1   Ownership concentration, institutional ownership and stock return: The case of India

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Abstract

The main focus of this paper is to find out the effect of ownership concentration and institutional ownership on the stock return during the pre and post-crisis period. To carry this study, two study periods are used- the pre-crisis and the post-crisis period- and the global financial crisis 2008 considered as a base. The pre-crisis period is covered from FY2000-01 to FY 2007-08, whereas post-crisis period is covered from the FY 2008-09 to FY 2016-17. Further, NSE-500 listed companies are used as the sample size for this study. Dynamic panel data methodology, for instance system GMM, is employed to test the research hypotheses. Firm-specific factors such as firm size, age, risk, profitability, leverage, liquidity, and dividend pay-out are considered as control variables. The model findings indicate that ownership concentration has a negative effect, while institutional ownership has no effect on the stock returns during the pre-crisis phase. Firm-specific factors such as firm age and profitability improves the stock return in the pre-crisis period. In the post-crisis phase, it is observed that institutional ownership has an adverse effect, while concentrated ownership has no effect on the stock return. In the context of firm-specific factors, it is found that firm age and higher leverage led to a decline in the stock returns.

Keywords: Crisis, ownership, variables,

<H1> Introduction

Ownership structure is considered as one of the key governance mechanisms for the enhancement of the corporate efficiency and performance (Shleifer and Vishny, 1986). Hence, early literature has studied the effect of the ownership structure on the financial performance, where it witnessed a mixed effect of ownership holdings. However, there is a dearth of studies on the effect ownership structure on the stock return as most of the studies in this line have investigated the ownership effect on the accounting and financial measures. Stock return is different from these measures as it reflects the earning and management efficiency information of the firms, which depends upon the ownership control and engagement in the management decision making. Early studies opined that ownership control and engagement may affect

positively or negatively, hence the emphasis of this paper is on the concrete role of ownership structure on stock return.

The existence, and the role, of differential ownership structure and types of equity ownership fuel the debate of determining the stock return. It is observed that developed countries like USA, UK, and Canada mostly witness dispersed ownership structure, while emerging countries like India have concentrated ownership (Laporta et al., 1999). Further, it found institutional investors as one of the key owners in the corporate ownership structure, where they influence the management through their holdings and monitoring (McNulty and Nordberg, 2016). Due to the existence of differential ownership, the debate on the effect of ownership holdings on stock return becomes very intense. Here, this paper is mostly based on the effect of differential ownership holdings.

This paper investigates the effect of ownership concentration and institutional ownership on the stock return during the pre- and post-crisis phases and analyses the difference in the effect due to distinctive economic conditions. For this the S&P NSE 500 companies are selected as a sample and system-GMM estimation is applied to control the endogeneity issue. This study tries to define the monitoring and expropriation effect of the large owners and institutional concrete by contributing the existing literature through the following ways. First, this study considers two sets of study periods by taking the global financial crisis 2008 as a base, such as the pre-crisis and the post-crisis period. Second, this studies two major parts of the ownership structures such as concentrated ownership and institutional ownership. Third, the system-GMM is considered for this study to control the endogeneity problems in the ownership-performance models. Fourth, the considerations of an emerging market like India add a new field of study.

Rest of the paper is structured as follows. Section-2 reviews the extant literature. Section-3 describes the sample and variables. Section-4 explains the research methodology. Secttion-5 discusses the empirical findings. Section-6 summarises the paper.

<H1> Literature review

<H2> Ownership concentration and stock return

Early evidence on the relationship between the ownership concentration and firm performance can be traced back to the work of Demsetz and Lehn (1985); their study showed a non-significant association. Further, the study of Clark and Wojcik (2005) on the German corporates revealed that concentrated ownership negatively affect the stock return. Another study by Othman et al. (2010) in the Malaysian context found that large ownership holding is detrimental to the stock return. Another school of thought inferred that large ownership has a positive monitoring effect of stock return. Zou and Adams (2008) examined the different ownership holdings effect on stock return, where they inferred that block holdings have a positive effect on the stock return. Some other studies have found a positive effect

of ownership concentration on stock return through their effective monitoring. Zou and Adams (2008) tested various forms of ownership holdings on stock returns in Chinese firms, where they found that large block holdings significantly improved the stock returns in China. From these studies, it is reasonably apparent that large ownership holdings have a mixed effect on stock performance, which diverges from country to country.

H1: *Ownership concentration has no effect on firm-level stock return.*

<H2> Institutional ownership and stock return

The empirical evidence of Han and Suk (1998) indicated that institutional investors in US market have efficient monitoring abilities that result in a higher stock return. Similarly, Ovtcharova (2003) reported that institutional ownership reflected a positive stock return in stocks with high institutional ownership than stocks with low institutional ownership, which is in line with the findings of the Gompers and Metrick (2001). Another research by Brockman et al., (2014) in the US market provided the evidence on the positive role of institutional monitoring in improving the stock return of the real estate investment trusts (REITs).

<H2> Institutional ownership leads to higher firm-level stock return

Cella (2009) made a study on European firms to examine the effect of ownership structure on stock returns, where it was concluded that institutional holdings deleteriously affect the stock returns. Additionally, in an emerging market like China, it is found from the analysis of Ying et al. (2015) that institutional owners enhance the price efficiency. Similarly, Dyakov and Wipplinger (2020) indicated a weak positive association between the equity holdings of the institutional investors and stock returns in sixteen emerging and developed economies. The study of Chuang (2020) demonstrated that institutional trading has a short-term positive effect as well as a negative long term effect on stock returns of Taiwanese firms, which is consistent with the works of Dasgupta et al. (2011).

H3: *Institutional Ownership has an adverse effect on the firm-level stock return.*

<H1> Data and variables

<H> Study period and sample

The study period spans over 16 years from FY 2000-2001 to FY 2016-2017, which is categorised into two study periods such as pre-crisis and post-crisis by taking FY 2008-2009 as the crisis year. Pre-crisis phase includes 08 years from FY 2000-2001 to FY 2007-2008, while post-crisis phase covers eight years from FY 2009-2010 to FY 2016-2017. The US financial crisis 2008-2009 is considered to be one of the worst financial epidemics in the last century, which halted the growth of the world economy (Sikorski, 2011). Emerging markets like India could not be decoupled from the crisis and got affected through the financial and trade channels (Singh and

Singh, 2016). Due to the surfacing of the US financial crisis, India witnessed the decline of foreign investment, collapse of stock market and export dip, which deteriorated its corporate financial health. Prior to the crisis, Indian market and economy have shown a growth and a positive trend. The economic and market performance of pre-crisis is better than the post-crisis phase in India, which specifies that pre-crisis period was a growth phase and post-crisis was a sluggish phase. Hence, consideration of these two periods would furnish the fluctuations that occurred in investors' sentiment, equity investments and stock performances during these phases.

To construct the sample for this study, NIFTY-500 indexed companies are selected from the National Stock exchange (NSE), India. The selected sample size for the both the pre-crisis and post-crisis period is decided according to the data availability of the variables (ownership holdings, stock return, and company-specific). Balanced panel dataset of 316 listed companies is selected for the pre-crisis period while the post-crisis period comprises 404 balanced panel datasets of listed companies. The dataset related to the ownership holdings, stock return, company-specific data are extracted from the Centre for Monitoring Indian Economy (CMIE) database.

<H2> **Dependent variable**

Stock return: It is a widely used measure to quantify the profitability of the stock that affects the investors' sentiment profusely.

<H2> **Independent variable**

This study considers two major ownership structure measures such as ownership concentration and institutional ownership as independent variables. Emerging markets witness concentrated ownership, where they exert their influence on the management and governance of the firm hugely. Two measures such as holdings of the single largest shareholder and total holdings of the five largest shareholders are used to represent the ownership concentration. Fractions of shareholdings of the institutional investors are utilised as a measure for institutional ownership.

<H2> **Control variables**

Certain firm-specific factors based on previous studies are considered to control their effect on the stock return. This study includes firm size, firm age, firm risk, profitability, leverage, current ratio, and dividend pay-out to gauge the effect.

<H1> Methodology and model specifications

This study used dynamic panel models to curb endogeneity issue due to the unobserved heterogeneity and simultaneity (Wooldridge, 2013). Under dynamic panel models, two-step system-generalized method of moments (GMM) is considered. This econometric tool eliminates the endogeneity problem through internally generated instrumental variables. Subsequently, certain model

specification tests like Arellano–Bond test, Sargan test and Wald Chi-square (χ2) test are applied to check the serial correlation and over-identification issues. The insignificant autoregressive terms (AR) of Arellano–Bond test indicates the absence of serial correlations. The insignificant p-values of Sargan test indicate no over-identifications issues. Wald test with significant p-value implies the overall robustness of the model results.

Model specifications

Here, it is hypothesised that ownership concentration and institutional ownership affects the stock return of listed companies. Based on this hypothesis, the following empirical research models are developed.

$$SR_{it} = \alpha + \beta1OC_{it} + \beta2FS_{it} + \beta3FA_{it} + \beta4FR_{it} + \beta5FP_{it} + \beta6LEV_{it} + \beta7LIQ_{it+}$$
$$\beta8DP_{it} + \varepsilon_{it} \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (1)$$

$$SR_{it} = \alpha + \beta1IO_{it} + \beta2FS_{it} + \beta3FA_{it} + \beta4FR_{it} + \beta5FP_{it} + \beta6LEV_{it} + \beta7LIQ_{it+}$$
$$\beta8DP_{it} + \varepsilon_{it} \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (2)$$

Where, SR, OC, IO, FS, FA, FR, FP, LEV, LIQ and DP denote stock return, ownership concentration, institutional ownership, firm size, firm age, firm risk, firm performance, leverage, liquidity, and dividend payout. Ownership concentration includes two proxies such as holdings single largest shareholder (OC1) and five largest shareholders (OC5). The measurements of all these variables are depicted in the Table 1.

Empirical results

Pre-crisis estimations

Summary statistics: The summary statistics of dependent, independent and control variables for pre-crisis period are presented in the Table 2.

Table 1: Pre-crisis summary statistics.

Variables	Minimum	Maximum	Mean	Median	Standard deviation	Total observation
SR	-4.203	50.044	0.389	0.27	1.811	2528
OC1	0.05	0.761	0.334	0.27	0.209	2528
OC5	0.25	0.99	0.577	0.58	0.174	2528
IH	0.02	0.909	0.213	0.187	0.127	2528
FS	1.01	15.008	8.864	8.86	1.971	2528

FA	3.349	4.98	0.01	3.301	0.791	2528
FP	-201.09	189.24	16.571	16.96	24.126	2528
FR	-0.77	2.28	0.842	0.83	0.328	2528
LEV	0.01	1.687	0.446	0.458	0.238	2528
LIQ	0.01	139.42	1.687	1.2	3.228	2528
DP	0.01	97.09	26.533	24.075	17.529	2528

(*Source: Author's compilation*)

SR varies within -4.203 and 50.044 with a mean value of 0.389. The average values of OC1 and OC5 are 0.334 and 0.577, respectively. Institutional ownership is having an average value of 0.213. In India, the concentration level is very high, which means most of the ownership holdings lies in the hand of few large shareholders.

Correlation analysis

The correlation matrix for the pre-crisis period is depicted in the Table 3. It is detected that the co-efficient values between the variables are below the permissible limit of 0.8 (Kennedy, 1985), except between the BH1 and BH5, which validates the empirical models with no collinearity issues.
It is observed that ownership concentration and institutional ownership has no significant correlation with stock return. In the context of control variables, firm performance has a positive correlation with stock return.

Dynamic panel estimations

The two-step GMM estimations (Models: 1-3) are reported in the Table 4.
The model findings indicate that ownership concentration (OC1) has an adverse effect on the stock return during the pre-crisis period, which is similar to the early findings of (Clark and Wojcik, 2005). This shows that investors do not consider high concentration of ownership as a motivating factor because it is believed that higher concentration leads to expropriation of wealth. Further, the institutional ownership is found to be having no significant effect on the stock return. In the meantime, firm age and profitability have a positive effect on the stock return, which reflects that older firms with high profit infer better stock return.

Post-crisis estimations

Summary statistics: The summary statistics of dependent, independent and control variables for post-crisis period are presented in the Table 5.

SR varies within -0.094 and 8.525 with a mean value of 0.332. The average values of OC1 and OC5 are 0.374 and 0.618, respectively. Institutional ownership is having an average value of 0.233. Here it is noticed that there is an increase in institutional investment over the pre-crisis period.

<H3> *Correlation analysis*

The correlation matrix for the post-crisis period is depicted in Table 6. It is detected that the co-efficient values between the variables are below the permissible limit of 0.8 (Kennedy, 1985), except between the OC1 and OC5, which validates the empirical models with no collinearity issues.

Ownership concentration and institutional ownership have significant negative correlation with stock return while firm performance has a positive correlation with stock return. Other firm-specific variables do not have a significant correlation with stock return.

<H3> Dynamic panel estimations

The two-step GMM estimations (models: 1-3) are reported in the Table 7.

Table 2: Post-crisis GMM estimations.

Models	Model-1	Model-2	Model-3
DV	SR	SR	SR
IV/methodology	GMM	GMM	GMM
Intercept	5909.927	5814.435	5122.33
	(4.76)***	(5.44)***	(3.11)***
OC1	-1350.87		
	(-1.00)		
OC5		-503.13	
		(-0.59)	
IO			-864.821
			(-1.69)*
FS	-10.854	-9.643	-7.936
	(-1.04)	(-0.93)	(-0.95)
FA	-1379.08	-1423.45	-1281.962
	(-3.04)***	(-4.22)***	(-2.94)***
FR	-124.81	-103.89	-84.705
	(-0.76)	(-0.68)	(-0.70)
FP	-5.964	-5.574	-5.994
	(-1.49)	(-1.56)	(-1.89)*
LEV	-438.84	-452.11	-456.53
	(-1.70)*	(-1.84)*	(-1.64)*
CR	2.543	3.043	3.392
	(0.93)	(1.16)	(0.95)
DP	-0.142	-0.025	0.071

	(-0.23)	(-0.04)	(0.13)
Wald χ2 test	42.86***	43.20***	43.86***
AR(1)-p value	0.000	0.001	0.005
AR(2)-p value	0.328	0.335	0.324
Sargan test (χ2value)	22.651	23.149	26.327
P value	0.141	0.138	0.121

(Source: Author's compilation)Note: DV and IV represent the dependent and independent variables respectively.

Findings for post-crisis indicate that ownership concentration has no effect on the firm-level stock return. In case of institutional ownership, it is found that it has an adverse effect, which means institutional investors acted as negative feedback traders during the post-crisis period. The negative effect of institutional investment is similar to the earlier findings of Cella (2009). Firm age (FA) and leverage (LEV) are found to have a declining effect, which implies that older firms with high leverage provided a negative return.

<H1> Conclusion

This study has tested the effect of ownership concentration and institutional ownership on the firm-level stock return for the pre-crisis and post-crisis period. Here it is evidenced that ownership concentration has a negative effect in pre-crisis and no effect during post-crisis period, which signifies that ownership concentration has a time-dependent effect. During the growth phase of the economy, it can be said that concentrated ownership proves to be detrimental. There is no institutional effect during pre-crisis but it has a negative effect during post-crisis, which denotes that it also has a time-dependent effect. Here, it can be inferred that institutional ownership diminishes the stock return during the slowing economy. Further, the effect of firm age also has a time-dependent effect. Overall, this study suggests that firm profitability improves the stock return and high leverage leads to lowering of the stock return. This study can be an exemplary to other emerging market researchers and policy makers.

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