

# The Short Run Return of Initial Public Offerings (IPOs) in Nepal

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## ABSTRACT

*The study examines the initial return (first day returns) of 133 initial public offerings (IPOs) of Nepalese companies during a 15-year period (2005/06-2019/20). The study develops a comprehensive model based on the set of observations of the short-run price performance of new offerings in the light of existing literature of IPO underpricing. The study reveals that the average underpricing is 3003 percent. The study also estimates the regression of initial IPO return on explanatory variables, such as issue size, age of the firm, firm size, market return and subscription rate. The study reveals the subscription rate as the most significant predictor of IPO returns in Nepalese primary market indicating that firms with high subscription rate have higher initial returns. Further, the study also finds that market return has significant negative impact on initial return.*

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## I. Introduction

An Initial Public Offering (IPO) is the original sale of company's securities to the wider public for the first time in the primary markets (Myers and Brealey, 2003). Public offerings involve raising of funds for corporations from the public through the issuance of various securities in the primary market and is often the only major source of obtaining large and long-term funds. There are especially two areas within initial public offerings that cause wonder for researcher around the world: the evidence of initial underpricing and the long run underperformance. Why do companies choose to go public if these two issues are as consistent as prior evidences show? Why do IPO firms put themselves out on the market at a lower price than the fair value, leaving money at the table and why do firms still want to go if they are likely to underperform in the long run? In most cases of IPO, the offering price is systematically lower than its closing price on the first trading day. Because of this, investors can enjoy great benefits by purchasing IPOs on the first trading day and sell them on

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the second trading day or few trading days later. This phenomenon is called “IPO underpricing” and it has been extensively documented in different stock markets around the globe.

IPO underpricing, or high IPO return is a phenomenon common to most stock markets, regardless of whether these markets are in developed or emerging economies (Ritter, 1984). Though IPOs performances have been well documented in the finance literature, most of the studies have focused on the US, Western Europe and other G7 developed economies (Alli et al., 2010). However, these studies cannot be generalised for a country like Nepal. As a result, there is a need to analyse the price performance of IPOs in Nepalese context. Hence, this paper aims at determining the level of IPOs underpricing in Nepalese primary market. It also aims at assessing the relationship among initial IPO return and explanatory variables, such as issue size, age of the firm, firm size (total assets), market return and subscription rate.

The remainder of the paper is organised as follows. Section II deals with the review of literature on IPOs underpricing. Section III presents the details of the data and research methodology. Section IV presents the empirical findings of the study. Finally, section V contains the conclusion of the study.

## **II. Literature Review**

International evidence on the initial return of IPOs reveals that on average, IPOs are underpriced. The degree of underpricing of developed capital markets is generally lower than that of emerging capital markets. Underpricing of 6 to 20 percent is commonly found in developed markets but in emerging markets 100 to 200 is common and in China it may reach as high as 948 percent (Su and Fleisher, 1999).

Most early evidence of IPOs underpricing comes from studies of U.S. capital markets. For instance, Ibbotson (1975) using a sample of 771 IPOs listed from 1961-1969 finds average initial return of 11.4 percent. Jenkinson and Mayer (1988) and Husson and Jacquillat (1990) report that average initial return is 25.10 percent and 4 percent respectively for French markets. Menyah et al. (1995) investigates the initial returns and long-run performance of private-sector and privatisation IPOs in the U.K. and finds significant underpricing of 3.4 percent for private-sector IPOs and 38.7 percent for privatisation IPOs. Kunz and Aggarwal (1994) find an average initial return of 35.8 percent in Switzerland. Aussenegg (2001) and Jelic and Briston (2003) report an average initial return of 35.57 percent and 27.40 percent respectively in Poland.

Jog and Riding (1987) examines 100 IPOs listed between 1971 and 1983 and finds average initial returns of 11.50 percent in Canada. By comparison, studies of IPOs in developing countries show even greater initial returns. Dawson (1987) reports average initial return of 13.80 percent in Hong Kong, 39.4 percent in Singapore and 166.67 percent in Malaysia. Aggarwal et al. (1993) examines 55 IPOs in Chile capital markets and found a small positive excess return of 8.8 percent. However, using a sample of 62 IPOs in Mexico, they find a larger initial return of 33 percent and even larger underpricing of 78.5 percent are found in Brazil capital markets. Finn and Higham (1988) using a sample of 93 IPOs over 1966-1978 find average initial return of 29.2 percent in Australia.

The most recent study such as, Sadaqat et al. (2011) analyses the short-run market adjusted performance under different state of economy: Normal, Boom and Recession of 73 IPOs listed from January, 2000 to April, 2009. The results show that the IPOs give statistically significant market adjusted returns of 42.17%, 40.99%, 37.35%, 38.13% and 39.38% to the investors on the close of 1st, 5th, 10th, 15th and 20th day respectively under general state of economy. These returns improved to 55.19%, 52.17%, 49.14%, 47.59% and 45.76% on the close of mentioned odd days under the boom state of economy, while these returns declined under the recession state of the economy.

Similarly, Islam et al. (2010) reveals the levels of underpricing in IPOs and its determinants of the Chittagong Stock Exchange (CSE). The overall level of underpricing at the Chittagong Stock Exchange was 480.72% with a standard deviation of 1217.25. The study of Vongand Trigueiros (2010) examines the first day returns of over 480 initial public offerings (IPO) in Hong Kong during a 12-year period (1994–2005). Based on this set of observations the study builds a comprehensive model of the short-term price performance of new offerings, in the light of the existing theoretical hypotheses about IPO underpricing. Results show clear evidence of the signaling effect of underwriters' reputation. For a set of different conditions and time periods examined, the most sought-after underwriters are consistently associated with less underpriced offerings. In addition, the study shows that offerings underwritten by two or more underwriters tend to be less underpriced and that underpricing may be a signal in its own right. The study also shows that the informed demand hypothesis of Rock (1986) is supported only where some specific circumstances are verified. Finally, results confirm the recent trend (in Hong Kong) towards a less aggressive underpricing.

Kaya (2012) examines the short-term performance of initial public offerings in Istanbul Stock exchange. This study investigates the performances of all IPOs in Istanbul Stock Exchange (ISE) offered between January 2010 and June 2011. Event study methodology is used to measure the short-term performance of 32 IPOs and daily, end of week, month, 3 months and 6 months basis time windows were employed. The results reveal that IPOs provide positive abnormal return only at the end of third day of trading. In addition, no significance relation finds among IPOs short term performance and IPO firms' age, sector operated in, size, and shares sold to foreign investors.

Zamanian, Mirbagherijam & Khodaparati (2013) analyses the Long-Run and Short-Run Returns of IPO of Public and Private Companies in Tehran Stock Exchange (TSE) markets. The study shows some effective factors on long-term and short-term returns of IPO of public and private companies in Tehran Stock Exchange (TSE) markets. The panel data approach was used to compare determinant factors of returns of IPO either in public and private firms. The results shows that P/E ratio, volume of transactions and size of companies are the main factors of determinant of abnormal long-run returns of IPO in both private and public companies. In the short-run, the IPO's returns of private enterprises related to size, and volume of transaction. Although in the public companies, size, P/E and individual firm's specification were the determinants of short-run IPO's returns. The study concludes that the corporate ownership has no significant impact on returns of IPO in short-run and long-run.

AlShiab (2018) examines a set of 162 Middle East and North Africa (MENA) Initial Public Offerings (IPO's) for the period 2001- 2015, considered the first and most comprehensive data set

investigated to date. Results confirmed that IPO performances were mixed among MENA countries classified into three groups. The first group comprised countries whose IPOs over-performed the Benchmark portfolio over the short-run, but underperformed over the long-run. The second group comprises countries where IPOs underperformed the Benchmark portfolio over the following 60 months post-listing date where such underperformance became quite significant over the long-run in comparison to the short-run. The third group comprises countries whose IPOs experienced cyclical performance changes from over-performance to under-performance and vice versa. Overall, the IPOs went through cycles of price corrections around the fundamental value over the long term when compared to the short-term performance.

Yadav, Dasgupta & Moray (2018) analyses the short-term IPO returns that were issued on the National Stock Exchange (NSE) and Bombay Stock Exchange (BSE) of India. The evaluation of IPO is made on the basis of the returns generated on the day of issue, 10th and 30th day after the issue. The significance of this study can be realised from the fact whether the return generated in short term in comparison to the market are more or less, i.e., the IPO has outperformed the index as a benchmark. The study included a sample of 28 IPOs issued from the year 2013 to 2015. The results show that the mean percentage performance of IPO on the day of issue, 10 and 30 days after the day of issue is 9%, 10% and 10% respectively for NSE and 8%, 9% and 14% respectively for BSE. The above results are also supported by relative valuation index which thus brings a very important conclusion that the Indian Stock markets provide significant returns within 30 days from the date of issue of share.

In Nepalese context, Dahal (2007) reveals that the Nepalese IPOs are heavily oversubscribed and provide the investors 53.25% market adjusted excess rate of return leading to the conclusion that Nepalese IPOs are underpriced too. The study finds that the NEPSE Index and the subscription rate have significant predicting strength on the performance of IPOs. The study results show that phenomenon of oversubscription can be explained by the firm size and the debt equity ratios.

Pradhan and Shrestha (2016) examines the performance and determining variables of IPOs of Nepalese stock markets. The study is based on 61 firms for the period of 2005-2011. The result shows a positive impact of IPO factors (firm size, reputation of issue manager, subscription rate and market condition) on initial return. It indicates that greater the firm size, higher would be the initial return. Similarly, higher the reputation of issue manager, higher would be the initial return, and increase in subscription rate leads to better initial return. The result reveals that better the market condition, higher would be the initial return. The study also confirms a negative relationship between issue size and initial return which implies that greater the issue size, lower would be the initial return. The coefficient of beta was positive and significant for firm size, reputation of issue manager, subscription rate and market condition and initial return whereas the beta coefficient was negative and significant for issue size and initial return.

To sum up, the most of the earlier studies of IPOs are conducted in the context of developed and emerging economies of different parts of the globe. However, such studies are almost nonexistent in Nepalese context. Therefore, the current study is an attempt to address this gap and sheds light on the relation among initial IPO return and explanatory variables, such as issue size, age of the firm, firm

size (total assets), market return and subscription rate of Nepalese stock markets. To be more specific, the study attempts to reveal the factors that influence initial IPO return in Nepalese stock markets.

### III. Data and Methodology

The sample is comprised of 133 initial public offerings during 2005/06 to 2019/20 meeting the following criteria: i) firms with complete data required for the study ii) firms not only issuing the new shares but also listed and traded their share during the period iii) issue of common stock for the first time to general public. The study is based on the secondary data set, the necessary information has been collected from periodical reports and statements published by Securities Board of Nepal (SEBON), Nepal Stock Exchange Ltd (NEPSE) and Nepal Rastra Bank (NRB) provided in their respective websites covering the period of 15 years. Summary of new issue, listed and traded companies along with the sample firm during the period are presented in Table I.

**Table I**  
**Population and Sample Enterprises**

The table contains the summary of new issue, listed and traded companies along with the sample firm during the study period of 15 years, i.e., from 2005/06-2019/20.

Year	No. of New Issues	No. of Listed Companies	No. of Traded Companies	Sample Size (Companies)
2005/06	16	10	05	05
2006/07	14	13	14	13
2007/08	18	15	15	15
2008/09	11	10	14	14
2009/10	36	18	14	14
2010/11	15	33	22	02
2011/12	15	12	11	05
2012/13	22	20	20	04
2013/14	16	10	22	04
2014/15	18	07	07	01
2015/16	11	14	11	11
2016/17	17	12	12	09
2017/18	21	11	11	08
2018/19	28	22	22	15
2019/20	09	13	13	13
<b>Total</b>	<b>267</b>	<b>220</b>	<b>213</b>	<b>133</b>

Source: [www.nepalstock.com](http://www.nepalstock.com)

Altogether, a total of 267 IPOs were made over the 15 years period which is considered as the population of study. Out of 267 new issues during the study period, the final sample of 133 IPOs

of ordinary shares has been selected. The unavailability of past data and information, poor disclosures of accounts & documents, weak information base, lack of existence (liquidation) and merger & acquisitions of many companies are the reasons for excluding rest of the IPOs.

A regression analysis has been carried out in order to test the predictive power of issue size, firm size (total assets), age of the firm, market return and subscription rate. To investigate the factors affecting initial IPOs returns, the following model is specified:

$$R_{it} = \beta_0 + \beta_1 A + \beta_2 R_{mt} + \beta_3 FS + \beta_4 SR + \beta_5 M + \beta_6 \text{Voli} + \varepsilon \dots\dots\dots (1)$$

Where,

$R_{it}$  = Initial return,  $A$  = Age of the firm,  $R_{mt}$  = Market return,  $FS$  = Firm size,  $SR$  = Subscription rate,  $M$  = Market return,  $Voli$  = IPO volume

Summary of explanatory variables and their expected relationship with initial IPOs returns along with the prior reference are as below:

**Table II**  
**Explanatory Variables of Initial Return and Expected Sign**

The table contains the summary of explanatory variables and their expected relationship with initial IPOs returns along with the prior reference.

Variables	Definitions/ Proxies	Expected Sign	Prior Studies
<b>A</b>	The difference between the date of incorporation and the date at which company goes public.	+	Clark (2002), Kaneko et al. (2003), Ljugqvist (2006), Uddin (2008)
<b>R<sub>mt</sub></b>	Markets return using the market index.	+	Derrien (2005), Dahal (2007), Laughran and Ritter (2008), Pradhan and Shrestha (2016)
<b>FS</b>	The total assets of the firm prior to the IPO.	-	Ritter (1984), Purnandam and Swaminathan (2004), Laughran and Ritter (2008)
<b>SR</b>	Ratio of application size to the issue size.	+	Rock (1986), Paudel et al. (1998), Gauldey (2006), Dahal (2007), Pradhan and Shrestha (2016)
<b>I</b>	Issue size	-	Ritter (1984), Beaty and Ritter (1986), Laughran and Ritter (1986), Habib and Ljuqvist (1998), Su et al. (1999)

*Source: Literature survey*

The variables and measures used for the analysing the short run price performances of Nepalese IPOs are described as follows:

### **Underpricing Level or Initial Return ( $R_{it}$ )**

The initial return or underpricing of IPOs has been calculated using the following identity.

$$R_{it} = [(P_1 - OP)/OP] \times 100 \dots \dots \dots (2)$$

Whereas,

$R_{it}$  = underpricing or initial return,  $P_1$  = price observed at end of first trading day  $OP$  = offer price

If initial return is positive, the issue has been underpriced; if initial return is zero, the issue is correctly priced; if initial return is negative, it has been overpriced. Thus, the expression (2), can be viewed as the one-day (or one week or first trading day) initial return on buying an IPO.

### **Market Return ( $Mr$ )**

The returns calculated by expression (2) are deemed raw returns. However, there is need to calculate the market return as well. Given a lag between the setting of the offer price and the beginning of trading on an exchange (anywhere from one day to two or more), the price observed in the market on the first trading day may be high (low) relative to the offer price simply because the stock market as a whole has risen (fallen) over this period. Thus, analysing underpricing, there is need to control the performance of the stock market in general. So, the market return is calculated as in the expression (3).

$$R_{mt} = [(I_1 - I_0)/ I_0] \times 100 \dots \dots \dots (3)$$

Where,

$R_m$  = Market return,  $I_1$  = Level of general market index at first trading day

$I_0$  = Level of general market index at offer date.

If market return is positive, the market has been going up in the time between the setting of the offer price and the listing of the stock on the stock exchange. If market return is negative, the market has been falling.

## IV. Data Analysis and Findings

This section includes description statistics, correlation matrix and regression analysis respectively.

### Descriptive Statistics

Table III presents the summary statistics of variables used in the study. It shows minimum and maximum values, mean, standard deviation and skewness of the variables. Further, Table III shows that some of the companies prefer to go public fast while others go public in a really mature age, the age of the sample firms in study ranges from 0.73 to maximum 15.57 years with mean value and standard deviation of 4.87 years and 3.84 years respectively. The sample firms differ in terms of firm size. The maximum value of the firm size is Rs. 13026.29 million with minimum value of Rs. 7.35 million and standard deviation is Rs.1972.58 million. Gross proceed or issue size measures the amount of earnings the companies received from selling stocks in IPOs, in terms of IPOs issue size, the value ranges from minimum Rs. 0.51 million to maximum Rs. 1600 million with average of Rs. 106.53 million. The wide range of minimum and maximum value of firm size indicates that firms included in the sample vary significantly in terms of their size. The firms also differ in terms of their subscription times (SR), SR falls within the range of minimum 0.27 times to maximum 137.81 times. The initial return ( $R_{it}$ ), measures the return gained by investors from the difference between the price of stock at the close of first day with the offering price, it ranges from -12 percentage to 3003 percentage. On an average, initial public offering gives the 373.40 percent return, which indicates the level of underpricing of Nepalese IPOs. Similarly mean value of market return ( $R_{mt}$ ) is 13.21 percent and the standard deviations is 47.55 percent. In addition, Table III presents the value of skewness of all the variables. The value of skewness for all the variables is greater than one, i.e., all the variables are positively skewed. The value of skewness indicated that data are not normally distributed. Later, data has been normalised by taking log of the data of all the variables.

**Table III**

#### Descriptive Statistics

This table presents no. of observation (N), mean, median, standard deviation, minimum, maximum and skewness values of the 133 sample firms listed in the population of NEPSE till mid July 2020 with 133 observations for the period 2005/06 through 2019/20. **A** is the age of the firm, **FS** is the total assets proxy for the size of the firm, **Vol<sub>i</sub>** refers to issue size, **SR** is the subscription rate, **R<sub>it</sub>** indicates the initial return and **R<sub>mt</sub>** refers the initial Market return.

Variables	Minimum	Maximum	Mean	Std. Deviation	Skewness
<b>A</b> (Years)	0.73	15.57	4.87	3.84	1.24
<b>FS</b> ( Rs. in Millions)	7.35	13026.29	1337.98	1972.58	2.90
<b>Vol<sub>i</sub></b> ( Rs in Millions)	0.51	1600.00	106.53	200.02	4.42



<b>SR</b> (Times)	0.27	137.81	31.12	30.72	1.47
<b>R<sub>it</sub></b> (%)	-12.00	3003.00	373.40	419.90	2.72
<b>R<sub>mt</sub></b> (%)	-60.42	182.59	13.21	47.55	1.22
No. of observations (N)	133				

## Correlation Analysis

The variables used in the study are firm size (total assets), market return, subscription rate, issue size, age of the firm effect on the short-run price performance of IPOs.

**Table IV**

### Correlation Matrix

This table shows the bivariate Pearson's Correlation Coefficient between different pairs of variables used in the study for the analysing the short run return with 132 observations.  $R_{it}$ ,  $A$ ,  $Vol_i$ ,  $FS$ ,  $R_{mt}$ , and  $SR$  are as defined in the Table 3. '\*' indicates that correlation is significant at 0.05 percent level (one tailed) and '\*\*' indicates that correlations is significant at 0.01 percent level (one tailed).

	$R_{it}$	$R_{mt}$	$Vol_i$	$SR$	$A$	$FS$
$R_{it}$	1.00	0.319**	-0.05	-0.500**	-0.147*	0.01
$R_{mt}$		1.00	0.14	-0.12	-0.03	0.07
$Vol_i$			1.00	0.339**	0.193*	0.589**
$SR$				1.00	0.259**	0.09
$A$					1.00	0.271**
$FS$						1.00

Table IV displays Pearson correlation coefficients and significance values. The Pearson correlation coefficient is a measure of linear association between two variables. It shows the correlations among different pairs of explanatory variables are also relatively lower and higher though some of them are statistically significant. Among them initial return is positively and significantly associated with subscription rate with correlation value of 0.50 followed by market return and age of the firm with correlation values 0.319 and 0.147 respectively. Similarly, there is no significant negative relationship between the initial return and issue size. Moreover, there is very weak positive correlation between firm size and initial return. In addition, the correlation between dependent and independent variable is less than 0.70, i.e., there is no issue of multicollinearity between the variables (Berry et al.,1985).

## Regression Analysis

A cross-section regression analysis model has been used to explain the relationship among the dependent variables, i.e., short run initial return and explanatory variables such as issue size, firm size, subscription time, age of the firm and market return. The overall results have been presented in three tables namely Table V, Table VI and Table VII.

**Table V**  
**Model Summary**

This table shows the model summary of the regression equation. In detail the table presents R-square, Adjusted R-square and Standard Error of the Estimate.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1.00	0.57	0.33	0.30	0.31

Table V shows that 33 percent of the variation in dependent variable, i.e., initial IPO return explains collectively by independent variables, i.e., age of the firm, issue size, firm size, subscription rate and market return.

**Table VI**  
**Analysis of Variance (ANOVA)**

This table shows the analysis of variance of the regression equation. In detail the table presents Sum of Squares of regression and residual, degree of freedom, Mean Square, F statistics and level of significance.

	Sum of Squares	df	Mean Square	F	Sig.
Regression	5.81	5.00	1.16	12.30	0.00
Residual	11.99	127.00	0.09		
Total	17.79	132.00			

Table VI shows that F statistics is 12.30 and is also significant at one percent level of significance. Hence, linear regression model provides the best fit for this study. Finally, Table VII summarises the regression result of multivariate model to show the determinants of IPOs underpricing of Nepalese stock markets.

**Table VII**  
**Regression Result on Initial Return**

The table shows regression results of initial stock return on five explanatory variables on 133 firms listed in NEPSE from year 2005/06 to 2019/20 with 133 observations. The dependent variable is initial market return denoted as  $R_{it}$  and independent variables are age of the firm  $A$ , market return  $R_{mt}$ , firm size  $FS$ , subscription times  $SR$ , and issue size  $Vol_i$ . The table also contains t-value and asterisk sign indicates that result is significant level. \*Indicates statistical significance at a 1% level, \*\* Indicates statistical significance at a 5% level, and \*\*\* Indicates statistical significance at a 10% level. In addition, table also reports the D.W. statistics.

$$\text{Model: } R_{it} = \beta_0 + \beta_1 A + \beta_2 R_{mt} + \beta_3 FS + \beta_4 SR + \beta_5 Vol_i + \varepsilon$$

	Unstandardised Coefficients		Standardised Coefficients		t	Sig.
	Beta	Std. Error	Beta			
(Constant)	2.77*	0.13			21.64	0.00
A (Years)	-0.03	0.09	-0.03		-0.36	0.72
$R_{mt}$ (%)	-1.04*	0.31	0.25		3.32	0.00
FS ( Rs. in Millions)	-0.12	0.92	-0.01		-0.13	0.90
SR (Times)	1.71*	0.28	-0.50		-6.05	0.00
$Vol_i$ ( Rs in Millions)	0.06	0.06	0.10		0.99	0.33
DW Statistics	2.017					

Table VII presents the results of regression where the initial return is the dependent variable and age of the firm, market return, firm size, subscription rate and issue size are independent variables. The first variable in model is age of the firm. Prior studies such as Ljungqvist (2006), Clark (2002), Uddin (2008), Chiraphadhanakul and Gunawardana (2005) use company's age prior to the IPO as a main determinant on the post market performance of its shares. In fact, many empirical studies on underpricing have used this factor to explain the initial stock performance across the countries. How long a company has been established prior to its IPO has a positive impact on initial share price. Investors perceive a young company as a higher risk than an established company with a proven track record. Therefore, buyers require a higher return to offset the uncertainty risk of the younger firm. This requirement transforms into a higher level of underpricing, or lower share price, which the firm more or less is advised to do (Ljungqvist, 2006). Clark (2002) finds a statistically significant correlation between firm age at IPO and post IPO excess returns. In Asian markets, the result is restated in a study of Japanese IPOs (Kaneko et al. 2003). Uddin (2008), examines determinants of underpricing in the Singapore and Malaysia stock exchanges using a fairly large sample of 861 IPOs from 1990 to 2000. The result shows a mixed conclusion. While Malaysian IPOs significantly affected by how old the firms are, this factor is insignificant in determining Singaporean IPOs' underpricing. However, age of the firm proves influential in the combined sample which suggests that the Singaporean IPOs result is somewhat questionable. On the other hand, a company's

age is insignificant as a variable for IPOs return in another South East Asian country: Thailand (Chiraphadhanakul and Gunawardana, 2005). However, in Nepalese context, age of the firm found to be weakly negatively related with the initial return although the relationship is not statistically significant.

Similarly, the second variable in the model is market return. Prior studies such as Derrien (2005), Dahal (2007) and Laughran and Ritter (2008) use the market return as the explanatory variable with assumption of positive relationship between them. But the findings of this study contradict with the prior studies. In the present context, market is found to be negatively related to initial return and the result is significant.

The third variable of the model is firm size. Earlier empirical studies such as Ritter (1984), Buckland and Davis (1990), Dalton et al. (2003), Purnandam and Swaminathan (2004), Chiraphadhanakul et al. (2005), Loughran and Ritter (2008), and Islam et al. (2010) confirm that a company's size also influences initial stock return. They explain that since larger firms are perceived as more stable, this characteristic reduces the amount of risk investors are exposed to. This phenomenon is in accordance with winner's curse hypothesis, which associates lower underpricing with lower exposed risk.

Comparable markets in Asia have shown that this variable accounts for how much stocks are underpriced. Evidence found in Thai stock markets (Chiraphadhanakul et al., 2005), Malaysian stock markets (Annuar and Shamsher, 1998), as well as Bangladesh stock markets (Islam et al., 2010) support this notion. As a result of these findings, size of the firm is credible as a determinant of IPO stock price, especially for similar markets in the same region. In Nepalese context, firm size does not show the influential effect on initial return of the firm.

Subscription rate which measures the number of times an IPO has been over or undersubscribed. The fourth variable of the model is statistically significant as well as predictive power also seems better than another variable in the model. This indicates that subscription rate is one of the important variables that have impact on initial market return of the IPOs. Nepalese IPOs initial return is affected by two main variables: subscription rate and market return. Study results are consistent with the findings of Rock (1986), Paudyal et al. (1998) and Hassan et al. (2010).

The fifth variable is issue size in the model. Prior studies such as Beatty and Ritter (1986), Habib and Ljungqvist (1998), and Ritter (1984) find that not only do initial returns on IPOs correlate with the size of the offerings, but that these two variables also negatively affect each other. Overall, evidence suggests that a smaller IPO is riskier than a larger IPO, with all other things being equal. Therefore, a smaller IPO is underpriced more often than a larger IPO to induce investors into taking a higher risk (Ritter et al. 1984). This explanation lends credibility to the winner's curse hypothesis, which dictates that issuers reward uninformed investors for participating in risky IPOs to offset potential loss due to information asymmetry. Later research by Megginson and Weiss (1991) prove the pattern to be consistent. However, they comment that the significance of offering size depends on whether other variables are taken into account. According to their research, the age of a company has more weight in determining the underpricing level.

Nevertheless, recent studies in developing markets encourage the eligibility of offering size as a predictor of the degree of underpricing. A study of IPOs in Chinese markets by Su et al. (1999) reveals that with one percent decrease in the size of an IPO, there is a one percent decrease in the

share price. On the other hand, a one percent increase in the IPO size leads to approximately 0.52 percent decline in the IPO return. Another research on the Indian exchange reveals that on average the size of the issue reduces underpricing by 75 percent (Ranjan and Madhusoodanan, 2004). Last but not least, the IPOs on Chittagong Stock Exchange of Bangladesh, a comparable emerging market with Nepal, have been influenced significantly by offering size (Islam et al. 2010). However, this study indicates positive but insignificant relationship between issue size and initial IPO return and results contradict with the earlier findings of Beatty and Ritter (1986), Habib and Ljungqvist (1998).

## V. Conclusion

This study attempts to examine empirically short run price performance of 133 Nepalese initial public offerings from 2005/06 to 2019/20. On an average, the IPOs are underpriced to the extent of 3003 percent at the offer price. The high initial day return may be due to the over-expectation returns of the investors. Further, the regression analysis of the study reveals that issue size, firm size and age of the firm do not explain the IPO returns in the context of Nepalese primary market which contradict with the findings of developed and other emerging markets. The study reveals subscription rate as the most significant predictor of IPO return. Subscription rate has consistently significant explanatory power in all the models indicating that firms with high subscription rate have higher initial return. These results associated with positive and significant relationship between initial IPO return and subscription rate support the findings of some earlier studies such as by Rock (1986), Paudel et al. (1998), Gouldey (2006) and Dahal (2007) and Pradhan and Shrestha (2016). The study also reveals that market is negatively related to initial return and the result is significant. The finding contradicts with the prior studies such as Derrien (2005), Dahal (2007), and Laughran and Ritter (2008).

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