IPO underpricing. For example, Lin, Pukthuanthong and Walker (2013) examined the litigation risk in 40 countries by selecting 13759 firms and they found no significant impact of mitigation risk on underpricing of individual countries. However, they established positive relationship between mitigation risk and IPO underpricing in cross-country framework. On the other hand Li, McInish and Wongchoti investigated how asymmetric information evolves after firms go public and documented that level of underpricing is lower soon after the IPO, further they explored the hypothesis that greater the underpricing of an IPO if more information is produced after the market and lower the level of asymmetric information and validated the hypothesis.

Moreover, some researchers have attempted to link the underpricing of IPOs with the issue characteristics, firm characteristics and industry characteristics. Tong (2013) examined the media reputation of IPOs by considering eight attributes in Hong Kong market in 38 firms and documented that substantive media reputation has a significant positive effect on changes in IPO price. Edwards and Hanley (2010) examined the link between the short selling and IPO underpricing and concluded that short selling is integral to aftermarket trading and is higher in IPOs with greater underpricing.

#### 4. Overview of IPO market in Sri Lanka

All IPO issues are governed by the Securities and Exchange Commission of Sri Lanka (SEC) which is the regulating body of the stock market

activities. It releases circulars that govern the IPO market from time to time by observing the IPO market. One important rule is that a minimum of 40% of the issued shares should be made available to retail individual investors.

In CSE securities are listed in three forms namely offer for subscription, offer for sale and introduction. Offer for sales for subscription is an invitation to the public to subscribe for shares. Offer for sales is offering the shares already in issue to the general public and the introduction means listing of securities in the CSE with the requirement of IPO. In our paper we selected only the shares issued to the public and we do not consider the offer for sales and equity introduction in our sample. This is due to the fact that the underpricing phenomenon is more pervasive in public issue and also theories discussed in this paper are emerged in the context of IPOs.

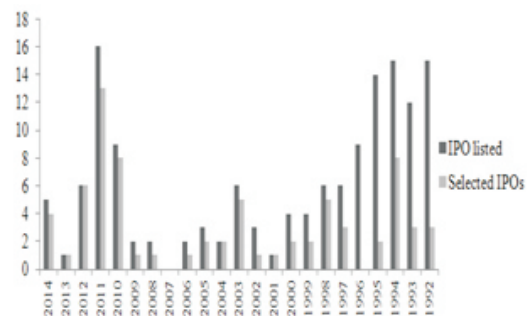


Figure 1 IPOs listed in CSE and selected number of IPOs for the sample period

In the Figure 1 thick bars show the total number of IPOs made available to the general public in Sri Lanka Stock market for the period 1992 to 2014 while the grey bars show the number of IPOs considered in this paper. It very clearly depicts that the IPOs listed on CSE varying widely for the period. Very interestingly, it seems high number of IPOs in early 1990s until 1996. After that it has taken declining trends until 2009. The growth of IPOs in early 1990s can be

attributable to the relaxation of capital control by opening the capital account and the interlocation of automated trading floor in the CSE.

The figure 2 shows the amount rose in the

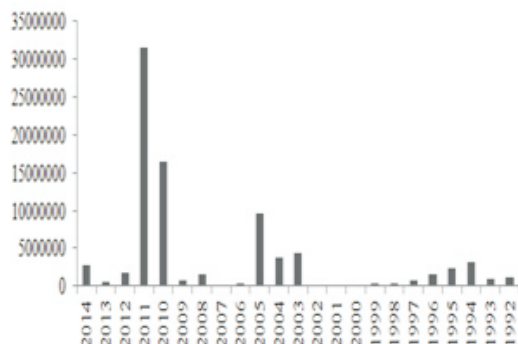


Figure 2 Raised Amount in Rs. (000) from IPOs Annually

IPOs for the period 1992 to 2014. It coincides with the number of IPOs in few years. In some years though IPOs high the amount raised in the IPOs is very low. However, it is considerably high in 2010 and 2011. On the other hand, the high value for the recent years may be due to the impact of inflation and declining of rupee value.

### 5. Data and sample

This study used IPO data of Colombo Stock Exchange during the period of 1992 to 2014. This period includes several development initiatives of the stock market and important structural changes to the economy. Early 1990s CSE introduced automated trading floor for the investors with several other physical developments such as extending the balances to main cities in the country. The other peculiarity of this period is that it covers war period and post war effect in Sri Lanka. The data were gathered from CSE data Library and Company's prospects. First we gathered data relating to the number of IPOs for the period. During this period 143 securities were listed in Colombo Stock

Exchange. We were constrained by availability of data for the 143 IPOs as a result the investigation was limited to 74 IPOs. All these 74 IPOs are grouped sector wise and it resulted to form 15 sectors. This grouping is important to look at the patterns of IPOs underpricing and after market performance in each sector. We used issue price of IPO, daily trading statistics and daily All Share Price Index statistics for this empirical analysis.

### 6. Methodology

First day returns or initial return were calculated in determining underpricing status of each IPO. Ritter (1991) defined initial return as the return generated by a stock on the first day listing, based on its price change from the offer price to its first day closing price. In this study also we considered the percentage differences between first day closing price and offer price of a security as the first day return or initial return of each security. First day return is calculated by using the following equation (1)

$$R_i = \frac{P_{i,1} - P_{i,0}}{P_{i,0}} * 100 \quad (1)$$

Where,  $R_i$  is the initial return of the security  $i$ ,  $P_{p,i}$  is the closing price of the security  $i$  at first day of listing,  $P_{p,0}$  is the issues price of the stock  $i$ .

By looking at initial returns, it can be determined pricing status of an IPO. But it is necessary to employ a standard method for calculating pricing status of securities. This study used market adjusted model which was introduced by Brown and Warner (1980) for calculating market adjusted initial returns of IPOs. It gives broader picture on IPO underpricing. Market return on IPO issued date is calculated by following equation (2);

Where,  $MR_t$  is the market return on issued date,  $M_t$  is the closing price of the ASPI at the first

$$MR_t = \frac{M_1 - M_0}{M_0} * 100 \quad (2)$$

day of trading issued of IPO;  $M_0$  is the closing price of the ASPI at the prior date to the IPO first day trade.

Market adjusted initial return is the initial return of a security on first day trading which adjusting the return of the entire market portfolio on IPO first trading date. Market adjusted initial return is derived from the following equation (3);

$MAIR_t$  is the market adjusted initial return of the security  $i$ ,  $R_t$  is the initial return of the security  $i$ ,  $MR_t$  is the market return on issued date.

$$MAIR_t = R_t - MR_t \quad (3)$$

According to the event study methodology (Fama & et. 1969, Brown and Warner 1985), the impact of an event is estimated by measuring the abnormal return of the security. The abnormal return is the difference between actual returns and normal returns of the security over the event window (MacKinlay 1997). In this study, we considered three post events windows to analyze the short run post performance of the IPOs. Post event windows consist of one week, one month and three months. These three windows are useful to examine the aftermarket performance up to three months. We believe that 7-day window is not sufficient as Sri Lankan market is not showing efficient market features and there is a delay in reaction of stock prices to the arrival of new information. Therefore, extend to one month and three months reasonably sufficient for the purpose. Following equation (4) is used to calculate post performance of the IPO.

Where,  $R_{i,t}$  is the return of the security  $i$  at time  $t$ ,  $P_{i,t}$  is the closing price of security  $i$  in period  $t$  and  $P_{i,0}$  is the closing price of the security  $i$  on the first day of listing.

$$R_{i,t} = \frac{P_{i,t} - P_{i,0}}{P_{i,0}} * 100 \quad (4)$$

The abnormal return is calculated by deducting market return at time  $t$  from actual return of security  $i$  at time  $t$ .

Where,  $AR_t$  is the Abnormal Return of security  $i$  at time  $t$ ,  $R_{i,t}$  is Actual Returns of security  $i$  at time  $t$ ,  $MR_t$  Market Returns at time  $t$ .

$$AR_{i,t} = R_{i,t} - MR_t \quad (5)$$

To investigate whether there are any influential abnormal returns around IPOs it is necessary to test whether the Average Abnormal Returns ( $AARs$ ) during the periods considered are significant i.e. different from zero. This is generally examined by using normal  $t$ -test.

For this purpose, the null hypothesis and the alternative hypothesis for  $AARs$  are set as follows;

$H_0$ : Average Abnormal Returns equal to zero  
 $H_1$ : Average Abnormal Returns not equal to zero

Test statistic,

$$t_{AR} = \frac{AARs}{Se(AARs)} \quad (6)$$



## 7. Analysis of results

Table 1 shows the percentage of underpricing of securities based on the war and post war period. The results presented in Table 01 show that underpricing rate for war and post war periods are 69% under the both methods of Initial Return (IR) and Market Adjusted Initial Return (MAIR). It seems that underpricing rate in post war period is increased when compared with war period. Interestingly, underpricing rate in post war period on IR method is 79%. Further it indicates that underpricing rate on MAIR is 76% for post war period. Attributable reason for the increase of underpricing in post war can be the increasing trend of IPOs in CSE during this period. When more companies come to market for raise funds they have to compete each other to attract more investors. The best strategy is to underprice the share and that will generate higher first day returns to the investors.

Table 1 IR and MAIR for war and post war period

Period	IR	MAIR
War period	69%	69%
Post war period	79%	76%

Table 2 presents the underpriced securities based on initial returns and market adjusted returns of different sectors. As shown in the Table 2 there are 15 IPOs in the Bank Finance & Insurance sector out of which the initial underpricing rate is 53% and market adjusted initial return is 67%. There has been 8 IPOs under the Beverage Food & Tobacco and 50% is underpriced on IR and MAIR. There is only one IPO in Construction and Engineering sector which is an underprice IPO. It seems 7 IPOs from the Diversified Holding sector and the

underpricing ratio is 71% on both IR and MAIR. Moreover, 2 IPOs have occurred in Footwear and Textile sector out of which one is underpriced and the other is overpriced that brings the underpricing ratio of both IR and MAIR to 50%. When it comes to Hotels and Travels sector it has experienced 6 IPOs during the period and 57% is underpriced on both IR and MAIR. Other important sector is Healthcare where 3 IPOs have been introduced during the period and it shows that 67% is underpriced on IR and it has come to 100% under MAIR. Information Technology sector and Land and Property sector had announced one IPO each and had experienced overpriced under IR and MAIR. The Manufacturing sector has introduced 10 IPOs to the market during the period and 80% is underpriced on both IR and MAIR. In the Power and Energy IPOs 86% is underpriced on both IR and MAIR. Nine firms have gone public during the period from the Plantation sector and 89% is underpriced under both IR and MAIR. The Service sector and Telecommunication has introduced one IPO each and both have become underpriced. Finally, the Trading sector demonstrates 2 IPOs and 50% is underpriced in both IR and MAIR. The overall value of underpricing in Sri Lankan market is 68% under IR and when it is adjusted to market (MAIR) it is 72%.

A more focused attention to the sectors which have introduced more than 7 IPOs to the market revealed that the underpricing is ranging from 50% to 89% which is a notable figure. There is no noticeable difference between the underpricing based on *IR* and *MAIR* across the sectors. However, there is a remarkable difference of underpricing based on *IR* and *MAIR* in the Bank Finance and Insurance sector. The rate of underpricing that is determined with *IR* is 53% and it has increased to 67% with *MAIR*. This

finding is relevant with the general phenomena in the market. The Bank and Finance sector is highly sensitive to the macroeconomic environment of the country. On the other hand, it is widely known fact that the information very rapidly goes to the market in this sector which creates more volatility in the market largely. It is worthwhile to discuss these findings with Samarakoon and he suggested that Sri Lankan IPOs are underpriced by 34% and it is far below the our findings. Thus, our findings suggest that the recent IPOs are more underpriced than previous IPOs. Other important pattern is that during the sample period the highest number of IPOs are from Bank, Finance and Insurance sector and the second highest represents the Manufacturing sector and the third highest is Plantation sector. The capital structure of the Finance and Insurance sector is highly regulated by the Central Bank of Sri Lanka. However, as our focus is IPO initial day returns and after market performance we included this for the study. We assume here that factors influencing the IPO underpricing and after market performances are common to all sectors and highly regulated environment is no matter for the IPOs.

The percentages represent the number of IPOs underpriced during the period out of the total number of IPOs introduced by each sector. The percentage of underpricing is calculated on Initial Returns (IR) as well as Market Adjusted Initial Returns (MAIR). When only one IPO is introduced by the respective sector and if it is underpriced it represent 100% in the table and if the IPO is overpriced it represents 0% in the table. The percentages are calculated based on number of selected IPOs.

The Table 3 summarizes the outcome of the Market Adjusted Average Abnormal Returns (MAAAR) of the IPO firms and the *t* – test values

of the respective IPO firms. The Table contains the summarized statistics for 15 sectors in CSE. As previously mentioned, we consider three windows such as week, month and three months

Table 2 Initial Returns and Market Adjusted Return of Sectors

Sector	Selected IPOs	% of underpricing on IR	% of underpricing on MAIR
Bank Finance & Insurance	15	53%	67%
Beverage Food & Tobacco	08	50%	50%
Construction & Engineering	01	100%	100%
Diversified Holdings	07	71%	71%
Footwear & Textile	02	50%	50%
Hotels & Travels	06	67%	67%
Health care Information	03	67%	100%
Technology	01	0%	0%
Land & Properties	01	0%	0%
Properties		0%	0%
Manufacturing	10	80%	80%
Power & Energy	07	86%	86%
Plantations	09	89%	89%
Services	01	100%	100%
Telecommunications	01	100%	100%
Trading	02	50%	50%
Overall	74	68%	72%



to measure the short run price performance of the IPOs in CSE. We discuss the aftermarket performance sector wise to get a better picture on sectors and to reduce the complexity of the analysis.

To begin with, the Bank, Finance and Insurance sector account for the largest number of IPOs during the period. We calculate the MAAAR of 7 days one month and three month and the values are 5.4%, -30.5% and -47.9%. It very clearly demonstrates that when time passes the MAAAR return to investors gradually decreasing. It suggests that IPOs of Bank, Finance & Insurance sector underperformed compared to the market as the time passes. The other important finding is that in the Beverage, Food & Tobacco sector it has yield 7.5% in the 7 day returns outperformed the market and again when it comes to one month it is underperformed the market by -7.1% and when time passes to three months it again outperformed the market by 83%. The same performance is seen in Construction & Engineering sector which outperformed the market by 22% in three-month window. During the period the Diversified Holding sector has outperformed in all the three widow period suggesting positive abnormal returns for the IPO investors. However, it demonstrates that the MAAAR gradually, decreasing through the window period from 27% (7 day) to 13.3% (3 months). Conversely, the Footwear & Textile sector has performed below the market in all three windows and returns of this sector not sustain the expected returns. Both Hotels & Travel and Healthcare show positive (13.6%, 13.7%) abnormal returns with 7 days when it comes to three months it turned to negative (-83.3%, -6.5%) both sectors underperformed within 3 months window periods. In Information Technology and Land and Property sectors initial underpricing status

prevailed from 7 days to 3 months suggesting below market performance throughout the period. On the other hand the Manufacturing sector shows positive abnormal returns in all three windows which suggests that the underpricing status of the sector prevails even after three months while it is opposite when it comes to Power & Energy sector. The Telecommunication sector has only one IPO and it is underpriced and during the three window periods it has outperformed the market. Finally, Plantation sector, Service sector and Trading sector show negative abnormal returns in all three window periods which suggest that the underpricing status prevails even after three months period in these sectors.

In this paper we used three windows to measure the prevalence of underpricing and after market performance after the first day initial returns. It is suggested in the literature that the first day initial return is not significant enough due to the fact that the market may be irregular on that day. The sector analysis revealed similar results in most of the occasions.

The t-statistics shown on the Table 3 revealed that in most of the cases (indicial firms) the null hypothesis that the MAAAR is equal to zero is rejected in 99% and 90% confidence level. For example, in Bank, Finance & Insurance sector out of 15 firms 11 are significant in 7 day, 14 are significant in one month window and all 15 firms significant in 3 months window. The similar pattern is observed in other sectors in majority of time. It is found that (Table 3) most of the IPOs outperformed the market within 7 days of the listing date. Out of 15 sectors 8 sectors positive MAAAR in the 7 day window. The underperformed sectors are Footwear & Textile, Information Technology, Land & Property, Plantation, Service and Trading. Conversely, 11 sectors underperformed the market and only 6

sectors outperformed the market in one month MAAAR. Not surprisingly, when it comes to 3 months window also 11 sectors underperformed and only 4 are outperformed the market.

Importantly, only two sectors have outperformed the market in all three window periods. Telecommunication sector also has outperformed the market (only one firm).

Table 3: Average Abnormal Returns and t- test for weekly, monthly and three months AAR:

Stock	7 days		Month		3 Months	
	MAAAR	T	MAAAR	T	MAAAR	T
<b>Bank Finance &amp; Insurance</b>						
ABL	-0.008	-0.75	-0.054	-4.47*	-0.098	-15.10*
AAF	0.556	-0.05	0.499	11.20*	0.124	3.41*
SFIN	-0.026	-1.88**	-0.066	-6.82*	-0.168	-15.24*
UBC	-0.084	-9.88*	-0.114	-17.69*	-0.216	-20.39*
CIFL	-0.094	-4.52*	-0.105	-15.02*	-0.165	-22.60*
TFIL	-0.001	-0.13	-0.046	5.00*	-0.014	-1.99**
PLC	-0.050	-8.22*	-0.103	-10.86*	-0.151	-17.45*
VFIN	-0.044	-16.97*	-0.048	-9.27*	0.171	7.40*
JINS	-0.018	-0.61	0.034	2.96*	-0.041	-4.14*
HASU	-0.067	-3.38*	-0.115	-9.26*	-0.123	-19.98*
NTB	-0.034	-2.27**	-0.047	-8.83*	-0.103	-16.24*
CSD	-0.209	-5.28*	-0.251	-14.44*	-0.275	-21.14*
PMB	0.152	7.69*	0.086	6.74*	0.160	14.61*
TFC	-0.072	-6.04*	-0.065	-0.26	-0.107	-8.05*
NDB	0.053	3.59*	0.090	10.12*	0.527	8.73*
<b>Average</b>	<b>5.4%</b>		<b>-30.5%</b>		<b>-47.9%</b>	
<b>Beverage Food &amp; Tobacco</b>						
LLMP	-0.058	-5.87*	-0.089	-14.47*	0.584	9.68*
HVA	-0.042	-5.48*	-0.104	-6.59*	0.030	20.93*
RAL	-0.082	-8.28*	-0.076	-14.42*	-0.097	-31.05*
RWSL	0.005	2.44**	0.000	0.02	-0.023	-6.70*
LION	0.057	9.96*	0.065	18.07*	0.175	7.59*
COCO	-0.049	-2.71**	-0.167	-7.41*	-0.103	-8.02*
BFT	-0.032	-1.13	-0.019	-1.74**	-0.077	-4.94*

BFT	-0.032	-1.13	-0.019	-1.74**	-0.077	-4.94*
DIST	0.276	21.01*	0.319	21.05*	0.348	54.64*
<b>Average</b>	<b>7.5%</b>		<b>-7.1</b>		<b>83%</b>	
<b>Constructions &amp; Engineering</b>						
AEL	-0.010	-1.26	-0.07278	-6.01*	-0.22985	-13.18*
<b>Diversified Holdings</b>						
AINV	0.066	6.76*	0.198	7.08*	0.141	10.88*
FLCH	-0.071	-5.15*	-0.106	-13.00*	-0.173	-18.21*
EXPO	-0.112	-18.02*	-0.081	-12.63*	-0.070	-12.14*
VONE	0.002	0.24	-0.037	-5.13*	-0.065	-15.64*
SHL	0.420	20.98*	0.339	26.86*	0.282	30.77*
BIL	0.020	12.32*	-0.003	-0.81	0.020	2.61*
HHL	-0.054	-4.05*	-0.086	-5.24*	-0.002	-0.48
<b>Average</b>	<b>27.1%</b>		<b>22.4%</b>		<b>13.3%</b>	
<b>Footwear &amp; Textile</b>						
ODEL	-0.051	-3.72*	-0.050	-8.80*	-0.016	-0.39
CLPL	-0.098	-7.32*	-0.098	-12.36*	-0.093	-11.46*
<b>Average</b>	<b>-14.9%</b>		<b>-14.8%</b>		<b>-10.9%</b>	
<b>Hotels &amp; Travels</b>						
ALHP	-0.004	-0.52	-0.097	-5.17*	-0.186	7.81*
CITK	-0.043	-6.21*	-0.158	-8.28*	-0.317	-17.54*
CITW	-0.035	-5.83*	-0.138	-4.36*	-0.245	-18.52*
CITH	0.098	4.468	0.163	4.46*	0.059	4.94*
MARA	0.163	4.12*	0.039	1.71**	0.101	7.87*
BBH	-0.043	-5.01*	-0.212	-15.50*	-0.245	-32.54*
<b>Average</b>	<b>13.6%</b>		<b>-40.3</b>		<b>-83.3</b>	
<b>Healthcare</b>						
NHL	0.210	6.21*	0.184	10.46*	0.158	3.05*
LHCL	-0.058	-37.73*	-0.047	-13.56*	-0.071	-18.54*
CHL	-0.015	-1.41**	-0.065	-4.55*	-0.152	-14.32*
<b>Average</b>	<b>13.7%</b>		<b>7.2%</b>		<b>-6.5%</b>	

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**Information Technology**

PCH -0.125 -15.15\* -0.168 -20.86\* -0.120 -16.39\*

**Land & Properties**

ETWO -0.1395 -6.60\* -0.14818 -13.66\* -0.15513 -28.02\*

**Manufacturing**

ALUM 0.002 1.01 0.006 4.13\* 0.002 1.87\*\*

TJL 0.022 7.34\* 0.043 10.40\* -0.038 -3.31\*

SIRA -0.038 -3.97\* -0.120 -8.41\* -0.238 -17.89\*

TYRE -0.103 -6.17\* -0.067 -5.87\* -0.147 -12.50\*

LWL -0.048 -5.88\* 0.018 1.41\*\* 0.144 7.26\*

RCL 0.064 6.84\* 0.044 7.39\* 0.117 12.48\*

CERA 0.062 8.27\* 0.105 9.74\* 0.121 21.92\*

BLUE -0.101 -4.56\* -0.048 -3.40\* -0.073 -11.79\*

BOGA -0.018 -0.68 0.000 0.07 -0.100 7.87\*

DIST 0.276 21.01\* 0.319 21.05\* 0.348 54.64\*

**Average 11.8% 30% 13.6%**

**Power & Energy**

MEL -0.055 -4.97\* -0.132 -9.30\* -0.205 -23.19\*

PAP 0.128 2.73\*\* 0.161 9.63\* 0.100 12.25\*

HPFL -0.060 -8.36\* -0.036 -5.56\* -0.235 -10.01\*

LGL -0.077 -5.02\* 0.057 1.41\*\* 0.115 5.15\*

HPWR -0.046 -4.58\* -0.088 -10.34\* -0.158 -21.95\*

VPFL -0.046 -7.98\* -0.096 -13.44\* -0.461 -12.14\*

LIOC -0.061 -7.94\* 0.003 0.25 0.054 6.76\*

**Average -21.7% -13.31% -79%**

**Plantations**

TPL 0.046 2.06\*\* 0.096 8.38\* 0.109 10.87\*

MAL -0.026 -5.05\* -0.082 -8.33\* -0.097 -22.38\*

NAMU -0.125 -0.17 -0.053 -2.94\* -0.046 -3.71\*

HAPU -0.086 -4.42\* -0.017 -0.97 0.203 5.76\*

UDPL 0.027 1.90\*\* 0.022 2.88\* -0.116 -7.38\*

BALA	-0.178	-7.93*	-0.340	-14.20*	-0.387	-37.31*
MADU	0.128	4.09*	0.184	13.76*	0.033	1.30**
KAHA	-0.131	-6.33*	-0.164	-17.61*	-0.270	-18.30*
WATA	-0.078	-4.75*	-0.065	-11.08*	-0.105	-13.30*
<b>Average</b>	<b>-42.3%</b>		<b>-41.9%</b>		<b>-67.6%</b>	
<b>Services</b>						
CTBL	-0.149	-6.33*	-0.162	-17.25*	-0.004	-0.87
<b>Telecommunication</b>						
DIAL	0.048	7.62*	0.091	12.06*	0.191	13.80*
<b>Trading</b>						
TESS	-0.090	-8.25*	-0.154	-13.89*	-0.253	-21.40*
CWM	-0.060	-2.44*	-0.205	-8.25*	-0.386	-19.52*
<b>Average</b>	<b>-15%</b>		<b>-35.9</b>		<b>-63.9%</b>	

Note: \*(\*\*) denotes significant at 1% & (10%) significant Level

## 8. Conclusion

Sri Lankan IPOs are underpriced by 68% on initial returns and when it is adjusted with the market 72%. The analysis for the war revealed that 69% underpriced on both methods. Moreover, in war period and post war period securities are underpriced by 79% and 76% initial return and market adjusted initial return respectively. It is observed that the underpricing rate has increased post war periods. This suggests that most of the companies have set their issue price far below what is priced when the IPOs are exposed to market. The highest number of IPOs reported from Bank Finance & Insurance and the MAIR based underpricing is more pervasive in that sector than others. Interestingly, the Manu

facturing Sector and Diversified Holding sector demonstrate positive returns all three window periods and outperformed the market. It is also notable that more MAAAR is significant in the three month window than other windows. It is also observed that majority of the IPO firms have underperformed the all three window periods.

Importantly, findings suggest some key policy recommendations for the investors and other stakeholders of the stock market. As the majority of the IPOs in the Sri Lankan market are underpriced the market participants who buy share from the primary market can gain huge first day returns. Therefore, the primary market is a good avenue for the investors to achieve high returns in short run.

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