

# Board Diversity and Operating Performance of Companies Making Initial Public Offerings (IPOs) in Indian Capital Market- A Conceptual Framework

## Abstract

Initial Public Offerings (IPO) has gained importance because of resource mobilization and diversification of equity base. This paper tends to build a conceptual model for examining the effect of operating performance on the pre and post issue of shares. Earlier studies conducted consider the short run and long run performance of IPOs. Based, on this measure an attempt has been made to propose an analytical model to determine the operating performance of IPOs. This paper has made an attempt to identify various factors as brought by empirical studies done in the past which have bearing on operating performance of IPO, board diversity and pre and post issue of shares. On the basis of various studies conducted, variables showed that pre issue operating performance tends to be positive or negative depending on the parameters used whereas post issue operating performance tends to decline after going public.

**Keywords:** Operating Performance, Board Diversity, Underpricing.

## Introduction

To measure long run after market performance, IPOs has generated considerable interest in the minds of researchers, politicians, and practitioners around the world. Operating performance measures long run performance of IPOs during subsequent years of performance. Firms at the time of issue for greater future prospects provide better picture of their earnings. Three reasons according to studies conducted earlier, for decline in post-issue performance is agency theory which considers separation of owners and managers, timing of issue and prevailing market conditions. It generally considers the values provided at the time of issue, may not be able to sustain for long because of changing market scenario. Different measures such as ROA, ROE and AT are considered to find out the true financial position of concern because trends in these ratios indicate whether performance has improved or not.

## Objective of the Study

The present study will attempt to build analytical model with following objectives

1. The relationship between pre-issue operating performance and level of IPO underpricing.
2. The relationship between performances of IPOs and post-issue operating performance.
3. The changes in post-issue operating performance relative to pre-issue level.
4. The relationship between board diversity and post-issue operating performance.

## Parameters of Operating Performance

The first is return on assets (ROA) which was calculated by dividing income before extraordinary item by total assets as done by Shelor and Anderson (1998). It measures the firm's capacity to utilize its assets as to generate income for the concern. ROA has been widely used in previous studies such as those of Daniels and Bracker(1989), Haar (1989). Following Shelor and Anderson(1998) the second operating performance measurement was total asset turnover ratio(ATO) which was calculated by dividing net sales by total assets. ATO is an accepted measure of efficiency of utilization of corporate resources for generation of gross sales revenue (Lewellen and Huntsman 1970). The final operating performance

## Chaya

Research Scholar,  
School of Management Studies,  
Punjabi University,  
Patiala, India

## Vikas Deep

Assistant Professor,  
USBS,  
Talwandi Sabo,  
Regional Campus  
Punjabi University,  
Patiala, India

measurement was return on sales (ROS) as used by Shelor and Anderson (1998). It was calculated by dividing operating income by net sales. This gives measure of rate at which sales increase after infusion of more funds in the company. Sometimes, the managers in the company allocate resources to the activities which tend to benefit them, leaving aside the interest of investors which may be due to divergence of ownership and control. Sometimes due to window dressing of accounting figures may result in overstatement of pre-IPO operating levels and understatement of post-IPO operating levels.

#### **Underpricing of Initial Public Offering (IPO)**

##### **Initial Public Offering (IPO)**

It is process of selling securities to the general public for the first time in the primary market. It can be done either through book building process or fixed price option or combination of these two. Since, IPOs have been considered as an important source of corporate financing. Several studies validated two anomalies in pricing of IPOs of equity shares either through (a) underpricing phenomenon or (b) in the long run IPOs tends to be overpriced or underpriced.

**Underpricing:** It is difference between closing price of first trading day and offer price. It is based on winners curse theory which considers information asymmetry among investors. When IPOs are traded, underpricing leads to increase value of stock which would gain investors to whom shares are allocated at offer price. However, underpricing in IPO results in money left on the table. Moreover, when the stock is offered at higher price there would be loss of capital for the company.

Enough empirical evidence suggests that IPOs are underpriced on listing day (Shah 1995; Sahoo 2010). There are many theoretical explanations of underpricing of IPOs e.g.: winners curse hypothesis (Rock 1986), cascades hypothesis (Welch 1992), signaling hypothesis (Allen & Faulhaber 1989), costly information acquisition hypothesis, stabilization hypothesis (Rudd 1993), investment bankers reputation hypothesis reduced monitoring hypothesis & regulatory constraints hypothesis (Tinic 1988)

Rock (1986) There is information asymmetry i.e investors have full knowledge of the market. When issues are underpriced, they tend to oversubscribe the shares.

Allen and Faulhaber (1989) When the IPOs are offered to the public, time period should be the prior concern, because directly or indirectly it affects the level of underpricing.

Long run performance of IPOs: It considers growth of firms superior initially, but tends to deflate when investors believe the inflated long term growth projections. It generally assumed that IPOs do not underperform in the long run. The long run performance of IPOs up to a period of 36 months are measured by using wealth relative and average BHAR both being adjusted with market index. MAAR is calculated as raw return on the stock minus the return on market benchmark while wealth relative magnitude is an indicator of performance of stock Vis-a-Vis the benchmark index. McGuinness (1993) found that

during 2 years post listing period the returns were positive for first few months of listing but then the trend reversed resulting in long-run decline in trends with significant negative returns between listing day and other days.

##### **Board Diversity**

In area of research is predominantly important as it tends to explain the board of directors composition which ensures shareholders and managers interest and their relationship. It includes: observable diversity (gender, age, size, nationality, religion) and less visible diversity (educational background, functional background, industry experience).

##### **Board of Directors and Size**

One of the most important determinants of top level management is board size. It should be effective for the progression of firm and valuing it. In board size, independent directors are necessary because they tend to maintain good relations with shareholders.

##### **Board of Directors and Age**

Another factor is age which highly impacts the working of the company in either positive or negative way. There is myth that old age directors tends to provide good economic resources and experiences wisdom.

##### **Board of Directors and Gender**

After Companies Act 2013, one women director is mandatory. Men and women both can function and perform their duties in their respective ways but women's tends to improve the corporate value.

For the purpose of study, secondary data was used. Lots of empirical papers were reviewed to build an analytical model.

##### **Relationship between pre-issue operating performance and level of IPO underpricing**

It considers operating performance following an IPO. Pre-IPO operating performance explains a substantial portion of variation in the revision from midpoint of the initial price range to the IPO offer price.

Scribano (2015) studied the impact of pre-IPO operating performance of Italian firms by using three operating performances EBITDA margin, return on assets and sales growth (Cai and Wei 1997). It showed positive relationship between ownership and operating performance.

Zaluki (2008) investigates operating performance and existence of earnings management on Malaysian IPO firms. Variables like operating income on operating assets, operating income on sales are used. He found deterioration in operating performance relative to matching companies following IPOs.

Aharony et al. (2000) analyzed companies return on assets (ROA) in the financial year and year after that. He found deflation in the IPOs of companies which are spurred by the government that is fuel, energy.

Chan et al. (2001) studied that increase in operating performance was not because of

deterioration in business exercises but because of reports that are window dressed

**TABLE 1: Relationship between Pre-Issue Operating Performances Level of IPO Underpricing**

Sr No.	Author(s)	Period	Sample Size	Operating performance measure	Performance relative to pre-issue level
1	Scribano (2015)	2003-2009	58	<ul style="list-style-type: none"> <li>• EBITDA margin</li> <li>• Sales growth</li> <li>• ROA</li> </ul>	(+) (+) (+)
2	Zaluki (2008)	1990-2000	254	<ul style="list-style-type: none"> <li>• Operating income on operating asset</li> <li>• Operating income on sales</li> </ul>	(-) (-)
3	Aharony et al (2000)	1992-1995	83	<ul style="list-style-type: none"> <li>• ROA</li> </ul>	(-)
4	Peristiani& Hong (2004)	1980-2000		<ul style="list-style-type: none"> <li>• Profitability (ROA)</li> </ul>	(-)
5	Mikkeleson et al (1997)		700	<ul style="list-style-type: none"> <li>• ROA</li> </ul>	(-)
6	Chan et. al.(2001)	2001-2011	357	<ul style="list-style-type: none"> <li>• ROA</li> </ul>	(-)

Source: compiled on the basis of literature review

### The Relationship Between Operating Performance Of IPOs And Post-Issue Operating Performance

It considers operating performance after the IPO. A significant decline in operating performance subsequent to the IPO is found. Post issue performance declines in market to book ratio, price earnings ratio and earning per share.

Jain & Kini (2007) examined post-IPO operating performance and equity retention by original entrepreneurs is correlated. No relation found

between post-IPO operating performance and initial level of underpricing. They studied that after the issue there is decline in market to book ratio, earning per share and price earnings ratio.

Performance of IPO firms declines significantly after the issue because of transition from private to public ownership which leads to increased agency costs. (Khurshed, Paleari, VismaraAlanazi& Liu (2013), Bhatia & Singh (2009) Kim, Kitsabunnarat & Nofsinger (2004)).

**Table 2: Relationship between Operating Performance of IPOs And Post-Issue Operating Performance**

S. No.	Author(s)	Period	Sample size	Operating performance measure	Performance relative to Post-issue
1	Khurshed, Paleari&Vismara (2003)	1995-1999	621	<ol style="list-style-type: none"> <li>1. ROA</li> <li>2. ROE</li> <li>3. Cash flow from operating activities</li> </ol>	(-) (-)
2	Bhatia & Singh(2009)	1992-2001	300	<ol style="list-style-type: none"> <li>1. ROA</li> <li>2. ROE</li> <li>3. Growth in sales</li> <li>4. Operating cash flow on assets</li> <li>5. Asset turnover</li> <li>6. Capital expenditure growth rate</li> </ol>	(-) (-) (+) (-) (-) (+)
3	Kim, Kitsabunnarat&Nofsinger(2004)	1987-1993	133	<ol style="list-style-type: none"> <li>1. ROA</li> <li>2. ROE</li> </ol>	(-) (-)
4	Jain &Kini (1994)	1976-1988	682	<ol style="list-style-type: none"> <li>1. Market to book ratio</li> <li>2. EPS</li> <li>3. Price earnings ratio</li> </ol>	(-) (-) (-)

Source: compiled on the basis of literature review.

### The Changes in Post-Issue Operating Performance Relative to Pre-Issue Level

It considers changes in pre and post issue performance relative to following an IPO and after IPO. It is so because of prevailing market conditions, earning management figures used to change which may not present true picture of the concern.

They studied influence of pre-IPO factors on post-IPO operating performance and examined positive relationship between pre-IPO profitability and post IPO performance. (Ho and Hamzah (2011),

Valarmathi, Jossy, Babu investigated that operating performance tends to increase or decrease as they make transition from private to public ownership. They studied significant decline in operating performance subsequent to IPO (Jain and Kini (1994), Coakley et al. (2004)).

Teoh, Welch and Wong (1998) examined that discretionary current accruals of the seasoned issuers increased significantly prior to the offerings of the IPO than decrease in post issue period.

**Table 3: Changes in Post-Issue Operating Performance Relative To Pre-Issue level**

S. No.	Author(s)	Operating performance measure	Performance relative to pre issue and post issue
1	Ho &Hamzah (2011)	1. ROA 2. ROE 3. AT 4. Dilution of ownership	(+) (+) (+) (+)
2	Teoh , Welch & Wong (1998)	1. Abnormal Accruals	(-)
3	Jain &Kini (1994)	1. ROA 2. AT 3. ROS	(+) (+) (+)
4	Valarmathi, Jossy&Babu	1. ROA 2. ROE 3. Dilution of ownership 4. ROS	(-) (-) (+) (-)

**Source:** Compiled on the basis of literature review.

#### **Relationship between board diversity and post-issue operating performance**

Since, operating performance will be studied with different measures similarly board diversity includes:

#### **Total no of Independent Directors on Board**

Arosa, Iturralde, Maseda (2013) studied the influence of board of directors on firm's performance. They documented negative impact of outside directors and size of board on operating performance of the concern.

Herdhayinta (2013) investigates the impact of board diversity on operating performance. Variables like gender, firm size, board size were

considered to measure the performance of the concern. He examined that gender diversity and financial performance are positively correlated.

#### **Gender Diversity and Experience**

Zaluki (2012) studied representation of women on board as board of director in Malaysia. He analyzed that the greater the percentage of women's on board lead to lower long run underperformance in post-IPO period.

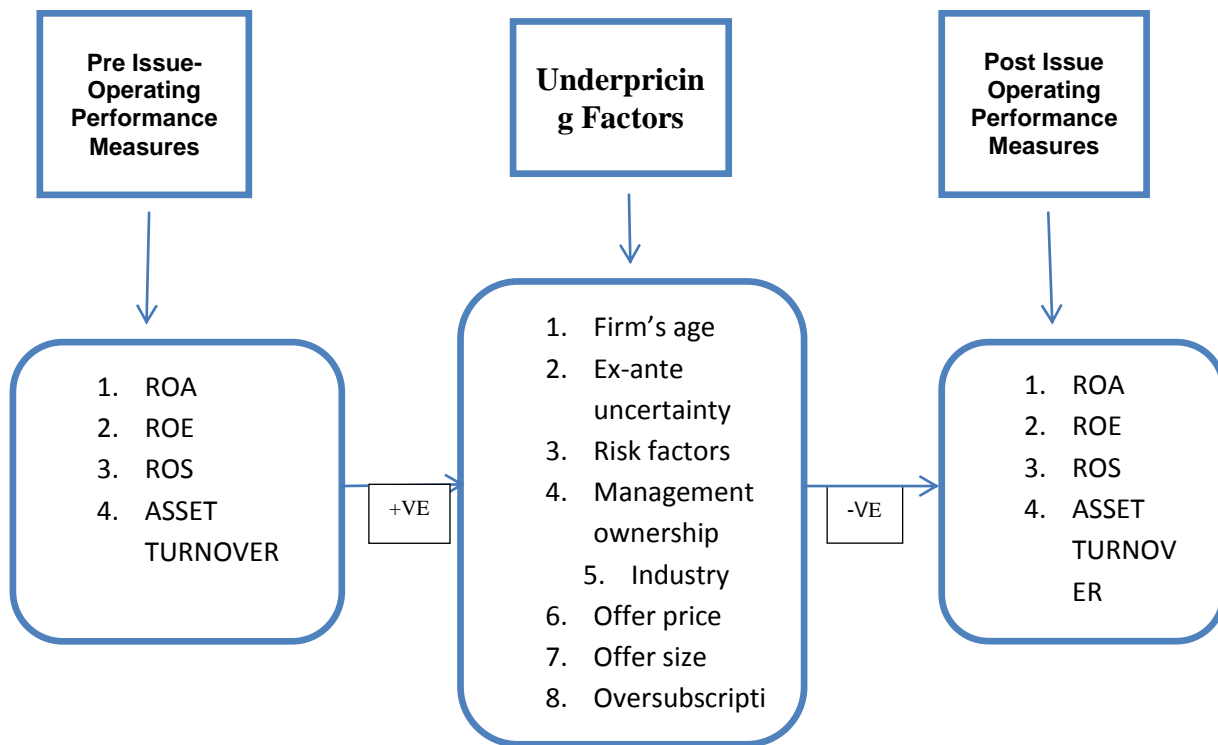
Shrader, Blackburn, Iles (1997) analyzed percentage of women's as board members and two measures of value (ROA & ROE). They examined negative relationship between percentage of women on board and firm value.

**Table 4: Relationship between Board Diversity and Post-Issue Operating Performance**

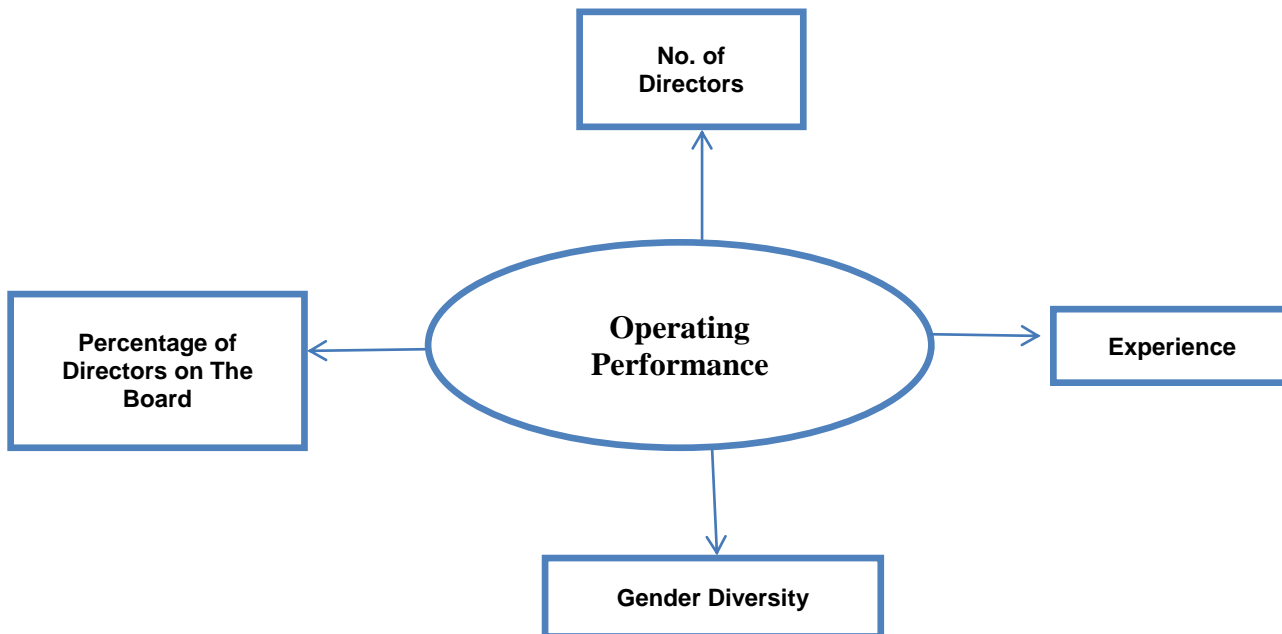
S.no	Author(s)	Period	Sample Size	Operating Performance Measures	Performance relative
1	Arosa, Iturralde, Maseda	2006	307	Firms Profitability Board Composition Board Size Board Activity Leadership CEO Tenure Firm Size Growth Opportunity	(+) (-) (+) (-) (-) (-) (-)
2	Herdhayinta	2013	50	Gender Nationality Board Size Firm Size Board Independence	(+) (-) (+) (+) (+)

**Source:** compiled on the basis of literature review

**Figure 1: Relationship of Underpricing With Pre And Post- Issue Operating Performance:**



**Figure 2: Relationship of Board Diversity and Post-Issue Operating Performance**



**Conclusion**

Finance is the nerve center of every business. There are many sources of finance either it may be equity or through debt but the important way to arrange fiancé is through IPO. Earlier studies conducted consider measures of pre-issue operating performance are ROA, ROE ATO which showed positive as well as negative relationship whereas post

issue operating performance measures tends to be same but it showed negative relationship as performance tends to decline after going public. Lots of empirical research can be done in future to address these issues. Here are the conceptual models drawn on the basis of relationship between the factors *figure1 and figure 2:*

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