Does Ownership Structure Affect Firm Performance in an Emerging Market? The Case of India

Brahmadev Panda* and Dinabandhu Bag

ABSTRACT

Manuscript type: Research paper
Research aim: This study aims to examine the impact of ownership structure (ownership concentration and identities) on the financial and market performance of Indian listed firms, post the US financial crisis 2008.
Design/Methodology/Approach: This study is based on a six-year financial dataset of 100 Bombay Stock Exchange (BSE) listed firms, from FY 2009-10 to FY 2014-15. The study applies the static panel data model (pooled OLS, fixed effect and random effect) and the dynamic panel data model (two-step generalised method of moments) for the hypotheses testing.
Research findings: This study finds that in the case of ownership concentration, large owners have no link with the financial performance. However, they have an adverse impact on the market performance. The presence of promoters, domestic institutions and foreign institutions appears to boost the financial performance, whereas the foreign institutional investment seems to enhance the market performance.

* Corresponding author: Brahmadev Panda is a Doctoral Research Scholar at the School of Management, National Institute of Technology Rourkela, India. Email: 514sm3009@nit.ac.in, brahmadev.panda@gmail.com
Dinabandhu Bag is working as an Associate Professor at the School of Management, National Institute of Technology Rourkela, India. Email: leepsan@nitrkl.ac.in, dinabandhu.bag@gmail.com

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Theoretical contribution/Originality: The major contributions of this study are the two dimensions of ownership concentration (large owners) and identity (types of owners) being considered as ownership structure, the use of the dynamic panel models to check for the endogeneity issue and the post US financial crisis analysis derived from this study. All of these contribute to the impact of ownership volatility and performance variation in the context of India, thereby making this study a novel one.
Policy implications: Policymakers should consider developing more lucrative policies so as to encourage institutional investors to invest in the Indian market. This is because domestic and foreign institutional owners are central to the enhancement of both the corporate financial and market performance. Further, corporate executives should aim to prevent inefficiencies so as to safeguard the interest of large owners.
Research implications/Limitations: This study has used ownership structure as one of the essential governance mechanisms. Future research may consider other mechanisms like board structure or CEO duality.

Keywords: Ownership Structure, Performance, Panel Data, GMM, Emerging Market
JEL Classification: G32, L25, C33

1. Introduction

The role of ownership and its impact on modern organisations and their performance has been a debated topic in financial economics since the early works of Smith (1776). The concept of ownership structure is developed based on the existence of multiple owners or shareholders in modern companies. Berle and Means (1932) attempted to delineate ownership from control in large corporations in the United States, where ownership does not lie in the hand of one person alone, but is instead, disseminated among many persons. The control of these companies, therefore, lies with the managers who represent the interest of the owners in the respective companies (Smith, 1776).

Since the emergence of the concept of diluted ownership, limited ownership rights and the rise of managerial powers in listed companies or firms, the relationship between ownership structure and firm performance has been of great concern. Without the firm owners' proper control, firm performance may decline, and expropriations by managers may rise (Berle & Means, 1932). Jensen and Meckling (1976) observed

that managerial ownership could lower agency conflict but increase firm performance. Nonetheless, Shleifer and Vishny (1986, 1997) and Thomsen and Pedersen (2000) explained that strong ownership control is vital for improving firm performance. The ambiguity of the relationship between ownership structure and firm performance has thus instigated the interest of research today as it is very crucial for governance.

Earlier studies (Jensen & Meckling, 1976; Lichtenberg & Pushner, 1994; Mehran, 1995) found a monotonic relationship between ownership structure and firm performance. However, there were also studies (Morck, Shleifer, & Vishny, 1988; McConnell & Servaes, 1990; Chen, Hexter, & Hu, 1993; Short & Keasey, 1999) which found a non-monotonic relationship between the two. All these studies have assumed ownership as the exogenous factor. Nonetheless, Demsetz (1983) and Demsetz and Lehn (1985) challenged the notion. They claimed that ownership structure is an endogenous variable which has no direct relationship on firm performance. Past studies by Demsetz and Villalonga (2001), Farooque, van Zijl, Dunstan and Karim (2007) and Boone, Colombage and Gunasekarage (2011) as well as Loderer and Martin (1997) noted a bidirectional relationship between the two. These results, therefore showed that there is no unanimous conclusion and the debate is still prevailing. Based on this, the current study aims to examine the relationship of these two variables in the context of the Indian public listed companies.

This study attempts to examine the impact of ownership structure on corporate performance in an emerging market scenario, post the US financial crisis of 2008. It is hoped that the outcome can contribute to existing ownership literature in a few ways. First, the ambiguity in the derived inference on the relationship between ownership structure and firm performance, as gathered from extant literature, cannot be generalised. Hence, a further study is inevitable. Second, most of the studies in this line of thought are based on developed markets like the US, the UK and the European community, which may not be applicable in the context of emerging countries such as India, due to different socio-economic and political structures (Fan, Wei, & Xu, 2011). Unlike their developed counterparts, emerging economies are confronted with a different type of agency problem, where majority of the inside shareholders tend to benefit themselves unfairly. This practice is liklely to disregard the interests of the minority or outside shareholders. Specifically, India has become one of the largest emerging markets in the

world, where investors across the world are keen to invest in the Indian market. However, the institutional settings and corporate governance of India is different from the developed markets (La Porta, Lopez-de-Silanes, & Shleifer, 1999), making the procedure either more tedious or more difficult. In this regard, information gathered from the current study would be able to provide investors with a better understanding of the Indian market, hence enabling them a better decision making process for investment purposes.

Second, ownership structure in India is typically concentrated on family firms and business groups (Chauhan, Dey, & Jha, 2016) which are mostly inter-connected either through formal or informal means. In many cases, it is the owners who control these firms through a complicated pyramidal and cross-holding ownerships. This practice allows the owners to own low-equity ownership yet be able to retain a tight control of the firms. In most of the family-owned firms, anyway, the family members are commonly promoted to the upper echelon of the management due to family ties and not merits. These family-promoted upper management members play a central role in the decision-making of the firms. They have the power to transfer resources from one firm to another, as a means to gain private benefits (Cheung, Rau, & Stouraitis, 2006; Gopalan, Nanda, & Seru, 2007). Taking this scenario to be typical of developing countries, it would seem that a study on India is thus imperative.

Third, this study takes into account two dimensions of the ownership structure: ownership concentration and identities. Studies (Kogan, Ross, Wang, & Westerfield, 2006) showed that ownership structure such as non-institutional ownerships and individual ownerships have been minimally regarded before. Individual ownerships or retail investors play a significant role in the capital market. Through their frequent trading, they can positively contribute to the market liquidity and resilience. Evidence also showed (Kogan et al., 2006) that retail investors' trading can have a persistent impact on share prices and market efficiency. Based on this, individual ownership and other types of ownership structure are also included in this study.

Fourth, both the static (pooled OLS, fixed effect and random effect) and dynamic panel models (generalized method of moments – GMM) are employed in this study. The GMM is used to check the endogeneity issue due to the simultaneity bias which exists in the ownership structure. This is rarely used in earlier ownership studies focussing on the Indian context. Fifth, we consider market capitalisation as the

measure for market performance. This variable is also not considered in earlier studies focussing on the Indian context.

Finally, this study takes into account the US financial crisis of 2008, as one element to understand its effect on Indian corporate performance and ownership variations. The US financial crisis was one of the worst financial epidemics that the world had ever witnessed since the Great Depression of 1930. Undoubtedly, the financial crisis has had a severe impact on investors' sentiment and corporate performance, especially in the context of emerging Asian countries (Kim, Kim, & Lee, 2015). Based on this, the current study assumes that the post-crisis era can be used to gauge the influence it might have had on the Indian market.

The rest of this paper is structured as follows. Section 2 describes the Indian institutional framework. Section 3 deals with theories and empirical studies related to the ownership structure and its relationship with firm performance, followed by the development of the hypotheses. Section 4 discusses the data, research methodology and model specifications. Section 5 provides the discussion of the empirical results and Section 6 concludes by looking at the limitations and implications.

2. Literature Review

2.1 The Indian Institutional Setting

The Indian economy has opened up since the structural economic reforms which occurred in 1991, due to the balance of payment crisis. The ambitious plan was launched as a means to attract foreign funds, to privatise the public sector undertakings (PSUs), and to liberalise the stringent rules of India. The impact of the new policy of Liberalisation, Privatisation and Globalisation (LPG), was noticed in the Indian economy in the new millennium. Privatisation led to the transfer of ownerships from the state or central government to the private and public owners (Mukhopadhyay & Chakraborty, 2017). Similarly, Indian corporate players went public in large numbers, in a bid to attract huge funds so as to compete with the global firms. Consequently, this move diluted the ownership structure of these firms. After the firms became public, there were many players like promoters, management, institutions, foreign investors and corporate players who retained some percentage of the total ownership. The diversification of the ownership structure in the Indian private sector has, inevitably, made governance an emerging issue of concern.

There are significant discrepancies between the governance systems of the emerging economies and developed economies. India, as an emerging economy, has different institutional settings and regulatory and legal environments in comparison to the developed countries (Prowse, 1992; Krishna, Ojha, & Barrett, 2017). Therefore, there are certain marked differences in the ownership structure, board structure, business practices, corporate disclosure practices, investor protection laws, governance codes and the market for corporate control. Corporate governance models across the world are different according to the variety of capitalism practised but two popular models stand out. They are the liberal model and the co-ordinate model. The former model prioritises shareholders' interest and it mainly exists in the Anglo-Saxon countries whereas the latter model acknowledges the benefit of stakeholders and it is mainly found in continental Europe and Japan.

The current institutional framework and regulatory functions of India are adopted from Great Britain due to its colonial past, but the Indian corporate governance model is developed from a mixture of the Anglo-Saxon and German model. In this regard, the Indian corporate sector is further classified into the private sector and the public sector. Much of India's industry is most closely held and dominated by the promoter groups while the public sector companies are mainly monitored by the state or central government. The ownership pattern of both the private and public sector companies was radically altered after the LPG era. The public sector companies became mainly socially driven and this has lowered the profitability and efficiency of the public companies. In contrast, the private sector was primarily driven by the controlling promoter groups (Balasubramanian & Anand, 2013) with the intention of maximising its benefits. The major issue here is the conflict of interest between the major and minor shareholders of the private companies.

Although India has adopted many governance and regulatory mechanisms from the west, it is still slow in its execution of these rules due to its low political will and insensitive bureaucracy coupled with corruption. The prevalence of the concentrated ownership structure among the large private sector of India has led to a lack of transparency and clarity of its governance and regulatory implementations. Even though India has a market-based system like western countries do, it is still infirm in various areas, for instance, the shortage of an active market for control, the lack of a free flow of information from companies to investors, and the presence of market anomalies. Consequently, the

ownership structure that prevails among India's corporate sector has become a crucial mechanism for governance.

2.2 Review of Theory and Empirical Evidence

The ownership structure is based on the distribution of the equity and property rights of the firms among the shareholders in publicly traded firms. The corporate ownership structure and its relationship with firm performance is developed under the framework of the agency theory (Jensen & Meckling, 1976) which explains the relationship between the principal and agent, where the agency conflict arises due to the diverging interest between the two coordinating parties (Fama, 1980). Managers of the firms may not work for the best interest of the owners in the absence of their close supervision (Smith, 1776). This will mitigate the profit maximisation purpose of the owners, and also creates doubt on the survival of the firm (Fama, 1980). To alleviate the agency problem and to optimise firm performance, ownership control has become a crucial governance mechanism even though earlier evidence looking at the relationship between ownership structure and performance had been mixed.

2.2.1 Ownership Concentration and Firm Performance

The agency theory also delineates the separation of ownership from control, and this leads to the confiscation of property by managers. The dilution of the owners' supervision in the firm boosts managerial opportunism and it can adversely affect firm performance (Berle & Means, 1932). Owners with small ownership in the firms are not interested in disciplining the blundering managers (Grossman & Hart, 1980), but owners with concentrated ownership can discipline the managers by utilising their voting rights. Their knowledge and resources can also enhance firm performance (Carney & Gedajlovic, 2001). Blockholders, with their complete control over the management, can also be helpful for resolving the free rider problem and moral hazards in their firms (Shleifer & Vishney, 1986), an action which can reduce agency costs.

The survey conducted by La Porta et al. (1999) mentioned that most of the economies of the world have a concentrated ownership structure except for the USA and UK. The study by Shleifer and Vishny (1997) also concluded that ownership concentration prevailed in most of the

Latin American, European, East Asian and African listed firms, but in Asian countries, the ownership structure was noted to be pyramidal and cross-sectional (Claessens & Fan, 2002). Studying Japanese companies, Kang and Shivdasani (1995) found that there was a high ownership concentration but Prowse (1992) found that financial institutions were those with the largest shareholders in the Japanese listed firms. In China, most of the firms were of high ownership concentration, with majority of the ownership being in the hands of the government (Xu & Wang, 1999) but in the case of Germany, large shareholders seemed to control the management of the listed firms (Franks & Mayer, 2001).

Studies (Berle & Means, 1932; Jensen & Meckling, 1976; Shleifer & Vishny, 1986) have noted that most of the countries' corporate world is dominated by concentrated ownership and large shareholders who controlled the management of the firms so as to maximise their returns. This was verified by Berle and Means (1932) and Jensen and Meckling (1976) who agreed that in a dispersed ownership pattern, ownership concentration can mitigate the agency problem. This helped to enforce firm performance. Shleifer and Vishny (1986) also argued that large shareholders have the capacity to streamline the action of the managers and to motivate them into improving firm performance. This was endorsed by La Porta et al. (1999) who stated that in a country with a less developed capital market and weaker investor protection, ownership concentration is beneficial for improving firm performance.

Thomsen and Pedersen (2000), Gorton and Schmid (2000), Earle, Kucsera and Telegdy (2005), Alonso-Bonis and de Andrés-Alonso (2007) and Krivogorsky and Grudnitski (2010) examined the effects of ownership concentration in the context of European countries. They all documented the positive effects of ownership concentration in their findings. Other studies witnessing the positive effect of ownership concentration on firm performance in other countries can be traced to Javid and Iqbal (2008) who examined Pakistan, Hu and Izumida (2008) who focussed on Japan, Boone et al. (2011) and Gaur, Bathula and Singh (2015) who examined New Zealand, and Desoky and Mousa (2013) who focussed on Egypt.

Despite this being so, some studies had noted the negative relationship between ownership concentration and firm performance. For instance, Leech and Leahy (1991) observed the ownership concentration of UK listed firms and Agrawal and Knoeber (1996) studied the interdependence of the control mechanisms in 400 of the largest USA firms. Both studies found no empirical relationship between insider

ownership and firm performance. Similarly, Jiang (2004), Džanić (2012) and Al-Saidi and Al-Shammari (2015) also reported the negative effect of ownership concentration. Investigating the relationship between ownership concentration and firm performance among a sample of USA firms, Demsetz and Villalonga (2001) also concluded that large shareholders were negatively related to firm performance.

Nonetheless, some studies found the inter-deterministic relationship between ownership structure and firm performance. For instance, Demsetz (1983) noted that ownership concentration was considered as the endogenous variable; it had no effect on firm performance. Likewise, Demsetz and Lehn (1985) found the endogeneity between ownership concentration and firm performance in the USA listed firms to be unassociated. The study of Demsetz and Villalonga (2001) also considered ownership structure as an endogenous variable; they stated that there was no significant link between ownership structure and firm performance. Finally, Manawaduge, De Zoysa and Rudkin (2009) looking at Sri Lanka and Al-Saidi and Al-Shammari (2015) looking at Kuwait, also reported no significant association between ownership concentration and firm performance.

2.2.2 Ownership Identity and Performance

Ownership identity is the other dimension of the ownership structure observed in the current study. It is a concept which can be described as made up of different types of owners who have a certain percentage of shares in the firms. They thus comprised promoters, corporate investors, financial institutional investors, government bodies, individual investors and employee stock owners (Boone et al., 2011). These ownership types or ownership identities have a different level of behaviour, which signifies the various kinds of engagement that can influence firm performance (Denis & McConnell, 2003). Ownership identities offer the shareholders three bases of powers, such as formal power, social impact power and expertise in the firms concerned (Kang & Sørensen, 1999).

In ownership identities, large institutional shareholders have the highest level of motivation, incentive and resources to control the actions of the managers. They can drive managerial behaviour towards improving firm performance by reducing the managers' self-consuming behaviours (McConnell & Servaes, 1995). In their studies, Leech and Leahy (1991), Xu and Wang (1999) and Al-Khouri (2006) reported that institutional investors have a positive impact on the firm's value. In

contrast, Agrawal and Knoeber (1996), and La Porta, Lopez-de-Silanes, Shleifer and Vishny (1998) noticed that domestic and institutional investors do not have any effect on firm performance while Barnhart and Rosenstein (1998) detected a negative association between institutional ownership and firm performance. Finally, Cronqvist and Nilsson (2003) found no association.

State ownership or government ownership is the next kind of ownership structure which prevails in most countries across the world. In the case of state-controlled companies, politicians are the ones who select the executives and other personnel, based on politicians' bias, rather than on the selected members credentials. This practice can lead to more transaction costs (Megginson, Nash, & Van Randenborgh, 1994). The influence of the politicians and bureaucrats in the decision-making process is very rampant in government-controlled firms and this unhealthy practice can adversely affect firm performance and firm efficiency (Shleifer & Vishny, 1994). Focussing on Middle Eastern countries, Aljifri and Moustafa (2007) and Omran, Bolbol and Fatheldin (2008) noted that government ownership has a positive association with firm performance. In contrast, Gunasekarage, Hess and Hu (2007) and Liao, Shyu and Chien (2014) stated that the high level of government ownership adversely affected firm performance in the case of China.

Another type of ownership structure is the founding family investors who try to enhance their interests by side lining the concerns of other shareholders (Morck et al., 1988; Prowse, 1992). In their study, Anderson and Reeb (2003) examined the performance of family-owned and non-family owned firms in the USA. They found that family-owned firms performed better than non-family owned firms. Chu (2011) mentioned that when family members of the firms were also the heads of the business, top executives or were members on the board of directors, the performance of the firms is strong. This claim was endorsed by Barontini and Caprio (2006) who studied ten European countries and were able to show evidence of the positive impact of family control on firm performance. This outcome was also validated by Yammeesri and Lodh (2004) and Shyu (2011) who looked at Taiwanese firms. Nonetheless, Filatotchev, Lien and Peisse (2005) found this not to be true.

Investments can come from any individual or group. Corporate investors, or business entities, for instance, invest with the purpose to control the actions of the managers, and to earn a huge financial gain. They have more inclinations towards earning a profit and in gaining

information about the firms (La Porta et al., 1999). Researchers like Xu and Wang (1999), Qi, Wu and Zhang (2000) and Hovey, Li and Naughton (2003) mentioned that the presence of corporate investors increased firm's profitability. In the case of individual shareholders, it was observed that their impact on the firm's decision-making process was very limited. This is because individual shareholders do not have the required power or the voting right to monitor the management (Zeitun & Gang Tian, 2007). Besides individual shareholders, another kind of ownership structure can be traced to managerial ownership. This type of ownership could influence firm performance as noted by Alabdullah (2018). However, Al-Khouri (2006), Džanić (2012) and Muller-Kahle (2015) detected that it had a negative effect on firm performance. Likewise, Liao, Shyu and Chien (2014) also found that managerial ownership had no influence on firm performance in Taiwan. Table 1 shows a summary of the empirical works done on ownership structure and firm performance.

2.2.3 Evidence from India

So far, we have witnessed certain studies which had stressed on the effect of the ownership structure on firm performance, whether positively, negatively or neutrally. This section highlights those studies which had focussed on India specifically, as shown in Table 2. In this regard, Ganguli and Agrawal (2009) mentioned that promoters were one of the largest shareholders in India. Their monitoring helped to improve the performance of the Indian companies (Haldar & Rao, 2011; Manna, Sahu and Gupta 2016; Mishra & Kapil, 2017). Likewise, Deb and Chaturvedula (2003) and Manna et al. (2016) also detected evidence showing that institutional ownership was positively related to the firm's performance measures. However, Srivastava (2011) stated that promoters have no influence on firm performance.

As noted in the table, empirical works conducted in the context of India are not very widespread. Among these studies, we also identified some limitations within. First, the consideration of ownership concentration in this line of research in the context of India is rather limited. Many of these studies had focussed on the promoters and institutional ownership. Second, earlier studies have not considered the endogeneity issue which exists in the ownership structure. Third, the use of the dynamic panel data methodology was hardly done in earlier works. Fourth, a post-US financial crisis had not been considered

Table 1: Summary of Empirical Works on Ownership Structure and Firm Performance

No.	Authors (Year)	Sample	Ownership Variables	Performance Measures	Main Results
1	Thomsen & Pedersen (2000)	214 firms from 12 European countries (1990-1995)	Ownership concentration	ROA and Market to book ratio	Positive effect
2	Gorton & Schmid (2000)	283 German listed firms (1975-1986)	Ownership concentration	ROE and Market to book ratio	Positive effect
3	Demsetz & Villalonga (2001)	223 US Firms (1976-1980)	Ownership concentration	Tobin's Q, Average accounting profit rate	No significant relationship
4	Jiang (2004)	33 Chinese firms (2003)	Ownership concentration	ROE	Negative effect
5	Earle et al. (2005)	168 Hungarian firms (1996-2001)	Ownership concentration	ROE and Operating efficiency	Positive effect
6	Al-Khouri (2006)	89 listed firms at the Amman Stock Exchange (1998-2001)	Institutional ownership shareholdings, Directors' ownership	Tobin's Q	Institutional investors (positive), Managerial ownership (negative)
7	Farooque et al. (2007)	660 Bangladeshi firm years (1995-2001)	Financial Institutional Shareholdings, Govt shareholdings, Public shareholdings	Tobin's Q and ROA	No significant effect
8	Alonso-Bonis & de Andrés-Alonso (2007)	101 Spanish listed firms (1991-1997)	Ownership concentration, Directors' ownership	Tobin's Q	Ownership concentration (positive), Directors' ownership (No relationship)
9	Javid & Iqbal (2008)	60 non-financial Pakistan listed firms (2003-2008)	Ownership concentration, Financial institution ownership, Foreign ownership, Individual ownership	ROA, ROE and Tobin's Q	Ownership concentration, family and foreign ownership (Positive). Financial institution and individual ownership (No relationship)

Table 1: (continued)

No.	Authors (Year)	Sample	Ownership Variables	Performance Measures	Main Results
10	Hu & Izumida (2008)	Japanese listed firms (1980-2005)	Ownership concentration	ROA and Tobin's Q	Ownership concentration (Positive)
11	Manawaduge et al. (2009)	45 Sri Lankan listed companies (2007-08)	Ownership concentration	ROA, Market to book ratio and Tobin's Q	No significant effect
12	Krivogorsky & Grudnitski (2010)	891 public firms of Continental Europe (2005)	Blockholders ownership	Return on Shareholders' fund and Tobin's Q	Positive effect
13	Boone et al. (2011)	612 firms of New Zealand years (2002-2007)	Individual blockholder, Director blockholder, Financial blockholders, Corporate blockholders and Foreign blockholders	Tobin's Q and Market value to book value ratio	Ownership concentration (Positive) and ownership identity (positive)
14	Džanić (2012)	237 Croatian joint stock companies (2003-09)	Ownership concentration, managerial ownership	ROE, Tobin's and labour efficiency	Blockholder ownership (Negative) and managerial ownership (Negative)
15	Desoky & Mousa (2013)	99 listed companies of Egypt (2009)	Ownership concentration, Government ownership, Corporate owners, Bank owners, Individual owners	ROA and ROE	Ownership concentration (positive with ROE), Bank owners and Individual owners (significant effect)
16	Liao et al. (2014)	488 Taiwanese manufacturing firms (1994-2004)	Directorial ownership, Managerial ownership	Tobin's Q	Director ownership (positive), managerial ownership (no influence)

Table 1: (continued)

No.	Authors (Year)	Sample	Ownership Variables	Performance Measures	Main Results
17	Muller-Kahle (2015)	187 US and UK firms (2000-2007)	CEO owner, Pressure Resistant and Pressure sensitive	Tobins' Q, ROA	CEO ownership (negative), dominant owners (positive)
18	Gaur et al. (2015)	169 New Zealand listed firms	Ownership concentration	ROA, ROE and ROS	Ownership concentration (positive)
19	Al-Saidi and Al-Shammari (2015)	103 listed firms of Kuwait (2005-2010)	Ownership concentration, Institutional ownership, Government ownership and Family ownership	Tobin's Q, ROA	Ownership concentration (no effect) and Government and Individual and Family owners (positive)
20	Alabdullah (2018)	109 listed firms of Jordan (2012)	Managerial ownership and Foreign ownership	Market share	Managerial ownership (positive)

Table 2: Summary of the Empirical Evidence of Studies Done in India

No.	Authors (Year)	Sample	Ownership Variables	Performance Measures	Main Results
1	Deb & Chaturvedula (2003)	443 BSE listed firms	Promoters, Institutional and Individual shareholders	Tobin's Q	Institutional owners (positive) and individual shareholders (negative)
2	Douma, George, & Kabir (2006)	1005 BSE listed firms	Foreign ownership, Foreign institutions, Foreign corporations, Domestic ownership,	ROA and Tobin's Q	Foreign ownership, Foreign corporations, and Domestic corporation (positive)

Table 2: (continued)

No.	Authors (Year)	Sample	Ownership Variables	Performance Measures	Main Results
			Domestic institutions, Domestic corporations, Managerial ownership		
3	Ganguli & Agrawal (2009)	NSE 98 mid-cap listed companies	Promoters and non-promoters shareholders	Tobin's Q	Promoters' holding (positive) and Non-promoters' holding (negative)
4	Srivastava (2011)	98 BSE listed companies	Domestic promoter, Foreign promoter, Non-promoter institutional investors, Non-promoter non-institutional holdings	ROA, ROE, Price to book ratio and Price-earnings ratio	No relationship
5	Haldar & Rao (2011)	BSE-500 listed firms	Promoters and non-promoters shareholders	Tobin's Q, ROA, and ROCE	Promoters' holding (positive) and Non-promoters' holding (negative)
6	Jameson, Prevost & Puthenpurackal (2014)	1796 Indian firms	Family ownership, Founding ownership, Founding family ownership	Tobin's Q	Family, Founding, and Founding family ownership (negative)
7	Manna et al. (2016)	42 NSE listed firms	Foreign promoters, Institutional investors	Tobin's Q, Market value added, Earning per share, and ROCE	Foreign promoters and intuitional owners (positive)
8	Mishra & Kapil (2017)	391 Indian companies	Promoter ownership	Tobin's Q, ROA	Promoters owner-ship (positive)

in those studies. The use of the agency theory in these studies had also conceptualised that the ownership structure enhances firm performance by mitigating the agency problems (Jensen & Meckling, 1976; Fama, 1980). Based on this philosophy, we predict that ownership structure has a positive and significant effect on firm performance. We consider ownership concentration and ownership identities as two dimensions of the ownership structure (Denis & McConnell, 2003). Further, firm or corporate performance is segregated into two categories: financial performance and market performance. Based on the review of previous literature mentioned, we hypothesised that:

H_1: Ownership concentration has a significant positive impact on the financial performance of the Indian listed firms, after the US financial crisis.

H_2: Ownership identities have a significant positive impact on the financial performance of the Indian listed firms, after the US financial crisis.

H_3: Ownership concentration has a significant positive impact on the market performance of the Indian listed firms, after the US financial crisis.

H_4: Ownership identities have a significant positive impact on the market performance of the Indian listed firms, after the US financial crisis.

4. Data and Methodology

4.1 Sample

This study selected the largest 100 firms from the Bombay Stock Exchange (BSE) and data over a period of six years from financial year 2009-10 to financial year 2014-15 are used to test the hypotheses. The BSE is the largest and oldest stock exchange of India which has been in operation since 1875. As of August 2016, more than 5500 companies are listed on the BSE. In this study, the BSE-100 companies are selected due to their total market capitalisation, that is, 67 per cent of the total market capitalisation of the BSE. This signifies that the BSE-100 companies represent almost 70 per cent of the BSE (International Finance Corporation, 2018). Further, we develop this study by using data that exist after the US financial crisis of 2008, so as to gauge the impact of the crisis on the variations of firm/corporate performance and ownership

patterns. We then form two models in this study. The first model is developed to uncover the causal relationship between ownership concentration and firm/corporate performance, where the sample comprised 91 BSE listed firms. The second model discusses the impact of the ownership identities on firm/corporate performance, where 93 listed companies are finalised as samples. The data involving firm/corporate performance, ownership structure, and firm-specific variables, are collected from the PROWESS database of CMIE (Centre for Monitoring the Indian Economy).

4.2 Measurement Variables

This study applies two dependent variables – return on assets (ROA) and market capitalisation (MC) as proxies for the financial performance and market performance, respectively. These two performance measures – ROA and MC, are taken from previous literature (Thomsen & Pedersen, 2000; Farooque et al., 2007; Haldar & Rao, 2011; Al Mubarak & Hamdan, 2016). Two broad independent variables are used for the ownership structure: ownership concentration and ownership identities. The first of these, ownership concentration, is measured by the percentage of the shareholdings of the largest shareholder (C1) and the top five largest shareholders (C5), as noted in the works of Demsetz and Villalonga (2001), Jiang (2004), Earle et al. (2005), and Desoky and Mousa (2013). The ownership identities are next categorised into five variables: promoter holdings (POWN), domestic institutional owners (DIO), foreign institutional owners (FIO), non-institutional owners (NIO), and individual owners (IO). These ownership identity variables are derived from previous literature (Deb & Chaturvedula, 2003; Javid & Iqbal, 2008).

4.3 Control Variables

Several control variables are also considered in this study so as to adjust for the economic and industry effects which explain the firm's performance significantly. Firm-specific variables like firm age (FA), firm size (SZ), leverage (LEV), asset turnover ratio (ATR) and liquidity (LIQ) are also taken into account. Firm age is represented by the number of years of the firm's incorporation. Firm size is considered as one of the important firm-specific factors which has a significant impact on firm performance (Džanić, 2012). Firm size is included in the empirical model to control the size effect across the firms. This is because the size of the

firms can determine if firms get to enjoy the economies of scale and scope. In the current study, we use the natural logarithm of total assets of the firm as a proxy for firm size (Džanić, 2012; Alipour, 2013). The leverage is incorporated because debt disciplines the managers which then reduces the agency cost and improves the firm's performance positively (Park & Jang, 2010). The assets turnover ratio indicates how the firms utilise their assets to generate revenue. A better utilisation ratio leads to a better performance (Welch, 2003). Liquidity is measured by the ratio between current assets and current liabilities, and higher liquidity leads to better firm performance (Alipour, 2013).

4.4 Methodology

The data in this study are extracted from the cross-sectional and time series base via the panel data method. The STATA version 12 is used to conduct the panel data analysis so as to examine the impact of the ownership structure on the firm's performance. The panel data method has been used significantly by researchers in the area of financial economics. This is because it captures the individual and time effect of the samples, and it also controls the heterogeneity problem which may exist in the data (Hitt, Gimeno, & Hoskisson, 1998). Hence, the panel data model is considered to be better than the cross-sectional and time-series models. In this study, we employed the static and dynamic panel models to test our hypotheses. The static panel data models we used include pooled OLS, fixed effect and random effect. Following this, the three tests comprising the F-test (Baltagi, 1995) is used to choose between the pooled OLS and the fixed effect while the Lagrange multiplier test (Breusch & Pagan, 1980) is utilised to choose between the pooled OLS and the random effect. Finally, Hausman test (Hausman, 1978) is applied to choose between the fixed effect and the random effect.

In the case of the dynamic panel model, we use a two-step generalized method of moments (GMM) to address the endogeneity issue. The GMM model is helpful in eliminating the endogeneity problem through the internally generated instrumental variables. The Arellano-Bond test is next applied to check the serial correlation problem, where AR(1) and AR(2) would indicate the first-order and second-order serial correlation. We use the Sargan test to examine the over-identification and validity of the instruments. The Sargan test, with high p-value approves the validity of the model while the significant p-value of the Wald test implies validity for the overall model.

4.5 Model Specification

The empirical findings are segregated into two sections. The first section deals with the impact of the ownership concentration on firm performance by estimating the following panel data regression model.

$$FP_{it} = \alpha + \beta 1C1_{it} + \beta 2C5_{it} + \beta 3FA_{it} + \beta 4FS_{it} + \beta 5LEV_{it} + \beta 6ATR_{it} + \beta 7LIQ_{it} + \varepsilon_{it} \quad (1)$$

$$MP_{it} = \alpha + \beta 1C1_{it} + \beta 2C5_{it} + \beta 3FA_{it} + \beta 4FS_{it} + \beta 5LEV_{it} + \beta 6ATR_{it} + \beta 7LIQ_{it} + \varepsilon_{it} \quad (2)$$

where,

FP_{it} = Financial performance represented by return on assets
MP_{it} = Market performance represented by market capitalisation
$C1_{it}$ = Shareholdings of the single largest shareholder
$C5_{it}$ = Shareholdings of the top five largest shareholders
FA_{it} = Firm age
FS_{it} = Firm size
LEV_{it} = Leverage
ATR_{it} = Assets turnover ratio
LIQ_{it} = Liquidity
ε_{it} = Error term

The second model tests the effect of ownership identities or the types of owners on firm performance by estimating the following panel data regression models, where we have introduced several types of large shareholders.

$$FP_{it} = \alpha + \beta 1PO_{it} + \beta 2DIO_{it} + \beta 3FIO_{it} + \beta 4NIO_{it} + \beta 5IO_{it} + \beta 6FA_{it} + \beta 7FS_{it} + \beta 8LEV_{it} + \beta 9ATR_{it} + \beta 10LIQ_{it} + \varepsilon_{it} \quad (3)$$

$$MP_{it} = \alpha + \beta 1PO_{it} + \beta 2DIO_{it} + \beta 3FIO_{it} + \beta 4NIO_{it} + \beta 5IO_{it} + \beta 6FA_{it} + \beta 7FS_{it} + \beta 8LEV_{it} + \beta 9ATR_{it} + \beta 10LIQ_{it} + \varepsilon_{it} \quad (4)$$

where,

FP_{it} = Financial performance represented by return on assets
MP_{it} = Market performance represented by market capitalization
PO_{it} = Promoters ownership holdings
DIO_{it} = Domestic institutional owners
FIO_{it} = Foreign institutional owners
NIO_{it} = Non-institutional owners
IO_{it} = Individual owners

FA_{it} = Firm age
FS_{it} = Firm size
LEV_{it} = Leverage
ATR_{it} = Assets turnover ratio
LIQ_{it} = Liquidity
ε_{it} = Error term

Table 3 is provided to highlight the summary of the variables used in the current study.

Table 3: Summary of the Variables

Variables	Definition	Symbol	Type
Return on assets	EBIT/total assets	ROA	Dependent
Market capitalisation	Natural log of market capitalisation	MC	Dependent
Ownership concentration	Percentage of shareholdings by the single largest and five largest shareholders	C1, C5	Independent
Promoters' ownership	Percentage of shareholdings by promoters	POWN	Independent
Domestic institutional ownership	Percentage of shareholdings by Indian institutional investors	DIO	Independent
Foreign institutional ownership	Percentage of shareholdings by foreign institutional investors	FIO	Independent
Non-institutional ownership	Percentage of shareholdings of non-institutional investors	NII	Independent
Individual ownership	Percentage of shareholdings of individual shareholders	II	Independent
Firm age	Natural Logarithm of years since firms' incorporation	FA	Control
Firm size	Natural logarithm of total assets	SZ	Control
Leverage	Total outsiders' debt to total assets	LEV	Control
Assets turnover ratio	Total net sales/total fixed assets	ATR	Control
Liquidity	Current ratio/current assets	LIQ	Control

5. Results and Discussions

The results of the study are also classified into two sub-sections. The first sub-section presents and discusses the univariate and multivariate results derived from the empirical tests which examined the relationship between the ownership concentration and firm performance. The next sub-section deals with the empirical results obtained from the tests conducted on the relationship between the ownership identities and firm performance.

5.1 Ownership Concentration and Performance

Literature focusing on the relationship between ownership concentration and firm performance has been very diverse. Some like Gorton and Schmid (2000), Earle et al. (2005), Hu and Izumida (2008), Desoky and Mousa (2013) noted that ownership concentration has a positive impact. Others like Demsetz and Villalonga (2001), Jiang (2004), Manawaduge et al. (2009), and Fauzi and Locke (2012) found that ownership concentration has a negative impact on firm performance. Both the groups were divergent in their findings. Therefore, in this study, we attempt to test the relationship between ownership concentration and firm performance, in the context of an emerging market like India, post the US financial crisis of 2008. This sub-section, therefore, presents the descriptive statistics, correlation matrix, static and dynamic panel data models results, which were derived from the model used to examine the relationship between ownership concentration and firm performance. Table 4 further illustrates.

Table 4: Descriptive Statistics

Variable	Mean	Minimum	Maximum	Standard Deviation	Total Observation
ROA	8.926	-47.11	60.42	9.254	546
MC	12.676	4.54	15.42	1.101	546
C1	0.403	0.04	0.90	0.218	546
C5	0.598	0.11	0.98	0.202	546
FA	3.603	1.79	4.79	0.642	546
FS	10.131	4.50	14.63	1.658	546
LEV	0.521	0.00	1.56	0.408	546
ATR	14.368	0.28	378.58	35.187	546
LIQ	1.969	0.26	17.80	2.004	546

The statistics given above are derived from the descriptive statistics of the dependent variables (ROA and MC), the independent variable (C1 and C5), and the control variables (FA, FS, LEV, ATR and LIQ). There is a total of 546 firm-year observations encompassing 91 Indian listed firms which are observed for six years, from FY 2009-10 to FY 2014-15. This offered a longitudinal dimension into understanding the data set.

Table 5 provides the statistics of the independent and dependent variables. Here it can be seen that the financial performance (ROA) and ownership concentration (L1 and L5) have declined consistently since FY 2009-10. This is a sign indicating the adverse effect of the crisis on the Indian corporate market. The average ownership holdings of the single largest and the five largest shareholders, are 40 per cent and 60 per cent, respectively. This outcome is similar to the concentration level of the Chinese listed firms noted by Wang, Guthrie and Xiao (2012). In developed countries like the USA and UK, the ownership structure is observed to be more or less dispersed, as compared to the European and Asian countries (Shleifer & Vishny, 1986). This was also noted by La Porta et al. (1998) who asserted that the high ownership concentration had become an alternative control mechanism due to low investors' protection rights in the developing countries.

Table 5: Year-wise Data of Dependent and Independent Variables

Variables/FY	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
ROA	10.00	9.58	8.68	8.33	8.26	8.34
MC	12.43	12.60	12.59	12.64	12.78	13.05
L1	40.85	41.36	41.34	39.92	39.70	39.65
L5	60.42	60.96	60.65	59.12	58.07	58.93

Table 6 presents the correlation matrix and the variance inflation factor value (VIF) of the independent and control variables. The correlation matrix table shows that no variables are having a high correlation coefficient, and this signifies that there is no collinearity problem. The ownership concentration variable of C1 shows a significant positive correlation with MC, and this implies that an increase in large owner's shareholdings enhances the MC. Next, we find that C5 displays a significant positive association with the ROA, and this signifies that that profitability has improved with an increase in the concentration level. Further, we find that firm size (SZ), leverage (LEV) and assets

Table 6: Correlation Matrix

Variables	ROA	MC	C1	C5	FA	FS	DR	ATR	LIQ	VIF
ROA	1.000									
MC	**0.179**	1.000								
C1	0.053	**0.121**	1.000							2.98
C5	0.104	0.055	**0.803**	1.000						2.88
FA	0.071	0.042	0.040	0.021	1.000					1.11
FS	**-0.469**	**0.496**	**0.174**	0.077	**0.099**	1.000				1.10
LEV	**-0.206**	-0.052	-0.019	-0.014	**0.097**	0.076	1.000			1.09
ATR	**-0.131**	-0.045	**0.165**	**0.093**	-0.057	**0.202**	**0.182**	1.000		1.08
LIQ	**0.177**	**0.115**	**0.153**	**0.168**	**0.148**	**0.123**	**-0.136**	0.032	1.000	1.06

Note: All correlations in bold are significant at $p < .05$

turnover ratio (ATR) also have a significant negative correlation whereas liquidity (LIQ) has a positive association with the ROA. In addition, firm size (SZ) and liquidity (LIQ) have a significant positive relationship with MC. Thus, it seems evident from the VIF values that there is no multi-collinearity problem as the VIF values of the independent and control variables are under the recommended value of 10 (Kennedy, 2008).

Table 7 shows the Breusch-Pagan test, where we find the chi-square value to have a significant p-value, which signifies that the variables are not homoscedastic. To control the heteroskedasticity and auto-correlation problem, we then use the "clustered" function in the static models employed for this study.

Table 7: Breusch-Pagan Test for Heteroscedasticity

Variables: C1 C5 FA FS LEV ATR LIQ		
H0: Constant variance		
Chi-square value	97.51	P-value 0.000

Table 8 depicts eight models which comprise of four static models and four dynamic models. The static panel models are the fixed effect models, as confirmed by the specification tests as noted in Table 9. The four dynamic panel models comprise the two-step generalized method of moments (GMM). Here, the serial correlation test results such as the AR(1) and AR(2) show an insignificant p-value for all the GMM models. This indicate that there is no serial correlation problem. Subsequently,

Table 8: Static and Dynamic Panel Data Models

Models	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
DV	ROA	ROA	MC	MC	ROA	ROA	MC	MC
Methodology	FE	FE	FE	FE	GMM	GMM	GMM	GMM
Constant	37.265	37.880	5.707	5.656	9.131	11.715	-5.070	-5.499
	(3.44)***	(3.54)***	(4.48)***	(4.51)***	(1.41)*	(1.65)*	(-4.07)***	(-5.31)***
C1	-2.404		-1.831		-0.939		-0.668	
	(-0.52)		(-3.35)***		(-0.190		(-1.13)	
C5		-2.018		-1.081		0.079		-0.364
		(-0.84)		(-3.83)***		(0.07)		(-5.13)***
FA	-4.841	-4.944	1.446	1.422	-1.316	-1.132	1.043	1.023
	(-1.53)	(-1.56)	(3.88)***	(3.82)***	(-0.62)	(-0.56)	(4.97)***	(4.69)***
FS	-1.024	-1.026	0.252	0.256	-0.126	-0.458	-0.306	-0.337
	(-1.83)*	(-1.83)*	(3.84)***	(3.90)***	(-0.25)	(-0.85)	(-3.70)***	(-4.56)***
LEV	-2.021	-2.002	-0.007	0.001	-0.295	-0.452	-0.245	-0.261
	(-2.55)***	(-2.53)***	(-0.08)	(0.02)	(-0.46)	(-0.71)	(-2.34)***	(-2.82)***
ATR	0.025	0.026	-0.003	-0.002	-0.003	0.003	0.001	0.001
	(-1.54)	(1.53)	(-1.65)	(-1.40)	(0.16)	(0.14)	(-0.63)	(0.63)
LIQ	0.578	0.576	-0.008	-0.007	0.007	-0.032	0.009	0.013
	(2.59)***	(2.60)***	(-0.34)	(-0.27)	(0.02)	(-0.10)	(0.71)	(0.91)
R-squared	0.051	0.052	0.141	0.146				
F-test/Wald test	4.01***	4.09***	12.22***	12.87***	1819.27***	467.87***	626.23***	452.44***
AR(1) test (p-value)					0.095	0.096	0.106	0.101
AR(2) test (p-value)					0.529	0.541	0.218	0.503
Sargan test (chi^2 value)					13.492	12.719	43.061	42.518
Sargan test (p-value)					0.411	0.469	0.102	0.114

Note: ***, **, * refers to 1%, 5% and 10% level of significance. DV refers to dependent variable.

Table 9: Model Optimal Test

Models	F-test	LM test	Hausman test
Model 1	12.30***	549.22***	14.74**
Model 2	12.32***	544.23***	16.11***
Model 3	13.71***	578.34***	29.22***
Model 4	13.90***	580.34***	25.54***

Note: ***, **, * refers to 1%, 5% and 10% level of significance respectively.

the insignificant p-values of the Sargan test imply that the GMM models are free from the over-identification problem.

Table 9 presents the model specification tests which include the F-test, LM test and Hausman test. A significant F-test signifies that the fixed effect is better than the pooled OLS; a significant LM test also imply that the random effect is better than the pooled OLS, and finally, a significant Hausman test would indicate that the fixed effect is better than the random effect.

In this section, we report on both the static and dynamic panel models (Table 8) for robustness of the findings. In addition, the findings derived from the dynamic models are also considered. We find that both the ownership concentration variables (C1 and C5) have no significant impact on the financial performance (ROA) and this signifies that large owners do not influence the Indian firms' corporate financial performance. This result is very much, in line with the findings of Demsetz and Villalonga (2001), Jiang (2004), Demsetz and Lehn (1985) and Fauzi and Locke (2012). Nevertheless, variations noted in ownership concentration levels are observed to have a significant negative influence on market performance (MC), and this signifies that an increase in large ownership holdings has an adverse effect on market sentiments of Indian listed firms. The firm-specific variables, such as firm size and leverage, are noted to have a significant negative effect on market performance. Thus, our findings are consistent with Kapopoulos and Lazaretou (2007), Džanić (2012) and Muller-Kahle (2015).

5.2 Ownership Identities and Firm Performance

Earlier studies (Denis & McConnell, 2003; Boone, et al., 2011; Desoky & Mousa, 2013) have provided evidence to show that ownership identities have a significant influence on the firms' decision-making process,

which affected firm performance. The ownership identities of the current study are categorised into five groups: promoters (POWN), domestic institutional owners (DIO), foreign institutional owners (FIO), non-institutional owners (NIO) and individual owners (IO). The promoters group includes the shareholdings of domestic and foreign promoters. The domestic institutional owners include the shareholdings of mutual funds, insurance companies, as well as banks and financial institutions from India. The foreign institutional owners include investments from banks, insurance companies, and financial institutions from outside India and the Non-institutional owners include investments from the various corporate houses. Finally, the individual investors include total investments from all the retail investors.

Table 10 presents the descriptive statistics of the dependent, independent and control variables. There is a total of 558 firm-year observations, which consist of 93 Indian listed firms observed for six years, from FY 2009-10 to FY 2014-15. The average promoters holding in the samples are very high with 50 per cent stakeholdings, which is similar to the study of Deb and Chaturvedula (2003), also in the Indian context. It is found that the average promoters' holding of the CNX 500 companies is around 52 per cent. In this study, the results show that the average foreign institutional shareholdings (FIO) is almost 20 per cent, and this figure seems to be better than the average shareholdings of

Table 10: Descriptive Statistics

Variables	Mean	Minimum	Maximum	Standard Deviation	Total Observation
ROA	8.98	-47.11	60.42	9.38	558
MC	12.662	4.54	15.42	1.157	558
POWN	0.502	0.01	0.90	0.207	558
DIO	0.12	0	0.39	0.08	558
FIO	0.19	0.01	0.80	0.124	558
NIO	0.145	0.01	0.50	0.088	558
IO	0.086	0.01	0.25	0.055	558
FA	3.572	1.79	4.79	0.631	558
SZ	10.13	4.50	14.63	1.64	558
LEV	0.53	0.01	5.08	0.40	558
ATR	14.11	0.12	378.58	34.85	558
LIQ	1.91	0.26	17.80	1.96	558

domestic institutional owners (DIO). The maximum foreign institutional equity investment is nearly 80 per cent whereas the maximum domestic institutional investment is 39 per cent, and this statistic suggests that the Indian listed firms are quite inclined towards foreign investments. The average non-institutional shareholding is only 15 per cent, with a maximum of 50 per cent. Additionally, Table 10 also indicates the average institutional equity investment to be 30 per cent, and this figure is better than the average non-institutional investments. The outcome of this table further demonstrates that the institutional equity investment plays a significant role in the equity ownership structure of the larger Indian firms. The average individual investor's shareholdings (II) in the Indian listed firms is 9 per cent, and this is considered low as the average individual shareholdings of the CNX 500 companies as reported by Deb and Chaturvedula (2003) was 35 per cent.

Table 11 highlights the year-wise data of the dependent and independent variables. Our results indicate that the ownership holdings of the promoters, domestic institutions, non-institutions and individual investors have shrunk continuously since FY 2009-10. This occurrence indicates that the crisis has a harmful effect on the investors' sentiments. Nonetheless, the investments from foreign institutions has increased steadily since FY 2009-10. This occurrence can be inferred as showing that the foreign institutions have shown a strong confidence in the Indian market.

Table 11: Year-wise Data of Dependent and Independent Variables

Variables/FY	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
ROA	10.00	9.58	8.68	8.33	8.26	8.34
MC	12.43	12.60	12.59	12.64	12.78	13.05
POWN	50.98	50.83	50.91	50.25	49.56	48.92
DIO	13.42	12.58	12.47	11.51	11.11	11.45
FIO	17.09	18.17	18.81	20.83	21.74	21.74
NIO	14.98	15.18	14.85	14.68	14.41	13.83
IO	9.01	8.99	8.80	8.69	8.43	8.18

Table 12 depicts the correlation coefficients and variance inflation factor (VIF) value of the independent and control variables. From the statistics shown, it is observed that foreign institutional ownership is negatively correlated with ROA whereas no other ownership identity

Table 12: Correlation Matrix

Variables	ROA	MC	POWN	DIO	FIO	NIO	IO	FA	FS	LEV	ATR	LIQ	VIF
ROA	1.000												
MC	**0.189**	1.000											
POWN	0.201	0.056	1.000										9.36
DIO	-0.068	0.051	**-0.431**	1.000									3.17
FIO	**-0.146**	-0.048	**-0.677**	**-0.146**	1.000								5.52
NIO	-0.056	-0.096	**-0.603**	**0.293**	**0.121**	1.000							3.56
IO	0.021	-0.241	**-0.444**	**0.286**	**0.087**	**0.691**	1.000						2.23
FA	**0.119**	0.109	-0.071	**0.438**	**-0.203**	**0.205**	**0.281**	1.000					1.40
FS	**-0.453**	0.498	**-0.089**	**0.130**	0.071	-0.066	**-0.233**	0.071	1.000				1.20
LEV	**-0.181**	-0.018	**-0.131**	**0.100**	0.016	**0.223**	**0.191**	**0.102**	0.056	1.000			1.14
ATR	**-0.125**	-0.038	0.029	**-0.133**	**0.167**	**-0.119**	**-0.104**	-0.043	**0.196**	**0.179**	1.000		1.17
LIQ	**0.181**	0.031	**0.101**	**0.111**	-0.083	**-0.165**	**-0.167**	**0.132**	**0.102**	**-0.155**	0.031	1.000	1.12

Note: All correlations in bold are significant at $p < .05$.

is found to be having a correlation with MC. Further, firm age and liquidity are found to have a positive correlation with ROA while firm size, leverage and asset turnover ratio are found to have a negative correlation with ROA. The correlation coefficients between the variables are not high. In other words, no coefficient has crossed the threshold limit of 0.8 (Kennedy, 2008) and this implies that there is no collinearity problem. Subsequently, there is also no multicollinearity problem within the variables as the VIF values of the variables are under the value of 10 (Kennedy, 2008).

Table 13 shows the Breusch-Pagan test which is used to check the heteroscedasticity problem among the independent and control variables. Here, we find that there is a heteroscedasticity problem with the data as the p value is very significant. In this regard, we used the "clustered" function, together with the static models, to filter the heteroscedasticity and autocorrelation problem.

Table 13: Breusch-Pagan Test for Heteroscedasticity

Variables: POWN, DIO, FIO, NIO, IO, FA, FS, LEV, ATR, LIQ		
H0: Constant variance		
Chi-square value	128.90	P-value 0.000

Table 14 presents the model optimal tests where it is confirmed that both the static models are supported by the fixed effect parameters. Further, the autocorrelation tests AR(1) and AR(2) show a higher p-value. This indicates that the GMM models have no autocorrelation problem. We also found no over-identification problem in the GMM models as the p-values of the Sargan test are highly insignificant. Both the F-test and the Wald test are highly significant, with a 1 per cent level of significance. This indicates that the overall model is fit.

Table 14: Model Optimal Test

Models	F-test	LM test	Hausman test
Model 1	14.49***	617.90***	19.15**
Model 2	26.62***	680.39***	510.58***

Note: ***, ** and * refers to 1%, 5% and 10% level of significance respectively.

Table 15 exhibits the four models consisting of two static panels and two dynamic panel models. Although we have reported the results derived from both the static and dynamic models (Table 15), our findings have been mostly based on the dynamic panel models.

Table 15: Static and Dynamic Panel Data Models

Models	Model 1	Model 2	Model 3	Model 4
DV	ROA	MC	ROA	MC
Methodology	FE	FE	GMM	GMM
Intercept	1.021	-0.981	-17.702	-2.228
	(0.07)	(-0.71)	(-0.95)	(-1.30)
POWN	36.529	8.362	33.429	0.724
	(4.99)***	(11.71)***	(2.41)***	(0.47)
DIO	34.655	5.728	25.011	0.575
	(3.96)***	(6.72)***	(2.01)**	(0.37)
FIO	38.668	10.203	23.174	2.369
	(5.72)***	(15.50)***	(3.20)***	(2.09)**
NIO	28.113	7.882	16.125	2.091
	(2.27)**	(6.53)***	(1.40)	(1.30)
IO	5.245	-3.893	22.802	-0.474
	(0.26)	(-2.02)*	(0.92)	(-0.17)
FA	-5.001	1.138	-1.243	0.255
	(-1.50)	(3.50)***	(-0.43)	(0.72)
FS	-0.941	0.186	0.056	0.186
	(-1.71)*	(3.48)***	(0.06)	(1.33)
DR	-1.786	-0.001	-0.452	-0.051
	(-2.35)***	(-0.01)	(-0.46)	(-0.57)
ATR	0.021	-0.002	-0.001	-0.001
	(1.34)	(-1.60)	(-0.02)	(-0.28)
LIQ	0.632	-0.008	0.199	0.022
	(2.75)***	(-0.39)	(1.16)	(1.65)*
R-squared	0.128	0.456		
F-Test/Wald test	6.69***	38.13***	223.71***	398.18***
AR(1) test (p-value)			0.247	0.142
AR(1) test (p-value)			0.902	0.185
Sargan test (chi^2 value)			9.546	52.151
Sargan test (p-value)			0.388	0.081

Note: DV refers to the dependent variables. ***, **, * refers to 1%, 5% and 10% level of significance.

We find that the promoters, domestic institutional owners and foreign institutional owners have a significant positive impact on the ROA. This indicates that the presence of the promoters, domestic institutions and foreign institutions in the firms enhance the financial performance of the Indian companies. The current result is very much similar to the findings of Boone et al. (2011), Alipour (2013) and Desoky and Mousa (2013). In this study, we also detect that foreign institutional ownership has a significant positive impact on market capitalisation. This shows that investments from foreign institutions have highly enhanced market performance of Indian companies. This result is fairly reminiscent of Javid and Iqbal (2008) and Boone et al. (2011).

5. Conclusion and Implications

Empirical works based on ownership structure and its impact on firm performance have been limited and inconsistent when observed from the perspective of an emerging economy like India. Hence, in this study, we attempt to test the impact of ownership structure on Indian firms' corporate performance, post the US financial crisis of 2008. In our study, it is found that Indian listed firms have high ownership concentrations. This observation was also indicated by La Porta et al. (1999) who mentioned that most developing economies possess companies with concentrated ownerships. Despite the fact that high ownership concentration prevails in the Indian context, there seem to be no significant impact on firms' financial performance (ROA) although it has a negative impact on the market performance (MC). Based on this, it is deduced that large shareholders do not enhance firm performance, post US financial crisis 2008.

Our second model tests the causal relationship between ownership identities and the listed firms' performance. It is observed that the promoters, foreign institutional ownership and domestic institutional ownership have significantly boosted the financial performance of Indian companies, post the US financial crisis. This indicates that owners have strongly monitored the management and decision-making process to make their firms more efficient and profitable. Subsequently, it is also noted that only foreign institutional investments have significantly affected the market capitalisation of the Indian companies, post the US financial crisis. In this regard, it is inferred that the confidence and continuous investments from foreign institutions had assisted in propelling the investors' sentiments in the Indian market.

From the results and findings generated, it is deduced that this study has made several contributions and implications. First, our study is based on the ownership structure in the Indian context, hence the outcome would be enriching the governance literature of the emerging markets. Further, the outcome would be beneficial to researchers, policymakers, managers and practitioners as they add to a better understanding of the corporate ownership structure in the Indian market. The findings of this study would also clarify the impact of ownership concentration and identities on the Indian listed firms' performance. The outcome generated may also ease policymakers need to formulate favourable policies, such as rewarding of tax incentives, hassle-free investment policy, insuring of investments, checking of fraudulent trading activities, proper monitoring of the listed firms' governance policies and ensuring the proper audit of firms' annual reports. These could induce investors' participation in the capital market. These results would be able to guide corporate managers in understanding the effect of ownership holdings on corporate performance, thereby motivating investors to better corporate performance. Finally, the equity investors would be able to understand the causes of the market performance variations; hence, they would be able to decide better on their investments or divestments.

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