

RESEARCH ARTICLE

# Institutional Ownership Activism, Market Performance, and Financial Crisis: Evidence From an Emerging Market

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**Abstract:** This paper investigates the trading and investment behavior of the institutional investors in the Indian capital market post-financial crisis and their effect on the market performance. The study is based on the panel data sets drawn from the NIFTY 500 companies for eight years from FY 2008–09 to FY 2015–16, employing panel data econometric models (fixed effect and random effect) analysis. The results suggest that foreign institutional investors (FII) are having the edge over the domestic institutional investors (DII) in the Indian market. FIIs enhance the market performance, whereas DIIs dampen the market performance. Subsequently, we find that equity investment from banks and insurance companies have a detrimental effect, while mutual fund investment has no significant impact on the market performance of the Indian firms. These results imply that FIIs are better-informed players and follow the positive feedback trading behavior. On the other hand, DIIs, banks, and insurance companies are contrary investors and act as negative feedback traders.

**Keywords:** Institutional ownership, Financial crisis, Market-based performance, Panel data, Asian Market

The speculative trading behavior and the herding nature of the institutional investors and their growing presence in the stock market have raised the argument on their influence on the stock market performance. The institutional herding attitude has evidenced that the institutional players invest euphorically and flee from the market at the time of panic, which is a matter of great concern. On the other hand, these investors are the intermediary investors, where they

invest their clients' money in the market and need to satisfy their beneficiaries with a better return. This leads to a series of research questions like: How do institutional investors trade off their risk? Does the investee firms' stock performance matters for the institutional investors? Do the trading behaviors of the institutional investors affect the market performance? How do they behave during economic fluctuations? Earlier governance researchers have pondered into these issues and tried to find answers.

Prior literature on the interaction between the institutional investors' behavior and stock market performance have furnished diversified results, which intensify the debate further. Authors like Gompers and Metrick (2001) and Gillan and Starks (2003) have opined that institutional investors induce the stock price efficiency through their massive trading volume. Further, Nofsinger and Sias (1999) have argued that the institutional investors' behavior affects the future stock returns as they possess the ability of prediction. In contrast, Mizuno (2010), Ramezani, Pouraghajan, Emamgholipour, Khanalizadeh, and Hashemi (2012), and AL-Najjar (2015) have opined that institutional ownership has no sizable effect on the corporate performance. These inconclusive findings have motivated us to carry further research on the influence of the institutional owners' investment behaviors on the stock market performance of the listed companies.

Most of the studies on the institutional investors are concentrated in the developed markets, while few studies were done in emerging markets. Hence, the second motive of the paper is to find out the impact of the institutional owners' activism in an emerging market. This paper has focused on India due to two reasons. First, India, as an emerging country, has become a hot investment destination in the Asian region since its neoliberal economic reforms (Saha, 2009). As per the Bank of America-Merrill Lynch Global Research (2015) survey report, India is the most favorite capital market for the international investors at 43%, followed by China at 26%. Second, Indian stocks are on a roll, which made its equity markets onto the global stage. The phenomenal growth of Bombay Stock Exchange (BSE) and National Stock Exchange (NSE) has grabbed the attention of both the domestic and foreign institutional players and made the Indian stock trading at the global level and accessible to masses.

The next focus is on the impact of the USA financial crisis on the Indian market, as it is one of the worst epidemics that happened in the global financial history. The sentiment and investment pattern of the institutional investors fluctuate with the change in the economic cycle (Papaioannou, Park, & Pihlman, 2013), which affect the stock prices (Lakonishok, Shleifer, & Vishny, 1992). Hence, the question is how institutional investors behaved in India after the financial crisis.

Do the variations in the investment pattern and trading behavior of the domestic and foreign institutional investors affect the post-crisis market performance of India? What is the impact of the investment flow from the institutional investor groups on the market performance after the crisis? This paper attempts to find answers to these questions and formulates a noble effort to combine the time-series variations (institutional equity holdings) with the cross-sectional changes (different company stocks) to identify market performance.

The rest of the paper is organized as follows: Section I discusses origin and development of the USA financial crisis and its impact on Indian stock market and Gross Domestic Product (GDP). Section II reviews the literature evidence on the institutional ownership activism in the financial markets and their impact on the market performance. Section III details the sample selection and the variable descriptions. Section IV specifies the research methodology adopted and the model propositions. Section V presents the empirical results and its discussions. Section VI documents the discussions of the research results and draws the summary and conclusion of this paper.

## **Financial Crisis and India**

The emergence of the financial crisis in the USA happened in early 2007, which originated from the mortgage lending markets and their subprime lending. The financial meltdown was triggered by the severe liquidity crunch in the credit and real estate market, caused by the collapse of mortgage firms, investment banks, and government institutions, which were deeply involved in the subprime lending. The bust of the housing prices and credit bubbles in the USA dislocated its financial system. The financial institutions dealt with the mortgage-backed securities slowly fell into the prey of the crisis, and their credit ratings were downgraded. The deeper and severe contagious effect of the subprime crisis engulfed the USA financial system and led to the collapse of many financial companies (Marshall, 2009).

Mass foreclosure and subprime loan default happened in the early stage of the crisis and later the collapse of the top investment firms like Lehman

Brothers, Bear Sterns, Merrill Lynch accelerated the crisis, which eventually turned into a global financial crisis. Perhaps the fall of Lehman Brothers in September 2008 is the biggest financial meltdown in the history of the USA (Mathiason, 2008), which had a varying degree of effect on the global market due to its worldwide operation and credit base. The relentless impact of the crisis led the USA government to intervene in the market to rescue the top banks and investment firms to reinstate the confidence of the investors in the financial market. Still, the intervention would not be much helpful in restricting the chain effects of the crisis and the extreme and multifaceted nature of the financial crisis rapidly spread across borders.

International financial bodies and economists

believed that the crisis would have a very marginal effect on the emerging economies like India due to its “decoupling effect”, strong fundamentals, and market reforms (“The decoupling debate,” 2008). Nevertheless, the argument soon seemed to be futile with the intensification of the crisis. Soon, the waves of the financial crisis tsunami were felt in the Indian economy and its overall GDP growth rate dipped. Table 1 illustrates that all sectors, except personal and social service sector, were affected by the financial meltdown. Notably, the effect of the crisis was severely felt in the mining, manufacturing, trade, and electricity sectors as their growth rate have declined in 2008–2009. This has happened due to the reduction in the demand for India’s iron ore and exports. The drop in the sectoral and overall GDP growth rate clearly indicates the effect of the crisis on the Indian economy.

The intensity of the crisis was so high that the

**Table 1**  
*Growth Rate of GDP (Sector-Wise) in India*

Sectors	2006-07	2007-08	2008-09	2009-10	2010-11
Agriculture, Forestry & Fishing	3.7	4.7	1.6	-0.2	7.9
Mining & Quarrying	8.7	3.9	1.6	8.7	4.9
Manufacturing	14.9	10.3	3.2	8.9	9.7
Electricity, Gas & Water Supply	8.5	10	3.9	8.2	5.2
Trade, Hotels & Restaurants	11.2	9.5	5.3	8.3	11.5
Construction	10.6	10	5.9	6.5	10.2
Transport, Storage & Communication	12.6	13	11.6	14.8	13.8
Banking & Financial Services	14.5	13.2	10.1	9.9	10.1
Personal & Social Services	2.6	6.7	13.9	8.2	4.3
<b>Total GDP</b>	9.7	9.2	6.7	7.2	9.3

(Source: www.data.gov.in)

**Table 2**  
*Performance of BSE and NSE Indices*

Indices/Year	2005	2006	2007	2008	2009	2010
<b>BSE Sensex</b>	9397.93	13786.91	20286.99	9647.31	17464.81	20509.09
<b>BSE 100</b>	2872.9	4049.88	6469.48	2893.06	5353.23	6191.51
<b>BSE 500</b>	3795.96	5270.76	8592.43	3596.85	6842.25	7961.06
<b>Nifty Fifty</b>	2836.55	3966.4	6138.6	2959.15	5201.05	6134.5
<b>NSE 100</b>		3839.3	6048.2	2801.05	5118.05	6034.75
<b>NSE 500</b>	2459.2	3295.05	5354.7	2295.75	4329.1	4940.95

(Source: www.moneycontrol.com)

tremors were felt in Indian equity market during 2008. Indian stock prices were severely affected by the massive foreign institutional investments (FIIs) outflow. FIIs drove the stock market outrageously with their huge fund inflow from 2006 to early 2008, but they withdrew their investments partly to become safe and to meet the redemption commitments at their home. The severe global liquidity crunch and pull out of the FIIs led the BSE Sensex to crash and bottomed at 8000 points in October 2008 after mounting the 21000 points mark in January 2008 (Dubey, 2012). Soon after, the other major indices of BSE and NSE followed suit (Table 2), which shows the effect of the crisis on the equity market. The crisis dampened the market value of many firms, and both the retail and institutional investors lose their money and confidence. Hence, the post-crisis the institutional investment and market performance has been an area of concern.

## Literature Evidence

### *Theoretical Background*

Institutional investors activism is linked to the theory of corporate governance, where it is argued that institutional owners act as one of the important governance mechanisms to mitigate agency conflict (Gilson & Gordon, 2013). Institutional owners invest equity which they pooled from other investors, and they have the fiduciary duties to satisfy these beneficiaries with the promised return (Ingley & van der Walt, 2004). The risk and obligation attached to the institutional equity investment led them to take successful projects to ensure a better return. While, large institutional owners are conferred with the shareholding power to discipline the managerial activities (Shleifer & Vishny, 1986; Maug, 1998; Bushee, Carter, & Gerakos, 2014) to improve firm efficiency, which is quite evident in the Anglo-American countries (Rose, 2007; Ping & Wing, 2011; Mizuno, 2014). Further, as advocated by the signalling theory, institutional investors act as a signaling device in the financial markets (Gillan & Starks, 2003), where the other investors were made aware of the firm performance.

Based on the relationship between the institutional ownership activity and firm performance, Pound (1988) developed three hypotheses—efficient-

monitoring hypothesis, conflict-of-interest hypothesis, and strategic-alignment hypothesis. The efficient-monitoring hypothesis delineates that institutional investors command superior expertise and better monitoring capacity at lower cost, which predicts a positive relationship between the institutional investment and the company performance. The second hypothesis, conflict-of-interest, proposes that the institutional investors vote for the management to pursue their self-interest business relation with the company management. The strategic-alignment hypothesis explains the existence of the mutual co-operation between the institutional investors and executives for their strategic purpose. Both the conflict-of-interest and strategic-alignment hypotheses foresee an adverse effect of the institutional ownership activism on the company performance.

### *Institutional Owners Activism Across the Globe*

Institutional investors have become the momentous players in the equity market in many countries and their rationale for engagement differs from country to country (Adegbite, Amaeshi, & Amao, 2012). Perhaps the presence of institutional owners activism is mostly found in the USA where the investment from these investors grew from 46.6% to 73% between 1987 and 2009. The concentration of the institutional ownership of the USA firms is very impressive, and the top 25 USA corporations witnessed a concentration level above 60% in 2009 (Rock, 2015). Most prolifically, pension funds, insurance companies, and mutual funds have become the major institutional investors in the USA. Their participation has increased since the Securities Exchange Commission (SEC) allowed the shareholders to submit a proposal to be incorporated in the corporate ballots in 1942 (Gillan & Starks, 2007).

The scenario of the institutional investment and their engagement in the European market has also grown eminently. Arnold and Breen (1997) have pointed out that mutual funds and newly privatized pension funds have become the prominent shareholder activists in Europe. British institutional engagement was promoted through the establishment of the Institutional Shareholders' Committee in 1973. Institutional investors like insurance companies and mutual funds have dominated the ownership structure of the British

companies. Ersoy-Bozcuk and Lasfer (2001) evidenced that institutions own equity between 65% to 80% in the United Kingdom (UK) capital market, but a poor voting turnout from the institutional owners is witnessed. Similarly, other European countries like Germany, France, and Sweden evidenced a strong institutional shareholder association since the 1960s.

Activist institutional investors have also developed in the Asian countries in recent times. Institutional investment in Malaysian capital market has accounted for more than 25%, where hedge funds are the most active players (Othman & Borges, 2015). In Korea, institutional investors own 40% of the capital market, but they are prevented from voting rights (Joh, 2003). Institutional investment in China have also flourished since the 1990s and securities investment funds, qualified foreign institutional investors, and insurance companies have become the significant institutional investors in China since 2005 (Huang & Xie, 2016). India has also witnessed strong institutional activism in many instances like institutions blocking the deal between Satyam computers and Maytas in 2008, stopped Coal India to sell coal below the market price in 2012, and opposed Maruti India to source its cars from parent Suzuki in 2014 (BS Reporter, 2014). These instances have proved the existence of the solid institutional activism in India.

#### *Institutional Ownership and Market Performance*

The trading behavior of the institutional investors have a potential effect on the asset prices as their investment has been a significant part of stock market trading volume across the developed economies (Griffin, Harris, & Topaloglu, 2003). The direction of the future stock returns is positively driven by the institutional herding (Nofsinger & Sias, 1999). Studies like those of Bennett, Sias, and Starks (2003) and Sias (2004) have explained positive correlations between the institutional ownership changes and stock returns over a period of the same quarter. Undoubtedly, stock returns are affected by the institutional trading but some studies have evidenced that stock returns are positively impacted by the institutional purchases and not by their sales (Cai & Zheng, 2004). However, Dasgupta, Prat, and Veroda (2011) have found that institutional tradings have an adverse impact on the long-term stock return.

Corporate governance in the US has been modeled by the growing prominence of institutional investors, such as pension funds and mutual funds (Bushee et al., 2014). Pension funds are often regarded as the potential players for stewardship and adopt a long-term perspective in the firms' management (Davis, Lukomnik, & Pitt-Watson, 2006). Authors like Shleifer and Vishny (1986) and Maug (1998) have opined that the monitoring by the pension fund investors increases with the size of their stakes, which leads to more superior performance. While Romano (1993) and Barber (2007) have reasoned that public pension fund engagement often wrecks the company value due to the existence of agency problems between the fund managers and members. Wahal (1996) has evidenced that pension fund activism has no impact on firms' wealth, while Carleton, Nelson, and Weisbach (1998) found a positive impact on abnormal stock returns.

Mutual funds, as one of the largest institutional investors, have a substantial effect on the company performance and firm value, which is explained by the informational hypothesis. Informational theory substantiates that mutual funds have strong informational advantage and expertise over the individual investors (Sharpe, Tian, & Zhang, 2013). The informativeness of the mutual funds has a sizable effect on the stock prices which was well documented in the work of Gompers and Metrick (2001). Sharpe et al. (2013) have tested the impact of mutual fund owners activism on firm value and operating performance in China by considering the mutual fund data from 2001 to 2010 where they found a significant positive impact. However, the impact of mutual fund and pension fund investment on stock market performance has got scant attention in the emerging economies.

FII are considered as one of the most remarkable institutional players in the emerging economies. Choe, Kho, and Stulz, (1998) have studied the effect of foreign investment on stock returns before and after the Asian crisis in Korea. They found a positive feedback trading before the crisis and the vanishing of the positive feedback trading during the crisis. Richards (2005) made a study on the role of foreign investment in the six Asian emerging markets and evidence showed a strong positive effect of FIIs on the stock market. Shukla and van Inwegen (1995) and

Hau (2001) discovered that DIIs have an advantage of private information over the FIIs and outperform the FIIs. In contrast, Froot and Ramadorai (2008) opined that FIIs are better informed players than DIIs. Similarly, Grinblatt and Keloharju (2000), Karolyi (2002) have conferred that FIIs have outperformed the DIIs in Finland and Japan.

Banks and insurance companies are the more sensitive investors and highly regulated, which affects their investment behaviors. Further, the investment from the banks and insurance companies are subject to the certain limits levied by specific acts (Del Guercio, 1996). Primarily, banks and insurance companies invest in those firms with whom they have a business relationship or long-term investment purpose. Gillan and Starks (2003) and Aggarwal, Erel, Ferreira, and Matos (2011) opined that these type of investors have no interest in short-term trading or capital gain and different from investment trust companies.

#### *Literature Evidence From India*

The emerging market like India has rapidly realized the growing importance of institutional investment, and the key emerging attributes for the development of the Indian equity market is the increasing participation of the foreign institutional investment (Samal, 1997). The flow of foreign fund into the Indian financial market has been increasing over the years due to its liberalization policy. Hence, most of the existing literature on institutional ownership have focussed on the influence of the FII where they inferred that the FIIs have a positive effect on the Indian stock market. FIIs possess large fund for investment, and they hunt for a better market. India has become their favorite hot destination where they book gains by buying the stocks at lower prices and selling at higher prices (Gordon & Gupta, 2003). Chakrabarti (2001) has discovered that FII flows into India have a strong correlation with the equity returns.

Mukherjee, Bose, and Coondoo (2002) have tested the relationship between the FII flows and the stock return, where they documented a strong effect of FIIs in the Indian stock market. Batra (2003) has opined that investment pattern of the FIIs does not have any destabilizing effect on the equity market. In another study, Douma, George, and Kabir (2006) evidenced

that domestic financial institutions negatively affected the firm performance in India. Suresh Babu and Prabheesh (2008) found a bi-directional relationship between the FIIs and stock return. Arora (2016) found that the behavior of the DII and FII in the stock market are opposite to each other. DIIs acted as contrarian investors and followed the negative feedback trading while FII acted as a positive feedback traders in the Indian capital market. Thenmozhi and Kumar (2009), Thiripalraju and Acharya (2011), and Bose (2012) found a negative influence of the mutual funds' net investments on the stock market return.

#### *Research Gap and Hypotheses Development*

Based on the literature evidence on the role of institutional ownership in the Indian context, it can be inferred that most of the focus has been devoted to the role of FIIs activism on the stock market performance. There are many other institutional identities like mutual funds, pension funds, investment banks, insurance companies, endowment funds, and so forth who play a significant role in the stock market investments of the developed economies like USA, UK, and European countries and affect the market performance (Gompers & Metrick, 2001; Basak & Pavlova, 2013). However, the research on the role of mutual funds, pension funds, banks, insurance companies, hedge funds, and endowment funds in Indian context has not been touched yet. India is a large emerging country where its governance style, investment pattern, and market performance affect the global market.

Hence, we are motivated to carry a research on the role of DIIs, FIIs, mutual funds, banks, and insurance companies in the Indian context to judge the impact of their activism on the market performance after the financial crisis. We have chosen these institutional players as they are the major institutional investors in the Indian financial market (CMIE ProwessIQ, <https://prowessiq.cmie.com>), while other institutional investors like pension funds, endowment funds, and hedge funds are not captured as their investment in the Indian equity market is very meager. The USA financial crisis is another notable event that affected both the institutional investment and the financial market performance across the globe and India was not an exception, which was not widely captured in

the literature. Based on these research gaps, we have formulated certain research hypotheses to carry our research, which are cited below:

H1: The degree of equity ownership and the trading behavior of the domestic institutions positively influence the market performance of the Indian listed firms.

H2: The degree of equity ownership and the investment behavior of the foreign institutions positively affect the market performance of the Indian listed firms.

H3: There is a positive significant relationship that exists between the domestic mutual fund activism and the market performance of the Indian listed firms.

H4: There is a positive significant relationship that exists between domestic banks' equity investment and the market performance of the Indian listed firms.

H5: There is a positive significant relationship that exists between domestic insurance companies' equity investment and the market performance of Indian listed firms.

## Methods

### *Sample*

This research is based on the balanced panel data set of Indian listed companies to test the effect of the institutional equity investment on the market performance aftermath of the crisis. The study spans over eight years from 2008–09 to 2015–16, which is selected after the US financial crisis of 2007–08 (Reinhart & Rogoff, 2008; Erkens, Hung, & Matos, 2012; Bose, 2012). Our sample companies were derived from the NIFTY 500 index of NSE. NIFTY 500 companies denote 94% of the total market capitalization of all NSE companies, and its traded value represents almost 87% of the total traded value of all stocks of the NSE. Moreover, NSE is one of the leading stock markets in the world with a market capitalization of more than US\$1.64 trillion and occupies the 11<sup>th</sup> position among the top 20 stock exchanges in the world. The data on institutional ownership, market performance variables, and firm-specific variables are collected from CMIE (Centre for Monitoring Indian Economy) database.

This research paper has formed two propositions to

study the impact of institutional equity investment on the stock market performance. The first proposition is established to determine the impact of the DIIs and FIIs' equity investment on the stock market performance. The final sample size for the first proposition is 391 NSE listed firms. The sample size is slashed due to the unavailability of the complete financial and institutional ownership data. The second proposition discusses the impact of the institutional ownership groups (identities) on the market performance. We have selected 323 listed companies for the second proposition where many companies are sacrificed due to the absence of the data.

### *Market Performance Measures*

Previous studies have frequently focused on the accounting-based performance measures, but academics have argued that accounting measures are not sufficient to gauge the efficiency of the firm (Chakravarthy, 1986). This led us to apply information-based market measures like Tobin's Q and market capitalization as the indicators for the market performance. Tobin's Q is one of the most popularly used measures propounded by the James Tobin, and it is the ratio of the market value of the firm to the replacement cost of the assets (Tobin, 1969, 1978). Tobin's Q is a very popular measure used to quantify the market performance. The next measure is the market capitalization, which is considered as a practical measure that reflects the real market value of the firm. Market capitalization is preferred over the stock price as the numbers of outstanding shares are different from company to company, and their market value varies accordingly.

### *Institutional Ownership Measures*

This paper uses two empirical propositions to gauge the impact of the institutional equity investment on the market performance. The institutional owners are divided into two categories—DII and FII—for the first proposition (Mizuno, 2010). DII represents the equity investment by the Indian institutional investors, while FII denotes the capital investment made by the foreign institutional players. In the second proposition, we have segregated the institutional investors into three groups—mutual funds, banks, and insurance

companies (Bushee, 1998). The selection of these three types of investors was made due to their visible activism in the Indian equity market. There are many different types of the institutional investors that exist in the Indian capital market such as pension funds, hedge funds, and venture capital funds but these investors are either having very low investments or no investments, so these investors could not be considered in this study.

*Control Variables*

This paper has procured certain control variables to adjust for the economic and industry effects, which explain the market performance significantly. Based on previous literature control variables like firm size (SZ), leverage (LEV), liquidity (LIQ), market risk (MR), growth opportunities (GR), and profitability (PRF) have been selected. Firm size is often considered having a negative relationship with the ownership (Demsetz & Lehn, 1985) as holding of the same percentage of stock in big firms in comparison to the small companies is difficult. Leverage is considered as debt that regulates the managerial behavior and reduces the agency cost, which positively affects the firm performance (Anderson & Reeb, 2003). Stulz (1988) theorized that high ownership concentrated firms prefer debt to maintain their controlling position. Leverage is regarded as the measure of long-term financial distress.

Liquidity denotes the cash position of the firms. Firms with an adequate liquidity help in meeting their payment obligations in both the good times and bad times (Arnold, 2008), which stabilizes the firms’ position in the market. Hence, liquidity position of the company affects the investors in the market. The ownership of the company is affected by the riskiness of the firm as investors seek a lesser riskier firm (Demsetz & Villalonga, 2001). The growth opportunities for the firm indicate the firms’ future performance, and with

better prospects, the firm can attract investment from the investors, so growth opportunity has a positive effect on the market. Fundamentally, the profitability of the firm has a direct bearing on the market performance. Firms with better profitability enhance the investors’ confidence in the market, so profitability has a positive impact on the market performance.

*Model Specification*

This study deals with both the cross-sectional (number of companies) and time series (number of years) data, so panel data econometric models were utilized to find the impact of institutional ownership variations on the stock market performances. To carry out panel data regressions, statistical package STATA version 11.0 is employed in this study. Panel data models have been popularly used in recent times, as they capture the effect of both the individual and time factors of the sample and controls the heterogeneity problem in the data (Hitt, Gimeno, & Hoskisson, 1998). Therefore, panel data models are regarded as a better model than the cross-sectional and time-series models.

We are furnishing two propositions. The first proposition deals with the impact of the DIIs and FIIs on the market performance. Here, we try to specify the distinct role of the domestic institutional owners and foreign institutional owners and to find which is the better monitoring player. The second proposition tests the effect of the institutional ownership groups or the identities on the market performance of the Indian listed firms. Based on the previous literature, we have segregated the institutional owners into three group of investors such as mutual funds (MF), banks (BN), and insurance companies (INS). In this proposition, we try to identify which group of institutional owners affects the market performance.

$$MP_{it} = \alpha + \beta 1DII_{it} + \beta 2FII_{it} + \beta 3SZ_{it} + \beta 4LEV_{it} + \beta 5LIQ_{it} + \beta 6MR_{it} + \beta 7GR_{it} + \beta 8PRF_{it} + \epsilon_{it} \dots\dots\dots (1)$$

$$MP_{it} = \alpha + \beta 1MF_{it} + \beta 2BN_{it} + \beta 3INS_{it} + \beta 4SZ_{it} + \beta 5LEV_{it} + \beta 6LIQ_{it} + \beta 7MR_{it} + \beta 8GR_{it} + \beta 9PRF_{it} + \epsilon_{it} \dots\dots\dots (2)$$



where,

- $MP_{it}$  = Market performance represented by Tobin's Q and Market capitalization.  
 $DII_{it}$  = Domestic Institutional Investors  
 $FII_{it}$  = Financial Institutional Investors  
 $MF_{it}$  = Mutual Fund equity investment  
 $BN_{it}$  = Banks' equity investment  
 $INS_{it}$  = Insurance companies' equity investment  
 $SZ_{it}$  = Firm size  
 $LEV_{it}$  = Financial Leverage  
 $LIQ_{it}$  = Liquidity  
 $MR_{it}$  = Market Risk  
 $GR_{it}$  = Growth Opportunities  
 $PRF_{it}$  = Firm Profitability  
 $\varepsilon_{it}$  = Error term

## Results

### *Impact of Domestic and Foreign Institutional Owners*

This sub-section depicts the results of the first proposition that measures the impact of domestic and foreign institutional owners trading activities on the market performance of the Indian listed firms after the financial crisis. We present the summary statistics, correlation matrix, Breusch-Pagan test, Hausman test, and panel data regression results in this subsection.

Table 4 depicts the total firm-year observation of 3,128 where 391 Indian listed firms from NSE 500 companies is selected over a period of eight years from the FY 2008–09 to FY 2015–16 that allows some longitudinal dimension to the data set. Further, it shows that FIIs are commanding the institutional

**Table 3**  
*Summary of the Variables*

Variables	Definition/Calculation	Symbol	Type
<b>Tobin's Q</b>	Market value of the equity/Book value of the total assets	TQ	Dependent
<b>Market capitalization</b>	Total number of outstanding shares*market price	MC	Dependent
<b>Domestic institutional investors</b>	Percentage of equity investment by the Indian institutional owners	DII	Independent
<b>Foreign institutional investors</b>	Percentage of equity investment by the foreign institutional investors	FII	Independent
<b>Mutual fund</b>	Percentage of equity investment by the mutual funds	MF	Independent
<b>Banks</b>	Percentage of equity investment by the banks	BN	Independent
<b>Insurance companies</b>	Percentage of equity investment by the insurance companies	INS	Independent
<b>Firm size</b>	Natural logarithm of total assets	SZ	Control
<b>Financial leverage</b>	Total outsiders' debt to total assets	LEV	Control
<b>Liquidity</b>	Current assets/Current liabilities	LIQ	Control
<b>Market risk</b>	covariance between the security's returns and the benchmark returns	MR	Control
<b>Growth opportunities</b>	Book value of equity/market value of equity	GR	Control
<b>Firm profitability</b>	Profit after tax/Total assets	PRF	Control

investment space in Indian companies as their average investment (12.53%) is higher than the average investment (9.82%) of the DIIs. We obtain that both the DII and FII are having maximum investments of around 80% and 50%, respectively, in the companies, which signifies the institutional dominance in the

Indian stock market. It is witnessed from Table 5 that the average investment from FIIs in the NSE 500 companies is consistently flourishing in comparison to the DIIs, which substantiates the supremacy of the FIIs in the Indian market.

**Table 4**  
*Summary Statistics*

Variables	Total Observation	Mean	Minimum	Maximum	Standard Deviation
MC	3128	149271.80	117.25	5002494.00	372768.50
TQ	3128	1.57	0.01	19.29	2.00
DII	3128	9.82	0.01	50.03	7.91
FII	3128	12.53	0.01	79.65	11.27
SZ	3128	10.85	6.87	16.93	1.76
LEV	3128	0.42	0.01	1.78	0.25
LIQ	3128	1.84	0.03	95.26	3.10
MR	3128	1.07	0.18	2.90	0.41
GR	3128	3.72	0.13	125.69	7.20
PRF	3128	6.62	-42.29	48.70	7.83

(Source: results derived from STATA software)

**Table 5**  
*DII and FII Average Ownership (Percentage)*

Inst Own(%) / Year	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16
DII	9.01	9.65	9.27	9.22	8.67	8.04	8.72	9.47
FII	9.73	11.00	11.96	12.19	12.99	13.68	13.86	13.20

(Source: CMIE Prowess, <https://prowessiq.cmie.com>)

**Table 6**  
*Correlation Matrix and VIF*

Variables	MC	TQ	DII	FII	SZ	LEV	LIQ	MR	GR	PRF	VIF
MC	1.00										
TQ	<b>0.20</b>	1.00									
DII	<b>0.08</b>	<b>-0.10</b>	1.00								1.08
FII	<b>0.22</b>	0.05	0.04	1.00							1.13
SZ	0.46	-0.28	0.23	<b>0.31</b>	1.00						1.33
LEV	<b>-0.05</b>	-0.02	<b>-0.06</b>	<b>-0.05</b>	<b>-0.07</b>	1.00					1.20
LIQ	-0.05	0.04	-0.03	-0.01	0.03	<b>-0.31</b>	1.00				1.12
MR	<b>-0.14</b>	<b>-0.39</b>	<b>-0.05</b>	-0.02	<b>0.22</b>	<b>0.08</b>	0.03	1.00			1.29
GR	<b>0.09</b>	<b>0.53</b>	<b>-0.09</b>	0.01	<b>-0.14</b>	<b>0.20</b>	-0.04	<b>-0.13</b>	1.00		1.10
PRF	<b>0.18</b>	<b>0.59</b>	-0.01	0.03	-0.28	<b>-0.15</b>	<b>0.06</b>	<b>-0.45</b>	<b>0.17</b>	1.00	1.38

(Source: results derived from the STATA software)

Note: All correlations in bold are significant at  $p < .05$ , VIF = variance inflation factor.

**Table 7**  
*Breusch-Pagan Test for Heteroscedasticity*

Variables: DII, FII, SZ, LEV, LIQ, MR, GR, PRF			
H0: Constant variance			
Chi-square value	6004.76	<i>P value</i>	0.000

(Source: Results derived from STATA software)

Table 6 presents the correlation matrix and variance inflation factor (VIF) of the dependent, independent, and control variables. Correlation matrix shows the correlation coefficients ( $r$ ) which measure the strength and direction of the linear relationship between the two variables. We find that no variables are having a high correlation, that is, no coefficient is more than the threshold limit of 0.8 (Kennedy, 1985), which indicates that no collinearity problem exists in the model. Further, the model is also not suffering from the multicollinearity problem as the VIF values (Table 6) are well under the recommended value of 10. Table 7 presents the Breusch-Pagan (BP) test, where the heteroscedasticity problem is found as the  $p$ -value is

very much significant, which rejects the null hypothesis of constant variance.

From Table 6, we find that FII is having a positive and significant correlation with the market capitalization and Tobin's Q. Whereas, DII is having a positive correlation with the market capitalization and a negative correlation with Tobin's Q. This implies that market performance magnifies with the foreign investments. Among control variables, growth opportunity and firm profitability are having a strong positive and significant association with the market performance. Market risk and leverage are negatively connected with the market performance. Other control variables like firm size and liquidity have a mixed association with the market performance.

**Table 8**  
*Hausman Test*

Model	Chi-square value	<i>p</i> -value	Methodology selected
Model-1	161.13	0.000	Fixed-effect
Model-2	1239.11	0.000	Fixed-effect

(Source: Results derived from STATA software)

**Table 9**  
*Panel Data Regressions*

DV Variables	Model-1			Model-2		
	Coeff.	MC <i>t</i> -stat	<i>p</i> -value	Coeff.	TQ <i>t</i> -stat	<i>p</i> -value
DII	-2565.98	-3.36	0.001	-0.010	-2.13	0.033
FII	2157.46	3.80	0.000	0.020	5.81	0.000
SZ	148629.90	16.71	0.000	0.846	15.61	0.000
LEV	-117383.10	-6.19	0.000	-1.065	-9.21	0.000
LIQ	-117.63	-0.11	0.915	0.007	1.06	0.291
MR	-47218.60	-3.18	0.001	-0.124	-1.38	0.168

GR	4460.57	6.77	0.000	0.112	27.92	0.000
PRF	343.10	0.55	0.581	0.112	13.30	0.000
R-Square		0.15			0.37	
F-Stat		57.44***			56.97***	

(Source: Results derived from STATA software)

Notes: DV denotes the dependent variable, Coeff signifies the beta coefficient value, *t*-stat represents the *t*-test statistics of the variables, *F*-Stat indicates the *f*-test statistics of the model, \*\*\* refers to 1% level of significance.

We present two regression models with two different dependent variables such as Tobin’s Q and market capitalization in Table 9. Both the regression models are fitted by the panel data fixed-effect, which is checked and confirmed through the Hausman test. Table 8 presents the Hausman test where chi-square values of both the model are highly significant (1% level of significance), which denotes that the fixed-effect supports the models. Additionally, we have applied the “cluster ()” function along with the selected models in STATA to filter the heteroskedasticity and autocorrelation problem (Torres-Reyna, 2008). The *f*-statistics of both models are significant at 1% level of significance, which implies that both models are, overall, statistically significant. The *R*-square value of model-2 is better than model-1, which signifies that the market performance measure in model-2 is better explained.

The regression test results of model-1 (Table 9) shows that both the DII and FII are highly significant at 1% level of significance. DII has a negative impact and FII has a positive effect on the market capitalization.

Subsequently, it is found that the control variables, like firm size and growth opportunities, are significantly positive, while leverage and market risk are having a significantly negative relationship with the market performance. The test results of model-2 (Table 9) depicts that both the DIIs and FIIs are significant, but DIIs are having an adverse effect, while FIIs positively affect the Tobin’s Q. All the control variables except liquidity and market risk are significant. However, leverage and market risk are adversely influencing the market performance. From both models, we find that FIIs improve the market performance, while DIIs diminish the market performance of the firms.

*Impact of Institutional Ownership Groups*

This sub-section deals with the second proposition that assesses the impact of institutional ownership groups’ investment behaviors on the market performance of the Indian listed firms after the financial crisis. We present the summary statistics, correlation matrix, and the regression results of the second proposition in this sub-section.

**Table 10**  
*Summary Statistics*

Variables	Total Observation	Mean	Minimum	Maximum	Standard Deviation
MC	2584	173334.60	117.25	5002494.00	405363.90
TQ	2584	1.50	0.01	19.29	1.89
MF	2584	5.23	0.01	35.42	5.14
BN	2584	1.66	0.01	44.25	3.56
INS	2584	4.21	0.00	27.54	5.09
SZ	2584	11.10	7.04	16.93	1.75
LEV	2584	0.41	0.01	1.11	0.25
LIQ	2584	1.87	0.04	55.77	2.44
MR	2584	1.06	0.18	2.64	0.40
GR	2584	3.47	0.13	119.09	6.33
PRF	2584	6.69	-42.29	48.70	7.66

(Source: results derived from STATA software)

Table 10 reports the summary statistics where there are 2,584 firm-year observations consisting of 323 listed companies chosen from NSE 500 companies from FY 2008–09 to FY 2015–16. We obtain that the mutual funds are the better investors than the banks and insurance companies as its average investment (5.23%) are higher than the average investments from both the banks (1.66%) and insurance companies (4.21%). Further, Table 11 reveals that the average mutual fund investment is very stable over the years,

while average investment from insurance companies is having a declining trend over the years. The poor average investment from the Indian banks exhibits their risk averseness as most of them are government regulated and usually divert their funds into retail lending, or corporate lending, or buying of sovereign bonds. On the other hand, it is believed that mutual funds are aggressive investors due to the expertise of their professional fund managers on stock picking and market timing abilities.

**Table 11**  
*Institutional Ownership Groups' Equity Ownership (Percentage)*

Inst Own/Year	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16
Mutual Fund	5.32	5.69	5.19	5.04	4.39	4.04	4.94	5.38
Banks	1.64	1.76	1.73	1.86	1.55	1.44	1.22	1.20
Insurance	6.12	5.78	5.47	5.44	4.99	4.71	4.51	2.91

(Source: CMIE Prowess, <https://prowessiq.cmie.com>)

**Table 12**  
*Correlation Matrix*

Variables	MARCAP	TOBINQ	MF	BN	INS	SZ	LEV	LIQ	MR	GR	PRF	VIF
MC	1.00											
TQ	<b>0.24</b>	1.00										
MF	<b>-0.10</b>	0.03	1.00									1.07
BN	-0.01	<b>-0.09</b>	-0.04	1.00								1.03
INS	<b>0.16</b>	<b>-0.09</b>	0.03	<b>-0.06</b>	1.00							1.18
SZ	<b>0.46</b>	<b>-0.27</b>	<b>-0.21</b>	<b>0.10</b>	<b>0.35</b>	1.00						1.37
LEV	-0.04	0.00	0.02	0.02	<b>-0.12</b>	<b>-0.11</b>	1.00					1.29
LIQ	0.00	0.04	<b>-0.06</b>	0.00	0.01	<b>0.06</b>	<b>-0.39</b>	1.00				1.19
MR	<b>-0.15</b>	<b>-0.46</b>	-0.14	<b>0.08</b>	0.02	<b>0.27</b>	<b>0.07</b>	0.02	1.00			1.38
GR	0.12	<b>0.56</b>	-0.01	<b>-0.07</b>	<b>-0.08</b>	<b>-0.13</b>	<b>0.20</b>	<b>-0.06</b>	<b>-0.21</b>	1.00		1.16
PRF	<b>0.19</b>	<b>0.66</b>	<b>0.10</b>	<b>-0.11</b>	<b>-0.05</b>	<b>-0.31</b>	<b>-0.09</b>	<b>0.05</b>	<b>-0.49</b>	<b>0.28</b>	1.00	1.47

(Source: results derived from the STATA software)

Notes: All correlations in bold are significant at  $p < .05$ , VIF = variance inflation factor

**Table 13**  
*Breusch-Pagan Test for Heteroscedasticity*

Variables: MF, BN, INS, SZ, LEV, LIQ, MR, GR, PRF			
H0: Constant variance			
Chi-square value	4477.65	<i>P value</i>	0.000

(Source: Results derived from STATA software)

From Table 12, we do not find any collinearity problem between any variables as all the coefficients are under the threshold limit. The VIF values of the variables signify that there is no multicollinearity problem that exists. We have checked the heteroscedasticity problem through Breusch-Pagan (BP) test (Table 13) and evidenced the existence of the heteroscedasticity issue, as the test result is significant at 1% level of significance. It is evidently grasped from Table 12

that banking investment is negatively related to both the market measures, while the relation between the investments from the mutual funds and insurance companies with the market performance is mixed. Among the control variables, growth opportunities (GR) and profitability (PRF) are having a significant positive relationship, while market risk (MR) is having a significantly negative correlation with both the market performance measures.

**Table 14**  
*Hausman Test*

Model	Chi-square value	P-value	Methodology selected
Model-1	213.37	0.000	Fixed-effect
Model-2	1140.20	0.000	Fixed-effect

(Source: Results derived from STATA software)

**Table 15**  
*Panel Data Regressions*

DV	Model-1			Model-2		
		MC		TQ		
Variables	Coeff.	t-test	P-value	Coeff.	t-test	P-value
MF	-1258.228	-1.070	0.283	0.002	0.040	0.966
BN	-1463.769	-0.920	0.356	-0.020	-2.630	0.009
INS	-7252.249	-4.140	0.000	-0.063	-7.440	0.000
SZ	190651.600	18.020	0.000	0.809	15.780	0.000
LEV	-158171.300	-6.640	0.000	-1.019	-8.830	0.000
LIQ	-797.042	-0.450	0.656	0.016	1.860	0.064
MR	-54714.010	-3.040	0.002	-0.157	-1.800	0.072
GR	6927.344	7.010	0.000	0.123	25.660	0.000
PRF	1442.62	1.810	0.070	0.046	11.960	0.000
R-Square		0.18			0.39	
F-Stat		52.9***			160.18***	

(Source: Results derived from STATA software)

Notes: DV denotes the dependent variable, Coeff signifies the beta coefficient value, *t*-stat represents the *t*-test statistics of the variables, *F*-stat indicates the *f*-test statistics of the model, \*\*\* refers to 1% level of significance.

Two regression models are depicted in Table 15 where the impact of the investment behavior of the institutional investor groups on the two different market measures (MC and TQ) are tested. Both of these regression results are based on the panel data fixed-effects, which are selected from the fixed-effect and random-effect by conducting the Hausman test (Table 14). To control the heteroskedasticity and autocorrelation problem, we have used the “cluster ()” function while extracting the fixed-effect regression results from the STATA. The overall significance of the models checked through the f-statistics, which is highly significant, suggests that both models are statistically significant and reliable. In the case of the model of fitness, model-2 is having better R-square value than model-1, which conveys that model-2 is well explained.

It is quite evident from the model estimation-1 result that investment from insurance companies is significant at 1% level of significance but negatively affects the market capitalization (MC), while other two players—mutual funds and banks—are not important as they have very low significance level. The control variables like firm size, growth opportunity, and profitability are found to be positively significant, while leverage and market risk are significantly negative. From the model-2 results, we find that insurance companies and banks are significant at 1% level of significance but negatively influencing Tobin’s Q (TQ), while mutual fund investors have no significant impact. Among the control variables, firm size, liquidity, growth opportunity, and profitability positively affect the market performance. From both the model results, we infer that equity investment from banks and insurance companies diminish the market performance.

## Discussion

The empirical results show that DIIs are having a significant negative impact on the market performance (MC, TQ) which is parallel to the earlier evidence of the Lins (2003), Durnev and Kim (2005), Douma et al. (2006), and Bose (2012). The equity investment and trading behavior of the DIIs’ have an adverse effect, which indicates that an increase of the DIIs does

result in the enhancement of the market performance of the Indian companies after the financial crisis. The causes behind the negative influence of the DII may lie on their poor monitoring capabilities as most of the domestic institutions are either central or state-owned financial institutions, which are tightly regulated by the government. Over and above, the governance of these institutions lies in the hands of the bureaucrats, who lack both the expertise and incentive for efficient monitoring (Ramaswamy, Li, & Veliyath, 2002; Douma et al., 2006).

We observe from both the model estimations that FII has a significant positive impact on the market performance. The results are consistent regardless of whether the market performance is market capitalization (MC) or Tobin’s Q (TQ). These results resemble the earlier findings of Choe et al. (1998), Khanna and Palepu (2000), Richards (2005), and Douma et al. (2006). The firms with huge FII investment become overvalued and there is an evidence of price pressure effect. FIIs are having different investment philosophies and wider investment horizons as they come from different countries, so they are considered as the better-informed players. They invest in bigger companies with better past returns and short-term capital gains (Kang & Stulz, 1997). Further, FIIs possess better technical abilities and managerial expertise that influences the company performances positively, which is evidenced by our findings.

The findings of the second proposition vividly explain that investments from domestic banks and insurance companies do not aid in improving the market performance after the crisis, which shows that these investors lack the market timing and stock picking abilities. On the other hand, mutual funds investment has an insignificant impact on both of market performance measure, which is similar to the results of Thenmozhi and Kumar (2009), Thiripalraju and Acharya (2011), Bose (2012), who found that mutual fund investments had a significant negative impact on the stock returns. These results signify that domestic banks’ and insurance companies’ investment behavior follow a negative feedback trading behavior.

Among the control variables, firm size (SZ), growth opportunities (GR), and profitability (PRF) of the firms are positively affecting both the market

performance measures. Firm size matters to the market performance as bigger companies enjoy the benefits of economies of scale and command a better managerial expertise that influences the market performance positively, while small firms are less competitive and lack managerial capital. Growth opportunities are also arguably considered as an important determinant of the market performance as better growth opportunities attract huge investments that positively enhance the stock market performance. Profitability of the firms reflects a positive effect on the stock market as a better profitability shows a sound and robust firm. The effect of the leverage (LEV) and market risk (MR) on the market performance are found to be negative. This guides us to infer that high debt, economic downturn, and overall market sentiments adversely affect the market performance.

This research offers a framework to the investors to identify the different kinds of institutional investors that exist and their trading behaviors in the Indian capital market after the crisis. The US financial crisis had a profound impact on the worldwide capital markets, which resulted in the loss of confidence of the investors and business. Undoubtedly, Indian financial market also got the shocks, where the heavy outflow of the FIIs was witnessed (Bose, 2012), but the depth of their impact is a matter of question. Next issue is whether the DIIs and institutional ownership groups have followed the trail of the FIIs. Therefore, it is interesting to witness the sentiments and trading behavior of the institutional investors and their impact on the Indian capital markets after the crisis.

The results from the first proposition reveal that both the FIIs and DIIs have a significant portion of equity investment but FIIs remain the largest investors among all the institutional investors. Unambiguously, FIIs have significantly guided the market performance through their positive feedback trading behavior, which appears to be following the efficient monitoring hypothesis and consistent to the early works of the Douma et al. (2006) and Bose (2012). However, DIIs have behaved contrary to the FIIs and they acted as the negative feedback traders where their investment in the companies negate the market performance, which seems to be following the conflict of interest hypothesis and similar to the prior study of Lins (2003),

Durnev and Kim (2005), and Douma et al. (2006). Our next proposition's results demonstrate that insurance companies and banks have an adverse impact on the market performance, which looks to be following the conflict of interest and strategic alignment hypothesis.

Subsequently, these research results will be beneficial to the stock market investors, practitioners, and market regulators in understanding the investment patterns and trading behaviors of the institutional investors and its impact on the stock market performance of the Indian companies after the financial crisis. In recent times, India is considered at par with the developed countries and its stock market growth in the turbulent times has fascinated the global investors. Hence the inferences of this research will be a parameter for the emerging market policymakers. Most prolifically after the strong resistance of the Indian economy against financial crisis shock, other emerging economies have become keen to understand its market model, where this research will be a valuable tool for them.

## References

- Adegbite, E., Amaeshi, K., & Amao, O. (2012). The politics of shareholder activism in Nigeria. *Journal of Business Ethics, 105*(3), 389–402.
- Aggarwal, R., Erel, I., Ferreira, M., & Matos, P. (2011). Does governance travel around the world? Evidence from institutional investors. *Journal of Financial Economics, 100*(1), 154–181.
- AL-Najjar, D. (2015). The effect of institutional ownership on firm performance: Evidence from Jordanian listed firms. *International Journal of Economics and Finance, 7*(12), 97–105.
- Anderson, R. C., & Reeb, D. M. (2003). Founding-family ownership and firm performance: Evidence from the S&P 500. *Journal of Finance, 58*(3), 1301–1328.
- Arnold, C., & Breen, K. (1997). Investor activism goes worldwide. *Corporate Board, 18*(103), 7–12.
- Arnold, G. (2008). *Corporate financial management*. Harlow: Financial Times Prentice Hall.
- Arora, R. (2016). The relation between Investment of domestic and foreign institutional investors and stock returns in India. *Global Business Review, 17*(3), 654–664.
- Barber, B. (2007). Monitoring the monitor? Evaluating CalPERS' activism. *Journal of Investing, 16*(4), 66–80.
- Basak, S., & Pavlova, A. (2013). Asset prices and institutional investors. *The American Economic Review, 103*(5), 1728–1758.
- Batra, A. (2003). *The dynamics of foreign portfolio inflows*



- and equity returns in India (ICRIER Working Paper No.109). Retrieved from <https://core.ac.uk>
- Bennett, A., Sias, R., & Starks, L. (2003). Greener pastures and the impact of dynamic institutional preferences. *Review of Financial Studies*, 16(4), 1203–1238.
- Bose, S. (2012). Mutual fund investments, FII investments and stock market returns in India. *Money & Finance, ICRA Bulletin, September*, 89–110.
- Bank of America-Merrill Lynch Global Research. (2015). *Survey report for favorite Asian equity market 2015*. Accessed from <https://economictimes.indiatimes.com/markets/stocks/news>
- BS Reporter. (2014, September 23). Shareholder activism in India highest in Asia, says report. *Business Standard*. Retrieved from <http://www.business-standard.com>
- Bushee, B., Carter, M., & Gerakos, J. (2014). Institutional investor preferences for corporate governance mechanisms. *Journal of Management Accounting Research*, 26(2), 123–149.
- Bushee, J. (1998). Institutional investors, long-term investment, and earnings management. *The Accounting Review*, 73(3), 305–333.
- Cai, F., & Zheng, L. (2004). Institutional trading and stock returns. *Finance Research Letters*, 1(3), 178–189.
- Carleton, W., Nelson, J., & Weisbach, M. (1998). The influence of institutions on corporate governance through private negotiations: Evidence from TIAACREF. *Journal of Finance*, 53(4), 1335–1362.
- Chakravarthy, B. (1986). Measuring strategic performance. *Strategic Management Journal*, 7(5), 437–458.
- Chakrabarti, R. (2001). FII flows to India: Nature and causes. *Money and Finance*, 2(7), 61–81.
- Choe, Y., Kho, B., & Stulz, R. (1998). Do foreign investors destabilize stock markets? The Korean experience in 1997. *Journal of Financial Economics*, 54, 227–264.
- Dasgupta, A., Prat, A., & Verado, M. (2011). The price impact of institutional herding. *Review of Financial Studies*, 24(3), 892–925.
- Davis, S., Lukomnik, J., & Pitt-Watson, D. (2006). *The new capitalists: How citizen investors are reshaping the corporate agenda*. Boston, MA: Harvard Business School Press.
- Del Guercio, D. (1996). The distorting effect of the prudent-man laws on institutional equity investment. *Journal of Financial Economics*, 40(1), 31–62.
- Demsetz, H., & Lehn, K. (1985). The structure of corporate ownership: Causes and consequences. *Journal of Political Economy*, 93(6), 1155–1177.
- Demsetz, H., & Villalonga, B. (2001). Ownership structure and corporate performance. *Journal of Corporate Finance*, 7, 209–233.
- Douma, S., George, R. & Kabir, R. (2006). Foreign and domestic ownership, business groups and firm performance: Evidence from large emerging market. *Strategic Management Journal*, 27(7), 637–657.
- Dubey, S. (2012). *Layman's guide to stock market & investment*. New Delhi: VIJ Books India Pvt Ltd.
- Durnev, A., & Kim, E. (2005). To steal or not to steal: Firm attributes, legal environment, and valuation. *Journal of Finance*, 60(3), 1461–1493.
- Erkens, D., Hung, M., & Matos, P. (2012). Corporate governance in the 2007–2008 financial crisis: Evidence from financial institutions worldwide. *Journal of Corporate Finance*, 18, 389–411.
- Ersoy-Bozcuk, A., & Lasfer, M. (2001). The trading behavior of UK institutional investors (EFMA 2001 Lugano Meetings; Cass Business School Research Paper) Accessed from SSRN. <http://dx.doi.org/10.2139/ssrn.269736>
- Froot, K., & Ramadorai, T. (2008). Institutional portfolio flows and international investments. *Review of Financial Studies*, 21(2), 937–971.
- Gillan, S., & Starks, L. (2003). Corporate governance, corporate ownership, and the role of institutional investors: A global perspective. *Journal of Applied Finance*, 13(2), 4–22.
- Gillan, S., & Starks, L. (2007). The evolution of the shareholder activism in the United States. *Journal of Applied Corporate Finance*, 19(1), 55–73.
- Gilson, R., & Gordon, J. (2013). The agency costs of agency capitalism: Activist investors and the revaluation of governance rights. *Columbia Law Review*, 113(4), 863–928.
- Gompers, P., & Metrick, A. (2001). Institutional investors and equity prices. *Quarterly Journal of Economics*, 116(1), 229–259.
- Gordon, J., & Gupta, P. (2003). *Portfolio flows into India: Do domestic fundamentals matter?* (Working Paper Number- WP/03/02). Washington, DC: International Monetary Fund.
- Griffin, J., Harris, J., & Topaloglu, S. (2003). The dynamics of institutional and individual trading. *The Journal of Finance*, 58(6), 2285–2320.
- Grinblatt, M., & Keloharju, M. (2000). The investment behavior and performance of various investment types: A study of Finland's unique data set. *Journal of Financial Economics*, 55(1), 43–67
- Hau, H. (2001). Location matters: An examination of trading profits. *Journal of Finance*, 56(5), 1951–1983.
- Hitt, M., Gimeno, J., & Hoskisson, R. (1998). Current and future research methods in strategic management. *Organizational Research Methods*, 1(1), 6–44.
- Huang, S., & Xie, R. (2016). Impact of shareholder activism on corporate governance in China: Evidence from companies listed on the Shenzhen stock exchange “A” Shares. *European Scientific Journal*, 12(1), 114–128.
- Ingle, C.B., & Van der Walt, N.T. (2004). Corporate governance, institutional investors and conflicts of

- interest. *Corporate Governance International Review*, 12(4), 534–551.
- Joh, S. (2003). Corporate governance and firm profitability: Evidence from Korea before the economic crisis. *Journal of Financial Economics*, 68(2), 287–322.
- Kang, J., & Stulz, R. (1997). Why there is a home bias? An analysis of foreign portfolio equity ownership in Japan. *Journal of Financial Economics*, 46(1), 3–28.
- Karolyi, A. (2002). Did the Asian financial crisis scare foreign investors out of Japan? *Pacific Basin Finance Journal*, 10 (4), 411–442.
- Kennedy, P. (1985). *A guide to econometrics* (2nd ed.). Cambridge, MA: The MIT Press.
- Khanna, T., & Palepu, K. (2000). Is group affiliation profitable in emerging markets? An analysis of diversified Indian business groups. *Journal of Finance*, 55(2), 867–891.
- Lakonishok, J., Shleifer, A., & Vishny, R. (1992). The impact of institutional trading on stock prices. *Journal of Financial Economics*, 32(1), 23–43.
- Lins, K. (2003). Equity ownership and firm value in emerging markets. *Journal of Financial and Quantitative Analysis*, 38(1), 159–184.
- Marshall, J. (2009). *The financial crisis in the US: Key events, causes and responses* (Research Paper 09/34). London: Business and transport section, House of Commons Library.
- Mathiason, N. (2008, December 28). Three weeks that changed the world. *The Guardian*. Retrieved from <https://www.theguardian.com>.
- Maug, E., (1998). Large shareholders as monitors: Is there a trade-off between liquidity and control? *Journal of Finance*, 53(1), 65–98.
- Mizuno, M. (2010). Institutional investors, corporate governance and firm performance in Japan. *Pacific Economic Review*, 15(5), 653–665.
- Mizuno, M. (2014). Corporate governance, institutional investors and firm performance in France. *Journal of Business Finance*, 2(1), 33–46.
- Mukherjee, P., Bose, S., & Coondoo, D. (2002). Foreign institutional investment in the equity market: An analysis of daily flows during January 1999–May 2002. *Money and Finance*, 2(2-9), 21–51.
- Nofsinger, R., & Sias, R. (1999). Herding and feedback trading by institutional and individual investors. *Journal of Finance*, 54(6), 2263–2295.
- Othman, S., & Borges, W. (2015). Shareholder activism in Malaysia: Is it effective? *Procedia - Social and Behavioral Sciences*, 172(January), 427–434.
- Papaioannou, M., Park, J., & Pihlman, J. (2013). *Pro-cyclical behavior of institutional investors during the recent financial crisis: Causes, impacts, and challenges* (Working Paper No. WP/13/193). Washington, DC: International Money Fund.
- Ping, Z., & Wing, C. (2011). Corporate governance: A summary review on different theory approaches. *International Research Journal of Finance and Economics*, 68, 7–13.
- Pound, J. (1988). Proxy contests and the efficiency of shareholder oversight. *Journal of Financial Economics*, 20(1-2), 237–265.
- Ramezani, A., Pouraghajan, A., Emamgholipour, M., Khanalizadeh, H., & Hashemi, S. (2012). Investigation the relationship between institutional investors and corporate performance: Evidence from Tehran stock exchange. *Middle East Journal of Scientific Research*, 11(11), 1566–1574.
- Ramaswamy, K., Li, M., & Veliyath, R. (2002). Variations in ownership behavior and propensity to diversify: A study of the Indian corporate context. *Strategic Management Journal*, 23(4), 345–358.
- Reinhart, C., & Rogoff, K. (2008). Is the 2007 US sub-prime financial crisis so different? An international historical comparison. *The American Economic Review*, 98(2), 339–344.
- Richards, A. (2005). Big fish in small ponds: The momentum investing and price impact of foreign investors in Asian emerging equity markets. *Journal of Financial and Quantitative Analysis*, 40(1), 1–27.
- Rock, E. B. (2015). *Institutional investors in corporate governance* (Working Paper No.1458). Retrieved from <http://scholarship.law.upenn.edu>
- Romano, R. (1993). Public pension fund activism in corporate governance reconsidered. *Columbia Law Review*, 93(1), 795–853.
- Rose, C. (2007). Can institutional investors fix the corporate Governance problem? Some Danish evidence. *Journal of Management and Governance*, 11(4), 405–428.
- Saha, M. (2009). Stock market in India and foreign institutional investments: An appraisal. *Journal of Business and Economic Issues*, 1(1), 1–15.
- Samal, K. (1997). Emerging equity market in India: Role of foreign institutional investors. *Economic and Political Weekly*, 32(42), 18–24.
- Sharpe, W., Tian, G., & Zhang, H. (2013). *Mutual fund ownership, firm specific information, and firm performance: Evidence from China*. Paper presented at China International Conference in Finance, Shanghai, China on July 10–13.
- Shleifer, A., & Vishny, R. (1986). Large shareholders and corporate control. *Journal of Political Economy* 94(3), 461–488.
- Shukla, R.K., & van Inwegen, G.B. (1995). Do locals perform better than foreigners? An analysis of UK and US mutual fund managers. *Journal of Economics and Business*, 47(2), 241–254.
- Sias, R. (2004). Institutional herding. *Review of Financial Studies*, 17(1), 165–206.

- Stulz, R. (1988). Managerial control of voting rights: financing policies and the market for corporate control. *Journal of Financial Economics*, 17(1), 25–54.
- Suresh Babu, M., & Prabheesh, K. P. (2008). Causal relationships between foreign institutional investments and stock returns in India. *International Journal of Trade and Global Markets*, 1(3), 259–265.
- The decoupling debate. (2008, March). *The Economist*. Retrieved from <http://www.economist.com/node/10809267>
- Thenmozhi, M., & Kumar, M. (2009). *Dynamic interaction among mutual fund flows, stock market return and volatility* (NSE Working Paper No. 50). Mumbai: National Stock Exchange of India Ltd.
- Thiripalraju, M., & Acharya, R. (2011). *Dynamic interaction between institutional investment and stock returns in India: A case of FIIs and MFs*. Indian Institute of Capital Markets. Retrieved from [http://utiicm.com/research/PDFs/dynamic\\_interaction\\_sr8.pdf](http://utiicm.com/research/PDFs/dynamic_interaction_sr8.pdf)
- Tobin, J. (1969). A general equilibrium approach to monetary theory. *Journal of Money, Credit, and Banking*, 1(1), 49–53.
- Tobin, J. (1978). Monetary policies and the economy: The transmission mechanism. *Southern Economic Journal*, 44(3), 421–431.
- Torres-Reyna, O. (2008). *Panel data analysis: Fixed effect and random effect using STATA*. Retrieved from <http://dss.princeton.edu/training>
- Wahal, S. (1996). Pension fund activism and firm performance. *Journal of Finance and Quantitative Analysis*, 31(1), 1–23.