# Pre-Acquisition Performance Analysis of Indian Target Firms

Gaurav Barick\* and Sheeba Kapil\*\*

The purpose of this paper is to compare the pre-acquisition performance of domestic and cross-border Indian target firms. Past studies suggest that foreign investors mostly acquire well-performing domestic firms, while domestic target firms invest more often in poorly performing firms. But in India's case, this theory could differ due to the distinct factors impacting the relative costs and benefits, like the availability of cheap assets in India due to high bank NPA, the economic inefficiencies due to lack of technology and the capital-regulatory constraints. By studying 133 target firms, the study finds that foreign acquirers select those targets which have viable product line, good network, and large asset size with low cash holdings. On the other hand, domestic investors acquire those target firms which have high public holdings and generate handsome top-line products in comparison to their industry peers but struggle to convert this top line into a reasonable bottom line.

#### Introduction

Acquisitions are categorized as domestic acquisitions or cross-border acquisitions. Acquisitions where the acquirer and target firm operate in the same country are called domestic acquisitions, whereas cross-border acquisitions are those where the acquirer belongs to a foreign country and the target firm belongs to the home country.

There are two main competing motivations behind acquisitions:

- 1. Corporate Control Hypothesis: According to this hypothesis, poorly-performing companies often become takeover targets for synergy gains.
- 2. Market Entry Hypothesis: According to this hypothesis, companies enter into new market through acquisition in order to tap the significant market potential.

Usually, the modes of entering a market can be either equity-based (e.g., acquisition, greenfield, joint ventures) or non-equity-based (e.g., export, debt funding, alliance), as the decision to acquire a firm is essentially an investment decision in case of capital budgeting process. According to Ernst and Young (1994), the three major components of the analytical structure for Mergers and Acquisitions (M&A) evaluation criteria are industry competitive

- \* Research Scholar, Indian Institute of Foreign Trade, New Delhi, India. E-mail: gauravbarick@gmail.com
- \*\* Associate Professor, Indian Institute of Foreign Trade, New Delhi, India. E-mail: Sheebakapil15@gmail.com

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factors, operating strategy and target firms' competitive position. The most preferred entry mode choice for entering any foreign market was found to be the acquisition of an existing local high technology firm, thus forming a duopoly with a local low technology firm (Gorg, 2000). Therefore, it is seen that existing operating characteristics of a company play a vital role in the acquisition decision-making process.

While pursuing a cross-border acquisition, firms consider various country, industry and firm-level factors. Past studies show that cross-border acquisitions are motivated by the Market Entry Hypothesis (foreign company acquires efficient domestic firms) and domestic acquisitions in emerging markets serve as a market for Corporate Control Hypothesis (domestic acquirers invest in poorly performing local firms with a view to improving their productivity and competence). According to Zhu et al. (2010), target firms of domestic acquisitions in emerging markets underperform target firms of cross-border acquisitions in the pre-acquisition period. Fukao et al. (2008) conducted a firm-level study in Japan and found that in case of domestic acquisitions, Japanese firms tend to target inefficient domestic firms with high leverage ratio, whereas in case of cross-border acquisitions, foreign firms prefer well performing Japanese firms. According to Zou and Simpson (2008), industry size and profitability are among the key determinates of cross-border M&A over the past few decades in China. Moreover, intangible resources and intellectual capability favor more of crossborder acquisition activities into China. Blonigen et al. (2013) found that foreign acquirers prefer such targets in the domestic country that have maintained high efficiency and competency levels for several years prior to acquisition.

Foreign markets are characterized by high information asymmetry and foreign acquirer usually has little knowledge and experience in doing business in the local domestic markets. Thus, foreign acquirers have less information about the valuation and business profile of the target firm. Differences in language, cultural, political, and financial systems make it more difficult for foreign firms to start new businesses in overseas markets. Therefore, foreign firms prefer large, competent and well-organized domestic firms. On the other hand, domestic acquirers have networking, intellectual and communication advantages and are also familiar with the governance system and legal framework of the country as against the foreign acquirer. As a result, it is relatively easier for domestic acquirers to identify efficient firms in the local market in order to acquire them at a lower valuation. Zhan (2014) conducted firmlevel study on banking sector and found that efficient banks have a higher chance to be acquired by foreign firms. It is observed that all these studies were conducted in different developed economies in Asia and the rest of the world. The studies indicate the relevance of gaining significant knowledge about such M&A procedures, as they are considered important investment decisions made by firms in order to either become more competitive in the existing domestic market or to acquire new markets in foreign countries. A study in this area would help identify factors influencing the decision making for M&As and provide valuable inputs to the firms seeking such acquisitions.

In case of developing economies like India, limited information and studies are available in this regard. However, it has been observed that the inflow of Foreign Direct Investments

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(FDI) to India has increased considerably since the latter half of the 1990s. The major part of the latest inflows of FDI to India were in the form of acquisitions. There has been a significant increase in the value and number of cross-border acquisitions in India lately. Corporate India's M&A deals rose by 12% to an estimated \$15.7 bn in the first half of 2016, mostly driven by domestic investors. Cross-border transactions in the first half included \$3.9 bn worth of inbound deals and \$3.1 bn worth of outbound deals (*The Financial Express*, July 19, 2016). Further, the report says that domestic M&A space was dominated by consolidation among start-ups (accounting for 25% of total M&A volume) to strengthen their market positions in an increasingly competitive market. Now the big question is—"Are the drivers of domestic and cross-border acquisitions in the developing Indian economy different from those of the developed economies?" Despite the intensive research on M&A in the last decade, the availability of literature on pre-acquisition context is limited. Thus, the present paper attempts to examine the pre-acquisition performance of the Indian target firms including domestic as well as cross-border acquisition targets.

## Literature Review

In the age of globalization, firms need to enhance their competitiveness in order to survive and sustain over a period of time. As elaborated by Paul (2003) with the entry of foreign players, only the successful firms can survive the merger or acquisition attempts. The small or incompetent companies often look at mergers or acquisitions by big companies as a means of short-term gain and a measure to survive the increasing competition. The acquirers gain by entering new markets and increasing their market share in the long run.

In the Indian context, the perfect example of competitiveness is the ICICI Bank acquisition strategy. This was the case in the Bank of Madura and ICICI Bank merger. While the shareholders of Bank of Madura gained from the merger in the short run, the acquirer company, i.e., ICICI Bank could increase its customer base, expand its business and add more branches to its network across India, to further strengthen its position in the Indian banking industry in the long run.

Another domestic acquisition by ICICI Bank took place in 2010 when it acquired the Jaipur-based Bank of Rajasthan. Through this acquisition, the ICICI Bank attempted to consolidate the scattered banking industry in India by taking over small-sized banks to increase its customer base and market share. This was ICICI's strategy to expand its presence in the northwestern region of the country by taking over the small Bank of Rajasthan and valuing the bank at 2.9 times its book value. The Bank of Rajasthan was suffering from continuous losses and had a weak management, making it a good target for ICICI Bank to acquire and strengthen its foothold in the northwestern region by acquiring the Bank of Rajasthan's customer base. Such acquisitions hold synergic gains for both the acquirer and the target firms (Sharma, 2012).

In the case of the Japanese acquisition of Indian firm Ranbaxy, the Indian firm was given a much higher premium for the share acquired. The Japanese firm Dai-Ichi needed greater

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market access and therefore acquired a share in Ranbaxy at a much higher premium. Paul and Bhawser (2011) highlighted the rationale behind the international acquisition of a domestic firm. Dai-Ichi acquired the shares of Ranbaxy at a premium of 53.5% because it saw potential in Ranbaxy's business in the Indian market and its foreign subsidiaries in several other countries. The acquirer was itself a successful leading pharmaceutical firm in Japan. It was a strategic transaction for Ranbaxy which completely transformed business by merging together a generic company and an innovator company. Dai-Ichi lacked the low cost development and manufacturing backup of generic substitution drugs of branded innovator drugs, which they acquired through the acquisition of Ranbaxy.

According to a study on the strategic and financial similarities of banking acquisitions by Kuriakose and Paul (2016), M&A are processes of financial transformations that lead to consolidation. The strategic decisions pertaining to such mergers depend upon the premerger financials as they are responsible for the post-merger performances of the merged firms. Every financial institution or bank is different from the other and therefore has dissimilarities in most key areas like financial leverage, efficiency, prudential norms, and diversity of earnings, which result in different post-merger performances. Sometimes, such mergers can also have an adverse effect on the post-merger performance.

A comprehensive review by Xie *et al.* (2017) studying the determinants of country-specific cross-border M&A suggested that inward acquisitions are higher when the host country's institutional laws applicable in the financial markets, taxation rules and regulations and corporate governance practices are favorable. It further suggested that differences on account of such regulatory measures and policies between the developed and developing economies can be moderated by typical characteristics of the target country like the market size, natural resource base, weak institutional laws pertaining to corporate tax and capital tax.

There was limited literature on the effects of pre-acquisition characteristics of target firm on Indian market and we had to therefore delve into literature available on the US and UK. There were only a few studies which distinguished between determinants of cross-border and domestic acquisition. Understanding and analysis of the pre-acquisition characteristics and performance of target firm of distinct developed economies gave us an insight into the matter and the related literature was studied. The literature on this topic exhibits two distinct points of focus: (1) The characteristics of target firms that influence takeover considerations; and (2) The methodological issues in building a robust predictive model.

# **Characteristics of Target Firms**

# 1980s-1990s: Era of Developing Successful Models

The theories on the financial characteristics of target firms to identify the target firms from the non-target firms started from 1970 onwards when Monroe and Simkowitz (1971) studied M&A activity in the UK and established that growth rates were better predictors of target firms than the size of the firms. According to them, target firms with higher growth rates

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turned into more profitable acquisitions than large-sized target firms (Monroe and Simkowitz, 1971; and Jucunda, 2014). After the 1980s more research was conducted to develop theoretical models to identify the characteristics of target firms. Palepu (1986) worked on the methodological flaws in the previous researches that used binary state prediction models using skewed distribution for two states of interest. Palepu used the optimal cut-off probability theory instead of developing a well-defined contextual decision model. His acquisition likelihood model specified the functional relationship between the target firm's characteristics and acquisition likelihood in a given period of time. His model study supported the 'inefficient management' and 'market for corporate control' hypotheses indicating that the acquired target firms were small-sized with weaker operating performance during the pre-acquisition period.

Until the 1990s, researchers used only the raw financial data and financial ratios as independent variables for determining the attractiveness of the target firms for acquisition. However, Platt and Platt (1990) developed the Industry Relative Ratio (IRR) in place of the ordinary financial ratios based on raw data as a measure to control the stability problems. The annual financial ratio of the target firm for a particular year was divided by the average financial ratios of all the firms in the same industry for that year to derive the IRR. IRR has shown to improve the predictive ability of the logit model and can be used in various other areas of research by effectively controlling industry variations to produce more efficient forecasts (Platt and Platt, 1990; and Jucunda, 2014).

#### 2000-2010: Prediction of Target Firm's Characteristics

During 2000-2010, researchers focused more on predicting the target firm characteristics. According to Sorensen (2000), financial ratios are less effective in prediction of target firms available for mergers and that acquisition of target firms is more profitable than the non-merging firms. Pawaskar (2001), who studied 36 cases of merger between 1992 and 1995, reported that the only major difference between the financial characteristics of firms involved in a merger was on the basis of size, as the target firms are smaller in terms of total assets than the other firms in the industry. As per Alcalde and Espitia (2003), firms which were targeted for acquisition had lower profitability and lower market valuation than other companies operating in the same sector.

The general conclusion of the studies based on the US and UK markets, is that the target firms with low valuation and small size appear more profitable and attractive to the acquirer in comparison to large-sized firms. These studies did not distinguish between the cross-border acquisitions and the domestic acquisitions.

#### Empirical Analyses in the Context of the Indian Market

Empirical analysis of the takeover data in the Indian context indicated that 'expected returns to shareholders' were positively related to the takeover likelihood (Panigrahi, 2004). As per Panigrahi (2004), higher the returns to shareholders, the higher are the chances of takeover. Kumar and Rajib (2007) asserted that acquirer firms have higher sales, profits and cash flow than the other firms in the control group of similar size within the same industry, while the



merging firms show better financial performance. Their study results supported the 'market for control' hypothesis and partially indicated that managerial efficiency and disciplinary motives drove the acquisitions in the Indian F&B industry.

#### Characteristic Difference of Cross-Border and Domestic Targets

Another section of existing literature examines the characteristic differences between crossborder acquisitions and domestic target acquisition. Georgopoulos et al. (2007) conducted a study of 168 manufacturing companies of Greek origin and found that targets of crossborder acquisitions were larger in size than the targets of domestic acquisitions. Product differentiation and liquidity of cross-border acquisitions is higher than that of domestic acquisitions. Bhalla (2011) studied 288 firms from the financial services sector of India for the period 1997-98 to 2007-08. The study used the logit model and found that results support the 'market for control' hypothesis. The result shows that acquiring firms have greater size, superior assets position and supervision. Zhu et al. (2010) studied 1,171 domestic acquisitions and 537 cross-border acquisitions of publicly listed firms in 20 emerging countries by using methods like Wilcoxon Z, multinomial and binary regression and found that cross-border acquisitions outperformed target firms in case of domestic acquisitions during the preacquisition period. He further stated that domestic partial acquisition, in emerging markets, serves as a mechanism for corporate control, while cross-border partial acquisitions are motivated by the 'strategic market entry' rationale. Banerjee and Nayak (2015) studied the determinants of domestic versus cross-border acquisitions in the pharmaceutical industry and indicated that companies with fewer drug approvals in the preceding five years but higher R&D expenditures (as a percentage of sales) were preferred as targets by crossborder acquirers. Cross-border targets were found to be financially worse off than the domestic targets, according to a study by Chen and Su (1997) based in the US market, emphasizing the significance of logit model over random predictions. As per Caiazza et al. (2014), cross-border acquirers are relatively large-sized and more profitable in comparison to domestic acquirers.

#### Macroeconomic Changes and Target Firm

Erel et al. (2012) highlighted the macroeconomic factors affecting the cross-border acquisitions and selection of target firms indicating that firms from weaker performing economies tend to become targets for acquisitions. Whereas firms from economies with better performing equity markets, relatively high Tobin Q and appreciated currency tend to be acquirers in case of cross-border acquisitions. The results also show that valuation plays a key role in motivating M&As. Barai and Mohanty (2012) developed a prediction model for acquisition targets in India using Logit regression. Traditional determinants like size and growth-resource were not found to be significant in the Indian context.

#### Characteristics of Target Versus Non-Target

Various other studies also provide comparisons of characteristics of acquired firms with those of matched samples of firms that were not acquired. The overall evidence indicates that acquired firms tend to be smaller and cheaper. Benston *et al.* (1995) suggested that

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large institutions were less desirable for acquisition purposes due to cost-of-capital and restructuring problems. Byrd and Stammer (1997) and Jucunda (2014) conducted an empirical research on oil industry and found that target firms have lower market valuation than non-target firms but high levels of managerial holding.

In contrast to the earlier studies, Benston *et al.* (1995), Byrd and Stammer (1997), and Hunter and Komis (2000) indicated that bidders chose those targets which were financially sound, as compared to those which cannot provide deep debt capacity to the bidder.

#### **Methodological Issues**

#### Selection of Determinants/Variables

Most of the past studies considered a significant number of financial parameters on an informal basis and reduced them using multicollinearity or other techniques. The most commonly used variables are 'book value' of assets, debt/equity, cash/total assets, profit/net worth, price/book value, profit margin and assets utilization. However, financial ratios used to represent these raw variables differed from researcher to researcher. For example, the size variable has been substituted by book value of assets (Palepu, 1986), sales (Chen and Su, 1997) and market capitalization (Barnes, 2000).

Ambrose and Meggison (1992) used institutional shareholdings as new variables, for examining the deterrent effects of various takeover defenses and found that probability of receiving a takeover bid is positively related to tangible assets and negatively related to firm size and net change in institutional holdings. Grossman and Hart (1980) argued that no bidder will ever find it profitable to take over a company with completely dispersed shareholding. Shleifer and Vishny (2003) asserted that presence of large shareholders facilitate takeovers.

## Selection of Targets

Belkaoui (1978) and Barnes (1998) considered all firms that have been the subject of takeover attempts within the estimation period, irrespective of the attempt's success as targets. Whereas Palepu (1986) segregated hostile and friendly takeovers as cases where preferential allotments were made to the acquirer and the acquired firms were not considered as target. Bartley and Boardman (1990) stated that firms that face investment attempts exceeding 5% of ownership are targets and cannot be included as non-targets (5% threshold at which disclosure norms are invoked in the US as per Securities and Exchange Commission).

#### Selection of Control Sample (Non-Targets)

Most of the researchers such as Palepu (1986) and Powell (1997) have selected control sample randomly, however Chen and Su (1997), Barnes (1990, 1998 and 2000) and Sharma and Ho (2002) have selected companies that match the assets, or sales, or market capitalization of target firms. Further, Chen and Su (1997) found that logit model is better than random prediction.



#### Research Gap

There is a dearth of available literature on characteristics of target firms specifically in case of Indian target firms. There are not many empirical researches conducted in the field and most of the available studies are based on the developed US and UK economies supporting the 'corporate control' hypothesis. As discussed earlier, Indian economy is different from the developed economies of the UK and US. As a result, past theories based on the US, UK and other developed economies may not hold true in case of India. Also, different factors influence different stages of development and may affect the drivers of M&A activity differently in the developing economies. For the acquisition of companies, broadly two types of effects, namely, the price effect and the future economic growth effect play a role while adjudication.

Jucunda (2014) conducted a meta-analysis of studies available from 1970 on pre-acquisition targets and found that most of the studies in the emerging markets seem to have adopted the theories and models from the developed west. As such the theories and models of the west may not be applicable in the developing economies. Thus, testing of old theories of west and developing new models for developing economies is necessary. Moreover, as Garita and Marrewijk (2007) indicated the underlying forces influencing cross-border M&As as being (i) a country level financial openness, (ii) macroeconomic performance, (iii) the investment environment, (iv) the quality of institutions, and (v) global factors, it is inferred that separate studies need to be conducted for developing economies.

## **Need for the Study**

The question that arises here is whether the above-mentioned theories hold true in the Indian market as well. In case they do not, the next question, to seek an answer for, is whether foreign firms prefer inefficient Indian domestic firms for acquisitions. Indian economy is different from western markets; therefore in India the regulatory barriers to cross-border deals not only decrease the frequency and number of cross-border acquisitions but also change the type of target firms. Moeller *et al.* (2012) studied how the economy impacts the acquisition activities. She conducted a study by using (MARC M&A maturity index) 36 factors which capture cultural, economic, financial, political, technological and legal characteristics from 175 countries. The index categorizes different development stages of growth in M&A activity. According to this index, developed countries like the US and UK are in the mature stage, whereas developing countries like India are in the emerging state of development. The study further says that drivers of M&A activity differ in the US, UK and India.

Thus, for studying the performance of the target firms, one has to look at the respective economies of the acquirer firm and target firm. For example, in India, where the scope of cost minimization and benefit maximization is huge, owing to economic inefficiency and higher NPA in Indian banking sector (due to mounting pressure from lenders, debt-ridden companies sell their assets at a cheaper price), one can expect foreign companies to actively look for opportunities to enter the Indian market. According to Bruner *et al.* (2002), emerging

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economy differs from developed economy in a couple of areas such as taxes and transaction costs, liquidity, accounting transparency and governance. According to Srinivasa (2015), target country's regulation, law, financial system, accounting and tax provisions, economic condition, investor protection, geographical, political and cultural factors play an important role in cross-border acquisition.

In comparison to other major emerging economies, growth rate in India has been robust. Moreover, on the development front, India could become the third largest economy in the world after 2030 making it one of the biggest markets world over. FDI in India increased by 29% during the period from October 2014 to December 2015 (post the launch of Make in India campaign). India ranked highest internationally in terms of consumer confidence for the October-December quarter of 2015. Vyas (2015) found the determinants of FDI in India to be (1) Stable policies, (2) Economic factors, (3) Cheap labor, (4) Basic infrastructure, (5) Unexplored markets, and (6) Availability of natural resources, through an analytical study.

The motives of acquisition also depend upon industry barriers to entry and industry size. According to Rossi and Volpin (2004), foreign acquirers target those countries for cross-border acquisitions where investor protection regulations and laws are relatively poor. In the study conducted by Acs and Terjesen (2013), new ventures also go international by using MNEs as intermediaries in order to minimize the costs of venturing a new market as against the traditional approach of going alone in the early stages of their life cycle. Going international is a strategic decision.

Emerging markets, unlike the developed economies in the west, have an unpredictable market. Political conditions and regulations may change overnight in emerging economies. Fast economic growth of the Indian economy differentiates it from other emerging economies and developed markets, leading to greater investment opportunities. Thus, in case of the Indian economy, a foreign acquirer would be more interested in acquiring a domestic firm with good network-distribution channel, large assets (growth potential-existing market shares) and branding while entering the Indian market.

In this paper, the domestic and cross-border partial acquisitions are compared in Indian market and the motivations behind these acquisitions are analyzed. In accordance to the past studies, one would expect that foreign acquirers enter the Indian markets by acquiring well performing Indian firms. However, since India is different from developed countries as it has large unexplored markets, low-cost structures in comparison to other countries as well as accounting transparency, liquidity and regulatory issues, to study the M&A pre-performance in India, there is a need to control a couple of factors and develop new models.

Also, most of the available studies use variables that have been selected on the basis of the target country's financial systems. Therefore, using the same variables to judge the different investment modes in a country like India, with different financial systems and law is not appropriate. Thus, in the present paper, variables were selected based on literature survey and the empirical precedents after considering country's financial and regulatory



system. For example, Indian companies have higher promoter holdings as compared to most of the developed and emerging economies which is why we have added shareholding as a new variable in this study. It was also suggested by Barai and Mohanty (2012) that irrespective of the financial characteristics of the firms, it is the shareholding pattern that defines the takeover dynamics.

For the purpose of this study, friendly acquisitions as well as any other acquisitions whose objective was restructuring (for example, acquisitions of listed Shell Company that have no business or have limited assets) have been excluded from this study. Although there is no specific formula to identify a Shell Company, we tried to identify them on the basis of their balance sheet figures. Shell companies for the purpose of this particular study have been defined as companies with no business and limited assets. Powell (1997) segregated hostile and friendly takeovers and found characteristics of hostile and friendly targets differ significantly and that these differences also vary depending on the time period under investigation.

Further, this paper studies the non-target firms selected on the basis of macro factors like sales and assets in accordance with the previous researches. Zhu *et al.* (2010) used total assets for selecting not-acquired firm.

#### **Objective**

The present study aims to:

- Examine the pre-acquisition performance of the Indian target firms including domestic as well as cross-border acquisition targets.
- Examine the characteristics of the Indian target firms during domestic and crossborder acquisitions.
- Identify the differences in characteristics and pre-acquisition performance of the acquired target firms and the not acquired non-targets.

## **Data and Methodology**

Sample evidence has been taken within the context of Indian economy and secondary data has been used. The data under this study has been mostly collected from Bloomberg and Capitaline database. The research was conducted over a span of four years extending from January 2012 to December 2015. Instead of taking a longer time period, we have considered only a four-year period because changes in the macroeconomic conditions may impact the target firm characteristics. Barai and Mohanty (2012) considered a three-year period for predicting determinants in India.

#### **Descriptive Statistics**

Initial sample consists of 133 completed acquisitions (90 domestic and 43 cross-border) of publicly listed Indian target companies between the period 2012-2015. The acquisition sample

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was split into domestic acquisitions and cross-border acquisitions based on the country of origin of the acquiring and target firm. To select the deals between CY 2012-2015, the following parameters have been used:

- Initial stake of the acquirer was less than 25% (as per SEBI takeover code trigger point). The initial stake of 25% is chosen because of the provisions of takeover regulations of SEBI.
- We have considered only those acquisitions where the acquiring firm acquires more that 25% share. However, Bartley and Boardman (1990) considered only those companies as target where acquirer acquired 5%. Due to the difference in shareholding patterns between the Indian and other developed economies, we considered only those acquisitions where acquisition of shares was greater than 25%.

By using the above-mentioned parameters to the stated criteria, 133 acquisitions were selected. Further, before including them in the sample, the following parameters were checked:

- In cases where a target firm is partially acquired by the same firm or other firms at different points of time, only the initial acquisition date has been considered.
- Financial firms have been excluded from the sample because they differ from the service and manufacturing sector.
- Friendly acquisitions and any other acquisitions whose objective was restructuring have been excluded for the purpose of this study.

These criteria reduced the sample size to 65 (domestic 39 and cross-border 26).

#### **Selection of Non-Targets**

For each domestic or cross-border acquisition, 'not-acquired' firms that were in the same sector (based on the Capitaline database industry classification) have been studied based on the latest fiscal year prior to the acquisition. Non-targets have been selected based on firm's total assets or sales (within the range of 60% deviation if sales or assets are less than ₹300 cr and in range of 40% deviation if sales or assets are greater than ₹300 cr). This procedure generated a control sample consisting of 157 firms' observations (91 for domestic and 66 cross-border). Chen and Su (1997) selected companies that match the assets, or sales of target firms.

#### Methods

#### Wilcoxon Sign Rank Test

To find the difference between pre-acquisition performances of targets in cross-border acquisitions, targets of domestic acquisitions and the control group, Wilcoxon Sign Rank test has been used. Since most of the distributions are symmetric, with high kurtosis, Wilcoxon ranked sign test is used in place of *t*-test like Zhu *et al.* (2010).

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#### Multinomial Logistic Regression Analysis

Multinomial logistic regression technique has been used to compare the pre-acquisition performance of the targets in domestic acquisitions, cross-border acquisitions, and non-target firms. By controlling the effects of other firm characteristics such as assets, debt to equity ratio, assets turnover, cash ratio, book to market ratio and shareholding, the multinomial regression analysis examines the differences in performance among the three samples at the same time. Cross-border acquisition target firms have been used as the benchmark sample. We have coded control firms as 1, domestic target firms as 2, and the cross-border target firms as 3. Fukao *et al.* (2008), Zhu *et al.* (2010) and Humphery-Jenner and Powell (2011) also used multinomial logistic regression analysis.

#### Binary Logistic Regression Models

In order to compare targets with non-targets and targets in cross-border acquisitions with the targets in domestic acquisitions, binary logistic regression models have been used. Zhu *et al.* (2010) have also used binary logistic to differentiate target, non-target and cross-border versus domestic targets. In the present study, all target firms have been coded (both domestic and cross-border targets) as 1 and non-target firms as 0. In the second binary logistic regression model, we code the cross-border targets as 1 and the domestic targets as 0.

#### Selection of Independent Variables

The independent variables were selected from empirical precedent and theoretical hypotheses developed in the past studies (Table 1).

Table 1: Definition of Independent Variables					
Variable	Definition				
Firm Size	Book Value of Assets				
Leverage	Debt/Equity				
Surplus Cash	Cash/Total Assets				
Return	Profit/Net Worth				
Firm Valuation	Price/Book Value				
Promoter Holding	Promoter Shares/Total No. of Shares				
Profit Margin	Profit/Sales				
Assets Utilization	Sales/Assets				
Deal Type-Dummy	1 – Cash and 2 – Stock				

**Note:** Since *Return* and *Profit Margin* are very volatile in nature, thus to remove the volatility, three-year average has been considered.



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**Firm Size:** Larger firms are more costly to acquire and have the financial power to fight against takeovers, hence, are less attractive as takeover targets. In this study, firm size has been measured by book value of assets like Palepu (1986). Here, book value is estimated as in the financial year just prior to takeover. Considering that in India most of the company's shares were infrequently traded, market capitalization has not been used to determine the size of the target firms but asset being a more stable factor than sales, book value of assets has been considered to determine the size of target firms.

**Leverage:** Liquidity is one of the important indicators of financial health. Leverage is denoted by debt to equity ratio.

**Surplus Cash:** The surplus cash ratio is the ratio of a company's total cash and investment to its total assets. Generally, companies with lower cash ratios in comparison to the industry peers become good takeover candidates.

**Return:** Return on Equity (ROE) indicates the competitiveness of a firm. Higher ROE encourages CFO's to take greater risks. The target's competitive effectiveness is always calculated by its ROE.

**Firm Valuation:** Companies with lower market cap than the book value of their assets are undervalued and therefore recommended as 'good buys'. The idea is that it is cheaper for the acquirer to 'buy' this firm, rather than build one from scratch. Here, price to book value ratio is taken as the ratio of market cap to the book value of assets, and is taken at the financial year-end just prior to the acquisitions.

**Promoter Holding:** Bhaumik and Selarka (2012) studied agency conflict between majority and minority shareholders of a firm and found that for the period 2001-2004, ownership concentration in the hands of foreign promoters improved post-M&A performance. Ownership and control offer stability and longer-term sustainability, but on the other hand, control offers personal enrichment at the expense of absentee shareholders. In this paper, shareholding was taken as a non-financial indicator of firm performance.

**Profit Margin:** Profit margin was calculated as net income divided by revenue. Profit margin indicates firm's ability to manage its expenses in comparison to its peers. Profit margin shows a company's operational efficiency.

**Assets Utilization:** Assets utilization ratios reflect the way in which a company uses its assets to obtain revenue and profit. The higher the ratio, the better it is, since it implies the company is generating more revenues on assets.

**Deal Type-Dummy:** The deal type dummy in this study is defined as 1 for cash deal and 2 for stock deal.

#### **Results and Discussion**

#### Wilcoxon Test

In Table 2, pre-acquisition performance and characteristics have been studied by using variables like assets, debt, cash, ROE, price to book value, shareholding, net profit margin

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	N	Target Firm Sample			Control Sample			Target versus Control
		Mean	Max.	SD	Mean	Max.	SD	Wilcoxon Z
		A.	Domestic	Partial A	equisition	ıs		,
Firm Size	36	966.00	10525.00	1934.00	815.00	9486.00	1730.00	-0.09
Leverage	36	1.26	7.96	1.45	1.69	13.01	2.75	-0.74
Surplus Cash	36	0.15	0.91	0.22	0.16	0.85	0.20	-0.60
Return	36	7.07	(26.00)	11.29	12.44	(23.65)	12.39	-1.98
Firm Valuation	27	1.77	5.39	1.45	1.92	6.71	1.50	-0.91
Promoter holding	31	50.54	75.0	15.38	59.72	75.84	12.45	-2.27
Profit Margin	36	(19.26)	(779.00)	130.00	3.58	(32.61)	10.34	-1.23
Assets Utilization	36	2.17	24.30	4.05	1.92	12.25	1.97	-2.21
B. Cross-Border Partial Acquisitions								
Firm Size	22	1460.00	10292.00	2632.00	1346.00	11129.00	2623.00	-1.899
Leverage	22	1.04	5.56	1.31	0.81	2.98	0.73	-0.763
Surplus Cash	22	0.12	0.49	0.14	0.19	0.43	0.09	-2.46
Return	22	11.73	82.15	17.7	11.70	29.53	9.33	-0.81
Firm Valuation	18	2.01	8.11	1.99	2.31	8.71	2.23	-0.50
Promoter holding	19	51.37	77.11	18.32	55.97	79.75	14.59	-0.28
Profit Margin	21	2.53	14.89	9.93	4.70	14.50	6.23	-1.2
Assets Utilization	22	1.7	6.8	1.42	2.07	10.89	2.16	-0.32

and assets utilization. Each target firm (domestic or cross-border acquisition target firm) was matched with a firm that has similar total assets (by the latest fiscal year-end before the acquisition) and belongs to the same industry. Industry has been defined as a four-digit NIC code. All values are measured using the latest fiscal year-end financial statements of the target firms before the M&A transaction. Panel A in Table 2 shows the characteristics of targets in domestic acquisitions, while Panel B represents the characteristics of targets in

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cross-border acquisitions. The Wilcoxon sign rank test is used to test for differences in the characteristics between the two samples.

#### Domestic Versus Control Sample

It is observed from Table 2 that targets in domestic acquisitions have lower return, promoter shareholding and higher assets turnover ratio (higher asset utilization in terms of sales) than their peers in the market. In contrast to the results on developed economies as found in literature, the present study does not show debt-equity ratio (leverage) and price to book value (firm valuation) as statistically significant. This indicates that domestic acquirers make acquisitions of weak operating firms with high market share and low promoter shareholding.

#### Cross-Border Versus Control Sample

Panel B shows that the target firms in cross-border acquisitions have higher assets and lower cash as compared to their peers. The logic behind this could be that foreign firms find it difficult to start a new business in Indian market and therefore foreign acquirers purchase larger firms. Since most of the cross-border acquisitions happen in cash deals, target companies with less cash and large assets become perfect candidates for cross-border acquisitions. This particular evidence confirms our theory that Indian economy is different from the US and UK, as in India, foreign acquirers are more interested to acquire a firm with low cash but having good network-distribution channel with large assets so as to explore the markets. Zhu *et al.* (2010) also asserted that cross-border target firms have low cash ratio in comparison to industry firm's cash ratios. The operating ratios like ROE (return), debt-equity ratio (leverage) and profit margin are found to be insignificant. Chen and Su (1997) also found that the US targets of cross-border acquisitions are financially worse off than the US targets of domestic acquisitions.

#### **Multinomial Logistic Regression Analysis**

Multinomial logistic regression analysis was done using 21 cross-border firms, 33 domestic firms and 129 control firms. The results of multinomial logistic regression analysis support the results of the Wilcoxon test. The results indicate that target firms in cross-border acquisitions have lower cash holdings than non-targets and domestic targets (Table 3).

Except cash other variables were found to be insignificant in most of the previous studies conducted in developed markets. However in the present study, variables like ROE (return), profit margin and debt-equity ratio (leverage) were found to be significant for cross-border acquisitions. This may be due to high returns from the Indian markets. For example, if the target firms have huge market shares due to large assets, then in spite of the high debt ratio and low ROE ratio, financing such targets would not be a bad choice for foreign acquires.

Another interesting finding of this study in sharp contrast to the previous studies is the insignificance of variables like the price to book value (firm valuation). While past theories stated that domestic acquirers invested in inefficient firms with low valuation, this study

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		Control Samp oss-Border S		B. Domestic Sample Versus Cross-Border Sample			
	В	SE	Wald	В	SE	Wald	
Firm Size	0.00	0.00	0.25	0.00	0.00	0.12	
Leverage	0.10	0.21	0.24	0.10	0.22	0.18	
Surplus Cash	2.90	1.90	2.60	3.17	2.12	2.50	
Return	0.00	0.02	0.02	(0.02)	0.03	0.65	
Firm Valuation	(0.06)	0.10	0.43	(0.10)	0.12	0.65	
Promoter holding	0.01	0.02	0.13	(0.02)	0.02	1.52	
Profit Margin	(0.01)	0.04	0.14	(0.03)	0.05	0.42	
Assets Utilization	0.02	0.14	0.02	0.07	0.14	0.21	
Sai	mple Size	_					
Cross-Border (3)	21	11.50%		Cox and Snell	0.08		
Domestic (2)	33	18.00%		Nagelkerke	0.10		
Control (0)	129	70.50%					
Total	183	100.00%					

shows that the price to book value is an insignificant variable and does not influence the target firm's valuation in Indian context. This may be due to the characteristics of India's financial market. In India, most of the firms are infrequently traded.

## **Binary Logistic Regression Model**

While comparing target firms with non-target firms, it was found that target firms have lower promoter shareholdings than the non-target firms, while the remaining variables were insignificant (Table 4). The findings are in-line with that of Ferreira *et al.* (2010) who found that institutional ownership is positively associated with the intensity of cross-border M&A activity worldwide. Koerniadi *et al.* (2015) asserted that when targets are from low institutional quality countries, acquirers are expected to experience post-merger default risk. Likewise,

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	Table 4:	Binary Log	istic Regr	ession Results			
	Target Firms (1) Versus Non-Target Firms (0)			Cross-Border Targets (1) Versus Domestic Targets (0)			
	В	SE	Wald	В	SE	Wald	
Firm Size	0.00	0.00	0.13	0.00	0.00	0.67	
Leverage	(0.04)	0.09	0.14	(0.14)	0.30	0.22	
Surplus Cash	(0.70)	1.04	0.46	(2.06)	2.29	0.81	
Return	(0.02)	0.02	0.98	0.01	0.03	0.15	
Valuation	0.02	0.08	0.04	(0.05)	0.24	0.04	
Shareholding	(0.02)	0.01	3.37	0.02	0.02	1.22	
Profit Margin	(0.01)	0.03	0.06	0.08	0.08	1.10	
Utilizations	0.03	0.06	0.33	(0.06)	0.16	0.16	
Deal Type				0.05	0.08	4.10	
		San	nple Size				
Target Firm		54.00		Cross-Border		21.00	
Non-Target		129.00		Domestic		33.00	
Cox and Snell R <sup>2</sup>		0.04		Cox and Snell R <sup>2</sup>		0.14	
Nagelkerke R <sup>2</sup>		0.06		Nagelkerke R <sup>2</sup>		0.19	
Note: Values in bold i	imply significar	nce and values	in parenthese	es imply negative va	alue.		

when targets are from high institutional quality countries, post-merger default risk is expected to be lower.

Furthermore, it is seen that there is not much difference between cross-border targets and domestic targets except the nature of acquisition deal. The results of binary logistic regression model suggest that the mode of consideration for most of the cross-border deals are cash rather than stock, whereas in case of domestic acquisitions mode of consideration is stock.

# Conclusion

This paper used data from 2012 to 2015 to investigate the pre-acquisition operating performance and characteristics of Indian domestic and cross-border target firms. It is generally

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acknowledged that foreign acquirers show more interest in well performing target firms, because of which the pre-operating performance has become a significant factor in the studies based in the US, UK and similar other developed economies. However, as per the results of the present study, performance of variables like ROE (return) and debt-equity ratio (leverage) show insignificant impact on the choices for target firms by acquirers.

One of the main reasons for such contrast in the findings of this study in comparison to other similar researches could be the exclusion of firms whose objective of the acquisition deal was restructuring or reverse M&A, i.e., target companies with no business and limited assets were excluded for the purpose of this study. Shell companies are being acquired through small deals by investors to take advantage of the listing. According to Vijay (2012), listed shell companies are often considered as acquisition targets because shell companies provide a ready listing platform for unlisted businesses of the acquirer. Therefore, in weak market conditions, acquiring a shell company due to its low valuation could make sense. This is why the shell companies are excluded from the scope of this research. Generally, most of the acquisition studies also include the shell companies acquired by domestic acquirers. However, in our sample such shell companies were excluded. This reduced the sample size of target firms to 65 firms and almost 90% of the shell companies were removed. This could be one of the primary reasons why the findings of this study are contrary to those of earlier studies. Moreover, shell companies usually have nil business and limited assets and therefore tend to show an increased debt ratio (because of negative or low net worth) and low valuation. It is observed that if the shell companies were included in the sample of target firms, binary and multinomial logistic tests would indicate a different result pertaining to the significance of variables like asset size, debt-equity ratio, net profit margin and price to book value ratio among domestic targets, crossborder targets and non-target firms.

The present analysis strongly supports the firm size hypothesis in case of cross-border acquisitions. The reasoning behind this could be the financial aspect of the acquisition deals since most of the cross-border acquisition deals are financed with cash and there are many firms in India that have huge assets and market shares but inadequate liquidity. According to Powell (1997), firms having lower liquidity have a greater chance of facing a hostile takeover. Therefore, it can be concluded from the results of this study that foreign acquirers select those target firms which have a viable product line, good network, and large asset size but lack the ability to market their products due to low cash holdings or increased financing needs for additional capacity expansion.

On the other hand, in case of domestic acquirer, promoter shareholding, ROE and assets utilization are the most important pre-acquisition performance indicators. Domestic acquirers have a better idea of the local markets than the foreign acquirers and therefore specifically select target firms with high public holdings and handsome top-line products instead of

those firms that although have assets, struggle to convert their top-line into reasonable bottom line products. Firms with high asset turnover ratio (higher asset utilization in terms of sales) and low ROE means with low profit margin in comparison to other firms are available at discounted prices and lower valuation. Another important finding of this study is that the target firms show significantly low promoter holdings than their industry peers. It was also found that target firms have lower cash holdings in comparison to the non-target firms in the industry. Price to book value was found to be an insignificant variable in this study in the context of Indian target firms. This finding is in contrast to that of the previous studies that highlighted its significance in relevance to target firm characteristics in other developed economies.

The findings of this study can be useful in practice for domestic acquirer firms in better understanding their target firms and their pre-acquisition performance indicators. The findings can also be used to identify the target firms from non-target firms by domestic acquires who are interested in expanding through acquisitions in the domestic market. The findings provide useful feedback and inferences that can be used by Indian acquirer firms which previously did not have a relevant study based on the characteristics of target firms in the context of the Indian economy.

Scope for Future Research: This study may be further extended to create better understanding in this area of research in other developing countries as well. Also, more studies are needed to support the findings of this research particularly pertaining to the results that show an insignificant relationship between ROE and debt-equity ratio as preacquisition performance indicators relatively impacting the selection of target firms in developing economies. Studies may also be conducted to analyze the variance in findings due to the exclusion of shell companies, which can further extend the understanding on this topic. The price to book value factor was found to be insignificant in this study in case of developing economies in sharp contrast to the developed economies. This can be further explored in case of other developing economies to examine its relative validity. •

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