# Does a Stewardship Code Improve the Firm Valuation and ESG Factors in India?

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## Abstract

This is the first study from an emerging market to examine the effect of stewardship codes on the relationship between institutional investors' (IIs) ownership and firm valuation, along with environmental, social, and governance (ESG) factors[3].. Using all S&P BSE listed non-financial firms data from financial years 2014-2015 to 2022-23, the results reveal a negative relationship between future firm value and II's ownership. Notably, stewardship code adoption does not affect Independent institutional investors' (IIIs)/ mutual fund (MF) ownership relationships with future firm valuation; however, Other institutional investors' (OIIs) negative relationship gets more profound. Difference in Difference (DID) analysis results confirm that the stewardship code positively affects IIs' and firm valuation relationship concerning firms with low promoter ownership than firms with high (more than 50%) ownership. However, the effect of the stewardship code changes throughout the different levels of Tobin Q. We find that an increasing IIs ownership enhances the likelihood of a positive change in ESG and its factors in which the environmental (E) factor contributes substantially . Further, a positive change in the governance score is associated with other institutional investors' (OIIs) ownership. Adopting the stewardship code strengthens the association between MF ownership and ESG factors.

**JEL:** G18 **SDG:** SDG 17, Target 17.J

**Keywords:** Institutional Investors ownership; ESG factors; Firm Value; Stewardship Code; Corporate Governance

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## 1.0 Introduction

After the global financial crisis (GFC) in 2008, institutional investors(IIs) were criticized for their positivity (Roach,2011; Ringe, 2020). Walker (2009) describes that directors' and boards' shortcomings during the GFC could be dealt with more efficiently with the help of the engagement of IIs. Previous literature has also suggested that IIs perform better firm monitoring than individual investors (Brickley et al., 1988; Hartzell & Starks, 2003; Nguyen & Shiu, 2022). However, the burden of monitoring costs for short-term IIs investment and the incentive of free riders[4] were identified as significant challenges for its application (Grosman & Hart, 1980; Gaspar et al., 2005). Still, by realizing its benefit, 'The Walker Review of Corporate Governance in the UK Banking Industry (2009) advises' the United Kingdom (UK) to recognize the importance of IIs in corporate governance. Based on advice, the UK introduced a new stewardship code in July 2010 to improve shareholder engagement. In 2012, a report published by the Organization for Economic Co-operation and Development (OECD) also emphasized the role of IIs in promoting corporate governance. Later, other countries' regulatory institutions realized the need and followed the UK path, and by 2017, more than 40 countries introduced stewardship codes to improve corporate governance in their country (Tsukioka, 2020), and this number continues to grow with time. This code mainly has a twofold objective. First, it aims to improve firms' corporate governance and performance through IIs engagement. Second, it aims to strengthen the accountability of IIs to their clients to build trust in the financial system.

In Dec 2019, India also recognized the importance of stewardship codes and introduced this code in the Indian market, which became effective in July 2020. Contrary to other countries, India introduced mandatory stewardship codes after seeing criticism for box-ticking exercises. Security and Exchange Board of India (SEBI) has introduced six principles in this code[5]. In the first principle, they directed IIs to formulate and publicly disclose a comprehensive policy to fulfill their stewardship responsibility. Second, they suggest including a clear policy to manage conflict of interest. In the third principle, they make IIs responsible for monitoring investee companies' strategy, performance, quality of management, and risk, including environmental, social and governance (ESG), and shareholder rights. The fourth principle emphasizes the need to have a policy on intervention in their investee companies to preserve the interest of ultimate investors. In the fifth principle, they advised IIs to have a policy for voting and its public disclosure. In the last principle, SEBI emphasized the periodic reporting of IIs' stewardship activities.

Despite its importance in the current market, we have found very few studies that examine its effect on corporate governance (Melis & Nijhof, 2018; Tsukioka, 2020; Ringe, 2020; Klettner, 2021; Nguyen & Shiu, 2022). Previous studies examined its effect on voting (Melis & Nijhof, 2018; Tsukioka, 2020) and the monitoring role of IIs (Nguyen & Shiu,2022). Ringe (2020) explores its feasibility for Germany, while Klettner (2021) revisited its basics to understand the actual role of IIs in corporate governance.

Stewardship principles guide IIs in fulfilling their shareholder responsibilities and growing their investee firms' value over time(Tsukioka, 2020). Nguyen and Shiu (2022) found a positive relationship between IIs ownership and future firm valuation in the UK market, which increased after adopting the stewardship code. They confirm that the stewardship code encourages IIs to

[4] The incentive for free riders means, the monitoring benefit of one IIs, could spill over among all investors. For more, please see(Grossman and Hart,1980).
[5] Please see circular no CIR/CFD/CMD1/168/2019

perform their stewardship role with credibility, and firms with high IIs ownership show a high future valuation.

Studies of Stewardship codes mainly belong to the developed markets. We have not found any study investigating the effect of stewardship codes in emerging markets like India, which differs from the developed market as it is a growing economy with a concentrated ownership structure. These differences can impact stewardship codes' effectiveness in emerging markets.

Stewardship principles assign the responsibility of monitoring firms and ESG risks to IIs. In this study, we investigate whether increased engagement of IIs after adopting the stewardship code improved future firm valuation. For instance, this study examines the effect of stewardship codes on the relationship between institutional investors' (IIs) ownership and firm valuation and ESG factors in the Indian market. Ringe (2020) shows their concern about the success of the stewardship code in improving firm governance if promotors' ownership is high, as it reduces the power of IIs to influence firm decisions. We did a difference in difference (DID) analysis to investigate any significant difference in the Indian market as it has various firms in which promoters have high ownership. We also classify total Institutional investors' (TIIs) ownership into independent Institutional investors (IIIs) and other institutional investors (OIIs), as suggested by Brickley et al. (1994) and Davis and Kim (2007) that not all types of IIs engagement improve firm governance. In addition, we separately examine mutual fund (MF) ownership to understand its effect on firm value and ESG.

Using S&P BSE listed non-financial firms' data from the financial year 2014-2015 to 2022-23, the study finds contrary results to previous findings of Nguyen & Shiu (2022), showing a negative relationship between future firm value and II's ownership. Adopting the stewardship code increased TII's negative effect on future firm value, especially firms not listed in the S&P BSE 500. The result demonstrates a negative association between IIIs/OIIs ownership and future Tobin Q. Notably, MF ownership was insignificant. Stewardship code adoption does not affect IIIs/MF ownership relationships with future firm valuation; however, OIIs' negative relationship gets more profound. DID analysis results confirm that the stewardship code positively affects IIs' and firm valuation relationship concerning low promoters' ownership compared to firms with high ( more than 50%) ownership. The effect of the stewardship code was found to be deferred throughout quantiles (based on Tobin Q). The study proves that banks and insurance have negative and significant relationships with future firm values. Moreover, the magnitude of this negative relationship is high in S&P BSE 500-listed firms.

Furthermore, the study shows a positive association of OII ownership with positive change in ESG and its factors. The environmental (E) and governance(G) factors contribute most to this positive association relationship. Due to very low MF ownership, it is negatively associated with positive change in ESG and its factors. However, adopting a stewardship code has positively affected MF ownership's association with ESG and its factors (E and G). TIIs and IIIs also show the positive effect of the stewardship code on the governance (G ) factor.

By providing the first empirical evidence related to stewardship codes from emerging markets, this study contributes to literature-related IIs' monitoring roles. Previous studies examined the developed market and documented the positive effect of the stewardship code ( Nguyen and Shiu,2022). In our research, we highlighted that the stewardship code has a negative impact on OIIs' ownership and firm valuation relationships. Additionally, the study confirms that firm IIs with ownership in low promoter holdings have a positive relationship with firm ownership

compared to firms with high promoter ownership. The study also contributed to ESG and IIs ownership relationships by proving evidence that MFs positively affect firms' ESG scores after adopting the stewardship code.

This study is organized as follows. Section 2 describes the literature review and hypothesis development. Section 3 explains the data and research design. Section 4 contains empirical results and discussion, and section 5 concludes this study.

## 2.0 Literature Review and Hypothesis

Studies highlighted the importance of IIs monitoring of management to improve corporate governance (Hartzell and Starks, 2003; Klettner,2021; Nguyen & Shiu, 2022). They can monitor firms through their 'voice' and 'exit' channels (Edmans and Manso, 2011; Nguyen & Shiu, 2022). IIs can discipline the firm through their intervention (Kahn and Winton,1998) and use their voting rights to show their different views. However, previous studies have shown that not all institutional investors put their differences on the table through voting to maintain their business relationships (Tsukioka, 2020). Brickley et al. (1994) reveal that banks and insurance companies vote to support management. At the same time, asset management companies are found to vote against managers' proposals (Davis and Kim, 2007). Doidge et al. (2019) state that improved corporate governance of firms through IIs monitoring is a result of their collective action. Direct communication and an 'exit' channel are valuable mechanisms of IIs to improve firms' valuation and corporate governance (McCahery et al., 2016). Nguyen and Shiu (2022) find a positive relationship between firm valuation and IIs ownership. Saha (2021) finds a positive association between corporate governance and firm valuation in the Indian market. To check whether the stewardship code affects this relationship to improve IIs engagement. This study hypothesizes as follows:

Hypothesis 1A: There is a positive relationship between firm valuation and IIs ownership, and the stewardship code has further emphasized this relationship in the Indian market.

We have performed the following model to test this hypothesis.

$$FV_{i,t+1} = \alpha + \beta_1 Own_{i,t} + \beta_2 ScDummy + \beta_3 ScDummy*Own_{i,t} + \beta_4 control\ variable + \varepsilon_{i,t} \quad (1)$$

Where *FV* is firm value i at time t+1, *ScDummy* is time dummy which has value one after stewardship code adoption, and *Own* is IIs ownership in firm i at time t.

IIs can improve firms' corporate governance through their intervention (voice or exist). They will hear more in firms that have low promoter holding. In this study, we assume that firms with promoters holding more than 50% will improve firm valuation better than those with high promoters holding. Our sub-hypothesis is as follows:

Hypothesis 1B: The stewardship code affects firms with non-promoters holding more than 50% greater than those with low holdings.

We did a DID analysis using the following model to check this hypothesis.

$$FV_{i,t+1} = \alpha + \beta_1 Own_{i,t} + \beta_2 Treatment\_d + \beta_4 control\ variable + \varepsilon_{i,t} \quad (1A)$$

Where the treatment group is the interaction of the *Tratement_d* group dummy variable( if the firm has non-promoters holding more than 50% =1) and stewardship code.

In recent times, stewardship has evolved beyond its initial scope to incorporate an expanded spectrum of concerns regarding ESG policies (Ringe, 2020). ESG encompasses firms' social and environmental obligations to prioritize financial gains and profits while also considering other business objectives and missions. Rastogi et al. (2023) find a positive non-linear effect of ESG on the firm's value. SEBI has also set ESG monitoring responsibility for IIs through the stewardship code. To check whether stewardship code affects firms' ESG factors to improve IIs engagement. To test this, we make the following hypothesis:

Hypothesis 2: Stewardship code positively impacts the ESG score of Indian firms.

Hypothesis 2A: Stewardship code positively impacts the environmental (E) score of Indian firms.

Hypothesis 2B: Stewardship code positively impacts the social(S)score of Indian firms.

Hypothesis 2C: Stewardship code positively impacts the Governance (G) score of Indian firms.

We have performed the following model to test these hypotheses.

$$ESG(D)_{i,t+1} = \alpha + \beta_1 Own_{i,t} + \beta_2 ScDummy + \beta_3 ScDummy*Own_{i,t} + \beta_4 control\ variable + \varepsilon_{i,t} \quad (2)$$

$$E(D)_{i,t+1} = \alpha + \beta_1 Own_{i,t} + \beta_2 ScDummy + \beta_3 ScDummy*Own_{i,t} + \beta_4 control\ variable + \varepsilon_{i,t} \quad (3)$$

$$S(D)_{i,t+1} = \alpha + \beta_1 Own_{i,t} + \beta_2 ScDummy + \beta_3 ScDummy*Own_{i,t} + \beta_4 control\ variable + \varepsilon_{i,t} \quad (4)$$

$$G(D)_{i,t+1} = \alpha + \beta_1 Own_{i,t} + \beta_2 ScDummy + \beta_3 ScDummy*Own_{i,t} + \beta_4 control\ variable + \varepsilon_{i,t} \quad (5)$$

Where *ESG(D)* is firm ESG score-based dummy variable (value one if increase) i at time t+1, *E(D)* is firm environment score-based dummy variable (value one if increase) i at time t+1, *S(D)* is a firm social score based dummy variable (value one if increase) i at time t+1, *G(D*) is firm governance score based dummy variable (value one if increase) i at time t+1, *ScDummy* is time dummy which has value one after stewardship code adoption, *Own* is IIs ownership in firm i at time t.

## *3.0 Data and Research Design*

### *3.1 Data*

This study investigates Indian non-financial firms of the listed S&P BSE. We have collected firms' financial and ownership data from 2014-15 to 2022-23 from the prowess database. We have considered only those firms whose ownership data is available from 2014. The study deletes firms if they do not have total assets, liabilities, and market value for the whole period and fills other sub-variables missing values with zero. From 3706 non-financial firms, this study includes 1856 firms in the sample for analysis that meet our criteria. To investigate ESG factors, we have taken ESG scores from Bloomberg. Due to the unavailability of ESG data for small firms, we have to restrict this analysis to BSE 500 non-financial firms. A total of 304 firms have been analyzed for this purpose[6]. To increase the number of observations due to the small sample, we have taken an unbalanced data set for ESG analysis. In this case, we exclude the firm observation for that

[6] Descriptive statistics of this sample are presented in the appendix. Table (1 (A)) summarizes all variables used in the analysis, and Table (2 (A)) provides a correlation Matrix.

particular year from our dataset if data is unavailable. Descriptive statistics of 1856 firms are presented in Tables 1 and 2 (on the following pages).

*3.2 Research Design*

Prowess database provides ownership pattern data with the classification of promoters and non-promoter investors, which is a percentage of the total number of shares held by investors divided by the total shares outstanding. The database is also subdivided into ownership promoters/non-promoters, Indian/foreign, and individuals/institutions. They further classified institutions' ownership into mutual funds/UTI, insurance and banks, and government and venture investors' ownership. We utilized this broad classification to create our primary dependent variable. We consider non-promoter institutional investors' ownership as total institutional investors (TIIs) ownership for analysis, which reflects combined ownership of mutual funds, banks, insurance companies, foreign institutional investors, and venture capital funds.

Previous studies highlighted that banks and insurance companies try to maintain a business relationship with the firm. In contrast, independent investors, like mutual funds, have no reason to support firms. This distinguishes behaviour and affects investors' behaviour in performing stewardship responsibilities. To document any significant difference, we divided TIIs into independent institutional investors IIIs and other institutional investors OIIs. IIIs reflect ownership of TIIs minus insurance and bank ownership, while OIIs combine ownership of bank and insurance companies. We have also examined the effect of mutual fund (MF) ownership separately. Table(1) shows TIIs, IIIs, OIIs, and MF have, on average, 6.99%, 5.53%, 1.33%, and 1.89% ownership in the firm, respectively.

This study uses Tobin Q to measure firm valuation, which is used widely in the literature (Nguyen & Shiu, 2022) and is calculated as total assets minus deferred tax minus common equity plus the total market value of equity divided by total assets. Apart from this, we collected firms' ESG, environment(E), social(S), and governance(G) scores from the Bloomberg database. W

ith the help of these scores, we created our dummy variable {ESG(D), E(D), S(D), and G(D)}. If the score increases from the previous year, the dummy variable has the value of one and zero otherwise.

We have also controlled various firm factors that were found to be significant in prior literature. Nguyen & Shiu (2022) found that financial leverage, research and development (R&D), cash ratio, and expense ratio have a positive and significant relationship with future Tobin Q, while property, plant, and equipment (PPE) ratio, sales, return on asset (ROA), Growth opportunities calculated as the market-to-book ratio(MB ratio) and sales growth and capital expenditure has a negative and significant relationship with future Tobin Q. Previous studies also documented these factors association with firm valuation and governance factors(Jensen and Meckling,1976; Chen 2006; Bolton et al. 2011). We control all these variables in our regression modeling. To understand the effect of the stewardship code on relationships, we created a time dummy variable (ScDummy), which has a value of one from the financial year 2021 and zero before it. Table(3(A) in the appendix contains a detailed definition of all the variables.

**Table (1): Summary statistics of 1856 non-financial firms.**

| Variable | Obs | Mean | Std. dev | Min | Max |
|---|---|---|---|---|---|
| Tobin Q | 16,704 | 0.1286 | 0.3108 | -0.5784 | 1.0726 |
| TIIs Own | 16,704 | 0.0700 | 0.1135 | 0 | 0.4880 |
| IIIs Own | 16,704 | 0.0554 | 0.0978 | 0 | 0.4157 |
| OIIs Own | 16,704 | 0.0134 | 0.0317 | 0 | 0.1802 |
| MF Own | 16,704 | 0.0190 | 0.0423 | 0 | 0.1999 |
| Financial Leverage | 16,704 | 0.5673 | 0.5326 | 0 | 5.2137 |
| R&D | 16,704 | 0.0029 | 0.0095 | 0 | 0.0660 |
| Capital expenditure | 16,704 | 0.0660 | 0.1918 | 0 | 1.8125 |
| Cash ratio | 16,704 | 0.0265 | 0.0690 | 0 | 0.4031 |
| PPE ratio | 16,704 | 0.2607 | 0.2007 | 0 | 0.8180 |
| ROA | 16,704 | 0.0684 | 0.1151 | -0.6060 | 0.4235 |
| Export ratio | 16,704 | 0.1125 | 0.2321 | 0.0000 | 0.9683 |
| MB ratio | 16,704 | 2.3695 | 3.9397 | -6.7591 | 26.1817 |
| Tobin_Q(t+1) | 16,704 | 0.1471 | 0.3188 | -0.6411 | 1.2752 |
| Log (sales) | 16,704 | 3.1904 | 1.1792 | -0.2218 | 5.5733 |
| Log(total asset) | 16,703 | 8.0256 | 2.2419 | -2.3026 | 16.0898 |

## Table ( 2): Correlation matrix of 1856 firms

| | Tobin Q | TIIs Own | IIIs Own | OIIs Own | MF Own | Financial Leverage | R&D | Capital expenditure | Cash ratio | PPE ratio | ROA | Export ratio | MB ratio | Tobin_Q(t+1) | Log (sales) | Log(total asset) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Tobin Q | 1 | | | | | | | | | | | | | | | |
| TIIs Own | 0.3088 | 1 | | | | | | | | | | | | | | |
| IIIs Own | 0.3348 | 0.9418 | 1 | | | | | | | | | | | | | |
| OIIs Own | 0.0688 | 0.5474 | 0.2625 | 1 | | | | | | | | | | | | |
| MF Own | 0.2706 | 0.721 | 0.771 | 0.1948 | 1 | | | | | | | | | | | |
| Financial Leverage | 0.256 | -0.066 | -0.1072 | 0.0729 | -0.0877 | 1 | | | | | | | | | | |
| R&D | 0.1447 | 0.184 | 0.1961 | 0.0543 | 0.1526 | -0.0606 | 1 | | | | | | | | | |
| Capital expenditure | -0.0438 | -0.0272 | -0.0426 | 0.0192 | -0.0492 | 0.1101 | 0.0038 | 1 | | | | | | | | |
| Cash ratio | 0.1539 | 0.162 | 0.1704 | 0.0477 | 0.1207 | -0.1462 | 0.0629 | -0.0268 | 1 | | | | | | | |
| PPE ratio | -0.0443 | -0.0212 | -0.0383 | 0.0269 | -0.0052 | 0.1366 | -0.0122 | 0.1272 | -0.1462 | 1 | | | | | | |
| ROA | 0.2192 | 0.1841 | 0.2104 | 0.0202 | 0.1812 | -0.2864 | 0.0654 | -0.2184 | 0.169 | -0.0028 | 1 | | | | | |
| Export ratio | -0.0192 | -0.0277 | -0.011 | -0.0573 | -0.0366 | -0.0738 | 0.0959 | -0.0537 | 0.0165 | -0.0217 | 0.1052 | 1 | | | | |
| MB ratio | 0.6211 | 0.2234 | 0.2496 | 0.037 | 0.1835 | -0.1119 | 0.0864 | -0.0678 | 0.0933 | -0.0839 | 0.2355 | -0.0108 | 1 | | | |
| Tobin_Q(t+1) | 0.8611 | 0.2801 | 0.3029 | 0.0644 | 0.2492 | 0.251 | 0.1386 | -0.0348 | 0.1394 | -0.0299 | 0.1894 | -0.0041 | 0.5346 | 1 | | |
| Log (sales) | 0.1711 | 0.5289 | 0.5079 | 0.2971 | 0.4179 | -0.1032 | 0.166 | -0.2437 | 0.0672 | 0.1832 | 0.3625 | 0.0495 | 0.1673 | 0.1477 | 1 | |
| Log(total asset) | 0.1264 | 0.6361 | 0.5949 | 0.3974 | 0.4589 | -0.1345 | 0.1909 | -0.0558 | 0.0876 | 0.0965 | 0.2588 | -0.0099 | 0.1491 | 0.097 | 0.8623 | 1 |

We applied the panel fixed effect regression model to examine firm valuation and IIs ownership relationship. We winsorized 1% of the data to reduce the outlier effect on regression results. A variance inflation factor (VIF) test has been performed to avoid multicollinearity issues in modeling, and the values of all model variables are less than 5%. We applied robust standard error clustering to deal with the heterogeneity of data. We transform a few variables into log values (such as Tobin Q, sales, and Total assets) to make data near normal. For hypothesis 1B, we applied DID analysis. In the case of ESG, our dependent variable is dummy, so we applied probit model regression for analysis.

## 4.0 Empirical Results and Discussion

### *4.1 Firm Value and Stewardship Code*

To test our first hypotheses, we follow Nguyen & Shiu (2022) and regress one year ahead of Tobin Q (t+1) on institutional investors' ownership, firm characteristics (such as financial leverage, R&D, sales, capital expenditure, cash ratio, PPE ratio, ROA, sales growth, Export ratio) and current Tobin Q (t) incorporate control variable in the regression model. We have wonsorized data at 1% to deal with outliers and checked the variance inflation factor (VIF) at less than 5 to avoid the multicollinearity problem. The study used robust clustering to tackle the heterogeneity problem. Table (3) presents the result of a regression equation (1). As we explained above, the Indian market differs from the previously examined market. Our result opposes the previous finding and shows the negative relationship between TIIs ownership and future Tobin Q. To understand the stewardship code effect on this relationship, the interaction ScDummy with TIIs ownership and ScDummy is included in the regression model. The result of model two shows a negative and significant coefficient for the ScDummy variable and an insignificant coefficient for the interaction variable. The result shows that firms' Tobin Q decreased after adopting the stewardship code, and ownership relations did not change significantly.

Brickley et al. (1994) find that banks and insurance companies do not perform stewardship duties reasonably to maintain business relationships with firms. To deduct bank and insurance companies' ownership from total TIIs ownership, we calculated IIIs variables like Ferreira and Matos (2008), which shows collective ownership of mutual fund managers, hedge funds, investment advisors, and venture capital firms. While OIIs show bank and insurance companies ownership. The regression result of the third model shows a negative and insignificant coefficient for IIIs and OIIs, which shows a negative relationship between IIIs ownership and future Tobin Q. In contrast, the MF ownership coefficient is insignificant. The model's fourth result confirms that after adopting the stewardship code, the negative relationship between OII ownership and future Tobin Q increased, which confirms the result of Brickley et al. (1994). Indian insurance and banking companies manage their relationship with management and are not performing their stewardship responsibility reasonably, and their high ownership negatively affects firm value. The result shows that adopting the stewardship code increases its negative effect on firm value. However, the impact of the stewardship code on IIIs and MF ownership is insignificant.

**Table (3): Firm valuation and IIs ownership**

| Tobin Q(t+1) | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
|---|---|---|---|---|---|---|---|---|
| TIIOs Own | -0.1603*** | -0.1588*** | | | -0.1374* | -0.1577*** | | |
| | (0.0354) | (0.0366) | | | (0.0764) | (0.0407) | | |
| IIIs Own | | | -0.1810*** | -0.1857*** | | | -0.1642** | -0.1809*** |
| | | | (0.0495) | (0.0503) | | | (0.0805) | (0.0626) |
| OIIs Own | | | -0.1439** | -0.1081 | | | -0.4330*** | 0.0559 |
| | | | (0.0700) | (0.0712) | | | (0.1392) | (0.0794) |
| MF Own | | | -0.0518 | -0.0863 | | | 0.0103 | -0.1973* |
| | | | (0.0793) | (0.0845) | | | (0.1275) | (0.1102) |
| ScDummy | | -0.0218*** | | -0.0212*** | -0.0389* | -0.0136** | -0.0334 | -0.0125* |
| | | (0.0063) | | (0.0063) | (0.0223) | (0.0067) | (0.0223) | (0.0067) |
| ScDummy*TIIs | | -0.0041 | | | -0.0454 | -0.0689** | | |
| | | (0.0216) | | | (0.0597) | (0.0312) | | |
| ScDummy*IIIs | | | | 0.0041 | | | -0.0526 | -0.0471 |
| | | | | (0.0475) | | | (0.0788) | (0.0688) |
| ScDummy*OIIs | | | | -0.1723*** | | | -0.4319*** | -0.1417** |
| | | | | (0.0613) | | | (0.1519) | (0.0662) |
| ScDummy*MF | | | | 0.0828 | | | 0.1806 | -0.0025 |
| | | | | (0.0964) | | | (0.1364) | (0.1267) |
| Financial Leverage | 0.0307*** | 0.0307*** | 0.0304*** | 0.0306*** | 0.0638*** | 0.0314*** | 0.0670*** | 0.0309*** |
| | (0.0090) | (0.0090) | (0.0090) | (0.0090) | (0.0210) | (0.0092) | (0.0205) | (0.0092) |
| R&D | -0.5336 | -0.5320 | -0.5177 | -0.5062 | -2.3262*** | -0.2619 | -2.2695*** | -0.2275 |
| | (0.3871) | (0.3871) | (0.3873) | (0.3860) | (0.8927) | (0.4256) | (0.8678) | (0.4250) |
| Capital expenditure | -0.0158*** | -0.0158*** | -0.0154*** | -0.0158*** | -0.0609 | -0.0148*** | -0.0601 | -0.0143*** |
| | (0.0052) | (0.0052) | (0.0052) | (0.0052) | (0.0493) | (0.0052) | (0.0509) | (0.0053) |
| Cash ratio | -0.0037 | -0.0037 | -0.0038 | -0.0038 | 0.0620 | -0.0045 | 0.0778* | -0.0050 |
| | (0.0104) | (0.0104) | (0.0104) | (0.0104) | (0.0459) | (0.0105) | (0.0415) | (0.0105) |
| PPE ratio | 0.0128 | 0.0127 | 0.0132 | 0.0132 | 0.0333 | 0.0005 | 0.0289 | 0.0013 |
| | (0.0338) | (0.0338) | (0.0339) | (0.0338) | (0.0586) | (0.0397) | (0.0579) | (0.0397) |
| ROA | 0.0439** | 0.0439** | 0.0438** | 0.0447*** | -0.0549 | 0.0498*** | -0.0581 | 0.0494*** |
| | (0.0173) | (0.0173) | (0.0173) | (0.0173) | (0.0662) | (0.0179) | (0.0673) | (0.0179) |
| Log(Sales) | 0.0827*** | 0.0826*** | 0.0825*** | 0.0836*** | 0.1760** | 0.0763*** | 0.1805** | 0.0765*** |
| | (0.0218) | (0.0218) | (0.0218) | (0.0216) | (0.0743) | (0.0228) | (0.0733) | (0.0226) |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Export ratio | -0.0000 | -0.0000 | -0.0000 | -0.0000 | -0.0027 | -0.0000 | -0.0027 | -0.0000 |
| | (0.0000) | (0.0000) | (0.0000) | (0.0000) | (0.0019) | (0.0000) | (0.0020) | (0.0000) |
| Sales growth | -0.0077 | -0.0077 | -0.0079 | -0.0076 | -0.0359 | -0.0011 | -0.0373* | -0.0011 |
| | (0.0106) | (0.0106) | (0.0106) | (0.0106) | (0.0218) | (0.0118) | (0.0219) | (0.0118) |
| Log(Tobin $Q_t$) | 0.5221*** | 0.5220*** | 0.5229*** | 0.5234*** | 0.6222*** | 0.5077*** | 0.6115*** | 0.5096*** |
| | (0.0120) | (0.0120) | (0.0120) | (0.0120) | (0.0314) | (0.0128) | (0.0325) | (0.0129) |
| Constant | 0.1326*** | 0.1358*** | 0.1328*** | 0.1338*** | 0.5172** | 0.0991*** | 0.5325** | 0.0924*** |
| | (0.0189) | (0.0190) | (0.0189) | (0.0190) | (0.2131) | (0.0185) | (0.2182) | (0.0185) |
| Observations | 16,704 | 16,704 | 16,704 | 16,704 | 2,160 | 14,544 | 2,160 | 14,544 |
| R-squared | 0.3978 | 0.3978 | 0.3981 | 0.3986 | 0.5280 | 0.3901 | 0.5344 | 0.3911 |
| Fund FE | YES | YES | YES | YES | YES | YES | YES | YES |
| Year FE | YES | YES | YES | YES | YES | YES | YES | YES |
| Industry | YES | YES | YES | YES | YES | YES | YES | YES |

The table presents the result of panel fixed effect regression(eq 1). Tobin Q(t+1) is the dependent variable, and Ownership (Own) is the independent variable. The control variables are financial leverage, R&D, Log(Sale), Capital expenditure, cash ratio, PPE ratio, ROA, Sales growth, Export ratio, and Lag value of tobin Q. Robust standard errors in parentheses and *** p<0.01, ** p<0.05, * p<0.1 denotes significant at 10%,5% and 1%, respectively.

In the descriptive analysis, we observe a significant difference in average ownership of IIs in firms listed in the S&P BSE 500 and others, which motivates us to analyze it separately; results are presented in models 5-8 (Table 3). The result shows that the interaction of stewardship with TIIs is negative and significant in firms that are not listed in the S&P BSE 500. Notably, it was interesting to see the negative effect of the stewardship code on bank ownership and the future Tobin Q relationship is more on S&P BSE 500 listed firms.

To understand whether the effect of the stewardship code is the same for all levels of the Tobin Q firms, we divide data into four quarters based on Tobin Q and regress each quantile separately. The result shows (see Table 4) that the effect of stewardship code on firm valuation differs from with quarters. ScDummy is positive in the first, second, and third quarters and negative in the fourth quarter. Firms' value with low Tobin Q increased after adopting the stewardship code, while high-valued firm value decreased after the stewardship code. However, it was interesting to notice that the positive effect of stewardship on the relationship between TIIs ownership and future Tobin Q positively increases with the quarter, although the coefficient is insignificant. Quarterly analysis shows a negative relation of IIs mainly driven by low Tobin Q firms. In contrast, the negative relationship between banks is significant in high Tobin Q value firms. Mutual fund ownership has a positive and significant relationship in low Tobin Q firms. However, we have not observed any significant effect of stewardship code in IIs and MF cases as IIs and MF interaction show an insignificant coefficient. However, OII interaction is negative and significant in high Tobin Q firms.

In the Indian market, the effect of institutional ownership on firm valuation is negative. However, this relationship changes with the type of investors and firm Tobin Q level. OIIs (Bank and Insurance) ownership is negatively related to firms' future Tobin Q, and this negative relationship is getting deeper after adopting the stewardship code.

### *4.2 Stewardship code effect on high non-promoters holding*

The objective of the stewardship code is to improve corporate governance through enhanced IIs engagement. The effect of stewardship depends on how much IIs can significantly intercept in a firm's corporate decision-making. If any firm's promoters have sufficient control (ownership of more than 50%), they may oversee IIs' input efficiently. In this situation, the impact of the stewardship code may differ for firms with high promoter ownership and those with low ownership. We use the DID technique to check this assumption. We made a group variable in which the treatment group has the value of one when firms have non-promoters holding more than 50% and zero otherwise. Then, we interacted with the group variable with stewardship code to create a treatment dummy (*Tretment_d* ). First, we run baseline regression, in which we find support for our hypothesis as we find positive and significant coefficients for *Tretment_d*(Table 5). In *the* descriptive analysis, we observed a significant difference in the mean of IIs ownership in firms listed in the S &P BSE 500 and those not in the list of top 500 firms. This motivated us to do a sub-sample analysis. The baseline results of models 4 to 7 confirm the positive effect of the stewardship code in firms with high non-promoter holdings driven from the top 500 BSE companies, as Tretment_d is positive and significant only for the top 500 companies. As base regression supports our hypothesis, we perform DID analysis to present robust results. DID analysis results supported our baseline findings (Table 6). We did an estimation test to check the robustness of the model. We performed parallel trend analysis, an essential condition for DID analysis, with the Stata command 'estat trendplots', the graph presented in Figure (1). As figures

show, after the adoption of the stewardship code in 2020, the gap between both (control and treatment) groups increased.

**Table (4): Firm valuation and ownership quantile analysis.**

| Tobin Q(t+1) | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 |
|---|---|---|---|---|---|---|---|---|
| TIIOs Own | -0.0368 | -0.0119 | 0.0110 | -0.0613 | | | | |
| | (0.0412) | (0.0223) | (0.0338) | (0.0843) | | | | |
| IIIs Own | | | | | -0.1308** | -0.0468 | 0.0162 | -0.0109 |
| | | | | | (0.0578) | (0.0339) | (0.0435) | (0.0908) |
| OIIs Own | | | | | 0.0639 | 0.0402 | 0.0425 | -0.4466** |
| | | | | | (0.1150) | (0.0440) | (0.0821) | (0.2185) |
| MF Own | | | | | 0.3315** | 0.0125 | -0.0511 | -0.1189 |
| | | | | | (0.1624) | (0.0607) | (0.0834) | (0.1559) |
| ScDummy | 0.0089 | 0.0120*** | 0.0143** | -0.0323* | 0.0102 | 0.0119*** | 0.0150** | -0.0330* |
| | (0.0084) | (0.0036) | (0.0065) | (0.0183) | (0.0083) | (0.0036) | (0.0065) | (0.0182) |
| ScDummy*TIIs | -0.0105 | -0.0252 | 0.0150 | 0.0014 | | | | |
| | (0.0475) | (0.0186) | (0.0220) | (0.0442) | | | | |
| ScDummy*IIIs | | | | | -0.0278 | 0.0276 | 0.0342 | -0.0005 |
| | | | | | (0.0973) | (0.0391) | (0.0404) | (0.0814) |
| ScDummy*OIIs | | | | | 0.0020 | -0.0295 | -0.0314 | -0.2823** |
| | | | | | (0.0543) | (0.0324) | (0.0614) | (0.1358) |
| ScDummy*MF | | | | | 0.0525 | -0.1249 | -0.0333 | 0.1737 |
| | | | | | (0.1986) | (0.0771) | (0.0852) | (0.1551) |
| Financial Leverage | 0.0349 | 0.0110 | 0.0256*** | 0.0390*** | 0.0346 | 0.0106 | 0.0253*** | 0.0393*** |
| | (0.0437) | (0.0108) | (0.0086) | (0.0087) | (0.0437) | (0.0107) | (0.0086) | (0.0088) |
| R&D | -0.2167 | -0.5314** | -0.1947 | -0.5248 | -0.2463 | -0.5355*** | -0.1837 | -0.5641 |
| | (0.6110) | (0.2082) | (0.2334) | (0.7421) | (0.5987) | (0.2067) | (0.2333) | (0.7322) |
| Capital expenditure | 0.0215*** | -0.0053** | -0.0110** | -0.0541*** | 0.0215*** | -0.0049* | -0.0110** | -0.0548*** |
| | (0.0066) | (0.0026) | (0.0044) | (0.0128) | (0.0066) | (0.0026) | (0.0044) | (0.0129) |
| Cash ratio | 0.0190 | 0.0028 | 0.0009 | -0.0370* | 0.0192 | 0.0026 | 0.0012 | -0.0376* |
| | (0.0117) | (0.0090) | (0.0093) | (0.0206) | (0.0118) | (0.0089) | (0.0093) | (0.0207) |
| PPE ratio | -0.0020 | 0.0314 | 0.0058 | 0.0233 | -0.0007 | 0.0305 | 0.0070 | 0.0239 |
| | (0.0554) | (0.0244) | (0.0344) | (0.0564) | (0.0556) | (0.0244) | (0.0345) | (0.0566) |
| ROA | 0.0864*** | -0.0102 | 0.0176 | 0.0221 | 0.0868*** | -0.0105 | 0.0176 | 0.0230 |
| | (0.0248) | (0.0102) | (0.0166) | (0.0408) | (0.0248) | (0.0102) | (0.0166) | (0.0409) |
| Log(Sales) | 0.0602* | 0.0118 | 0.0375** | 0.1173*** | 0.0621** | 0.0111 | 0.0375** | 0.1182*** |
| | (0.0308) | (0.0125) | (0.0145) | (0.0372) | (0.0308) | (0.0124) | (0.0145) | (0.0373) |
| Export ratio | -0.0000 | -0.0001** | -0.0001** | -0.0000 | -0.0000 | -0.0001** | -0.0001** | -0.0000 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | (0.0000) | (0.0001) | (0.0000) | (0.0002) | (0.0000) | (0.0001) | (0.0000) | (0.0002) |
| Sales growth | -0.0189 | -0.0023 | 0.0196** | -0.0178 | -0.0184 | -0.0020 | 0.0201** | -0.0183 |
| | (0.0186) | (0.0068) | (0.0093) | (0.0223) | (0.0185) | (0.0068) | (0.0093) | (0.0223) |
| Log(Tobin $Q_t$) | 0.2159*** | 0.0649*** | 0.0911*** | 0.2628*** | 0.2164*** | 0.0657*** | 0.0918*** | 0.2593*** |
| | (0.0216) | (0.0100) | (0.0097) | (0.0211) | (0.0218) | (0.0100) | (0.0097) | (0.0212) |
| Constant | -0.2532*** | 0.0192* | 0.1791*** | 0.6419*** | -0.2505*** | 0.0168 | 0.1750*** | 0.6425*** |
| | (0.0276) | (0.0108) | (0.0179) | (0.0454) | (0.0285) | (0.0111) | (0.0182) | (0.0460) |
| Observations | 4,176 | 4,176 | 4,176 | 4,176 | 4,176 | 4,176 | 4,176 | 4,176 |
| R-squared | 0.2665 | 0.1414 | 0.1173 | 0.2484 | 0.2679 | 0.1436 | 0.1177 | 0.2512 |
| Fund FE | YES | YES | YES | YES | YES | YES | YES | YES |
| Year FE | YES | YES | YES | YES | YES | YES | YES | YES |
| Industry | YES | YES | YES | YES | YES | YES | YES | YES |

The table presents the result of panel fixed effect regression(eq 1). Tobin Q(t+1) is the dependent variable, and Ownership (Own) is the independent variable. The control variables are financial leverage, R&D, Log(Sale), Capital expenditure, cash ratio, PPE ratio, ROA, Sales growth, Export ratio, and Lag value of tobin Q. Robust standard errors in parentheses and *** p<0.01, ** p<0.05, * p<0.1 denotes significant at 10%,5% and 1%, respectively.

**Table(5): Baseline regression of DID analysis**

| Tobin Q (t+1) | (1) | (2) | (3) | (4) | (5) | (6) | (7) |
|---|---|---|---|---|---|---|---|
| Treatmen_d | 0.0725*** | 0.0132** | 0.0132** | 0.0401** | 0.0099 | 0.0371** | 0.0098 |
| | (0.0087) | (0.0061) | (0.0061) | (0.0165) | (0.0065) | (0.0167) | (0.0066) |
| TIIs Own | | -0.1587*** | | -0.1574** | -0.1717*** | | |
| | | (0.0353) | | (0.0729) | (0.0400) | | |
| IIIs Own | | | -0.1800*** | | | -0.1629** | -0.1844*** |
| | | | (0.0492) | | | (0.0802) | (0.0607) |
| MF Own | | | -0.0517 | | | 0.0703 | -0.2141** |
| | | | (0.0791) | | | (0.1174) | (0.1035) |
| OIIs Own | | | -0.1373* | | | -0.4467*** | 0.0312 |
| | | | (0.0704) | | | (0.1408) | (0.0785) |
| Financial Leverage | | 0.0309*** | 0.0305*** | 0.0667*** | 0.0315*** | 0.0679*** | 0.0309*** |
| | | (0.0090) | (0.0090) | (0.0219) | (0.0092) | (0.0222) | (0.0092) |
| R&D | | -0.5234 | -0.5072 | -2.2528** | -0.2652 | -2.2841** | -0.2234 |
| | | (0.3849) | (0.3852) | (0.9188) | (0.4256) | (0.9206) | (0.4247) |
| Capital expenditure | | -0.0036 | -0.0037 | 0.0568 | -0.0050 | 0.0532 | -0.0054 |
| | | (0.0104) | (0.0104) | (0.0477) | (0.0105) | (0.0486) | (0.0105) |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Cash ratio | | 0.0122 | 0.0125 | 0.0312 | 0.0019 | 0.0307 | 0.0026 |
| | | (0.0338) | (0.0338) | (0.0597) | (0.0396) | (0.0595) | (0.0395) |
| PPE ratio | | 0.0430** | 0.0429** | -0.0586 | 0.0492*** | -0.0665 | 0.0483*** |
| | | (0.0173) | (0.0173) | (0.0661) | (0.0179) | (0.0664) | (0.0179) |
| ROA | | 0.0822*** | 0.0820*** | 0.1755** | 0.0763*** | 0.1725** | 0.0760*** |
| | | (0.0218) | (0.0218) | (0.0741) | (0.0229) | (0.0734) | (0.0228) |
| Log(Sales) | | -0.0154*** | -0.0150*** | -0.0549 | -0.0148*** | -0.0482 | -0.0141*** |
| | | (0.0052) | (0.0052) | (0.0501) | (0.0052) | (0.0504) | (0.0053) |
| Export ratio | | -0.0080 | -0.0083 | -0.0351* | -0.0012 | -0.0376* | -0.0014 |
| | | (0.0105) | (0.0106) | (0.0212) | (0.0117) | (0.0213) | (0.0117) |
| Sales growth | | -0.0000 | -0.0000 | -0.0023 | -0.0000 | -0.0020 | -0.0000 |
| | | (0.0000) | (0.0000) | (0.0019) | (0.0000) | (0.0020) | (0.0000) |
| Log(Tobin $Q_t$) | | 0.5218*** | 0.5226*** | 0.6254*** | 0.5084*** | 0.6207*** | 0.5099*** |
| | | (0.0120) | (0.0120) | (0.0316) | (0.0128) | (0.0322) | (0.0128) |
| Constant | 0.1393*** | 0.1307*** | 0.1309*** | 0.4948** | 0.0942*** | 0.4772** | 0.0922*** |
| | (0.0009) | (0.0189) | (0.0189) | (0.2138) | (0.0184) | (0.2148) | (0.0185) |
| Observations | 16,704 | 16,704 | 16,704 | 2,160 | 14,544 | 2,160 | 14,544 |
| R-squared | 0.0146 | 0.3981 | 0.3985 | 0.5307 | 0.3900 | 0.5324 | 0.3910 |
| Fund FE | No | YES | No | YES | YES | YES | YES |
| Year FE | NO | YES | NO | YES | YES | YES | YES |
| Industry | No | Yes | No | YES | YES | YES | YES |

Robust standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

**Table(6): DID analysis results.**

| Tobin Q (t+1) | (1) | (2) | (3) | (4) | (5) | (6) | (7) |
|---|---|---|---|---|---|---|---|
| Treatment_d | 0.0197** | 0.0131** | 0.0132** | 0.0401** | 0.0099 | 0.0371** | 0.0097 |
| | (0.0100) | (0.0061) | (0.0061) | (0.0162) | (0.0065) | (0.0167) | (0.0065) |
| TIIs Own | | -0.1587*** | | -0.1574** | -0.1717*** | | |
| | | (0.0353) | | (0.0729) | (0.0400) | | |
| IIIs Own | | | -0.1800*** | | | -0.1629** | -0.1844*** |
| | | | (0.0492) | | | (0.0802) | (0.0607) |
| MF Own | | | -0.0517 | | | 0.0703 | -0.2141** |
| | | | (0.0791) | | | (0.1174) | (0.1035) |
| OIIs Own | | | -0.1373* | | | -0.4467*** | 0.0312 |
| | | | (0.0704) | | | (0.1408) | (0.0785) |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Financial Leverage | | 0.0309*** | 0.0305*** | 0.0667*** | 0.0315*** | 0.0679*** | 0.0309*** |
| | | (0.0090) | (0.0090) | (0.0219) | (0.0092) | (0.0222) | (0.0092) |
| R&D | | -0.5234 | -0.5072 | -2.2528** | -0.2652 | -2.2841** | -0.2234 |
| | | (0.3849) | (0.3852) | (0.9188) | (0.4256) | (0.9206) | (0.4247) |
| Capital expenditure | | -0.0036 | -0.0037 | 0.0568 | -0.0050 | 0.0532 | -0.0054 |
| | | (0.0104) | (0.0104) | (0.0477) | (0.0105) | (0.0486) | (0.0105) |
| Cash ratio | | 0.0122 | 0.0125 | 0.0312 | 0.0019 | 0.0307 | 0.0026 |
| | | (0.0338) | (0.0338) | (0.0597) | (0.0396) | (0.0595) | (0.0395) |
| PPE ratio | | 0.0430** | 0.0429** | -0.0586 | 0.0492*** | -0.0665 | 0.0483*** |
| | | (0.0173) | (0.0173) | (0.0661) | (0.0179) | (0.0664) | (0.0179) |
| ROA | | 0.0822*** | 0.0820*** | 0.1755** | 0.0763*** | 0.1725** | 0.0760*** |
| | | (0.0218) | (0.0218) | (0.0741) | (0.0229) | (0.0734) | (0.0228) |
| Log(Sales) | | -0.0154*** | -0.0150*** | -0.0549 | -0.0148*** | -0.0482 | -0.0141*** |
| | | (0.0052) | (0.0052) | (0.0501) | (0.0052) | (0.0504) | (0.0053) |
| Export ratio | | -0.0080 | -0.0083 | -0.0351* | -0.0012 | -0.0376* | -0.0014 |
| | | (0.0105) | (0.0106) | (0.0212) | (0.0117) | (0.0213) | (0.0117) |
| Sales growth | | -0.0000 | -0.0000 | -0.0023 | -0.0000 | -0.0020 | -0.0000 |
| | | (0.0000) | (0.0000) | (0.0019) | (0.0000) | (0.0020) | (0.0000) |
| Log(Tobin $Q_t$) | | 0.5218*** | 0.5226*** | 0.6254*** | 0.5084*** | 0.6207*** | 0.5099*** |
| | | (0.0120) | (0.0120) | (0.0316) | (0.0128) | (0.0322) | (0.0128) |
| Constant | 0.1302*** | 0.1307*** | 0.1309*** | 0.4948** | 0.0942*** | 0.4772** | 0.0922*** |
| | (0.0043) | (0.0189) | (0.0189) | (0.2138) | (0.0184) | (0.2148) | (0.0185) |
| Observations | 16,704 | 16,704 | 16,704 | 2,160 | 14,544 | 2,160 | 14,544 |
| Fund FE | YES | YES | YES | YES | YES | YES | YES |
| Industry | YES | YES | YES | YES | YES | YES | YES |
| Year FE | YES | YES | YES | YES | YES | YES | YES |

Robust standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

This means there will be differences in both groups after 2020. We also perform a parallel trends test from the Stata command' estat ptrends', which tests the linear trend before the stewardship code. We also performed the Placebo test with the help of the Stata command 'estat granger.' All these tests supported our model.

DID analysis confirmed that the stewardship code positively affects firms' future Tobin Q, but only those firms in which the promoter does not have sufficient power to make management decisions. If the firm promoter holding is less than 50%, IIs engagement improves the firm's valuation. However, in India, we find that due to the high ownership of IIs, the positive effect is driven by S&P BSE 500 firms.

### *4.3 ESG and stewardship code*

First, we examined whether institutional investors' ownership is associated with changes in ESG scores. We used the ESG score to establish a binomial dependent variable (ESG(D)). In this variable, a value of one is assigned if the score increases compared to its previous value and zero otherwise. The panel probit regression model is found suitable for analysis. We regress ESG(D) as the dependent variable (Eq 2) on IIs ownership with the various control variables(Such as financial leverage, R&D, total asset, MB ratio, capital expenditure, cash ratio, PPE ratio, ROA, export ratio) influencing ESG score. The results are presented in Tables 7 and 8. The result shows that the TII / IIIs ownership coefficient is positive and insignificant. OIIs ownership has a positive and significant coefficient, while MF ownership shows a negative and significant relationship with change in ESG score and its factors. The result clarifies that other than MF, all types of TIIs ownership positively correlate with change in ESG score. To understand IIs ownership effect on specific ESG factors, we regress Environmental (E), Social(S), and Governance(G) scores dummy variable same as ESG on IIs ownership with a control variable (E 3,4, and 5). The result shows that all types of IIs ownership except MF have a positive and significant association with change in environmental scores, and the coefficient values are high compared to other ESG factors, reflecting TIIs' focus on improving the firm's green practices. However, the TIIs ownership coefficient in the social factor regression model is insignificant, showing they are not bothered about companies' CSR policy. The Governance factor results show that OIIs have a positive and significant association with positive change in governance score. While the remaining IIs have insignificant coefficients. These results show that Indian IIs ownership is positively associated with ESG and the environment. We observed that mutual funds have a very low holding in the firm; due to that alone, they cannot positively effect change in ESG and its factors. However, it was interesting to find that bank and insurance ownership are positively associated with a change in governance score despite their negative effect on the firm value.

Specific to the effect of the stewardship code on ESG and IIs ownership, The result shows that after adopting the stewardship code, the probability of improvement in ESG and its factor scores decreased except for the social factor. However intriguing, we find positive and significant coefficients for TIIs, IIIs, and MF interaction variables in the G(D) regression model. OIIs ownership interaction variable coefficient is insignificant in all scenarios. The result shows that the interaction of MF ownership coefficients in the ESG(D) and E(D) regression is also positive and significant. These results highlighted the positive effect of stewardship on firm governance. It shows that the MF ownership effect improves after adopting the stewardship code on the firm's ESG, environment, and governance factors.

## Table (7): TIIs and IIIs ownership and ESG relationship

| Dependent Variable: | ESG(D) | E(D) | S(D) | G(D) | ESG(D) | E(D) | S(D) | G(D) |
|---|---|---|---|---|---|---|---|---|
| TIIs Own | 0.5171 | 0.5789 | 0.4156 | -0.1305 | | | | |
| | (0.5095) | (0.3854) | (0.4808) | (0.3004) | | | | |
| IIIs Own | | | | | 0.0387 | 0.1515 | 0.4936 | -0.4162 |
| | | | | | (0.5160) | (0.3714) | (0.4635) | (0.3098) |
| ScDummy | -0.1788 | -0.5044*** | 0.2371 | -0.5571*** | -0.1553 | -0.4868*** | 0.2355 | -0.5690*** |
| | (0.1335) | (0.1353) | (0.1651) | (0.1258) | (0.1247) | (0.1249) | (0.1530) | (0.1166) |
| ScDummy* Own | 0.5006 | 0.7058 | -0.4189 | 0.9715** | 0.4900 | 0.7607 | -0.4861 | 1.2033*** |
| | (0.5403) | (0.4742) | (0.5951) | (0.4370) | (0.5781) | (0.4975) | (0.6214) | (0.4594) |
| Log(total asset) | -0.0555 | -0.0582 | 0.0364 | -0.0186 | -0.0099 | -0.0132 | 0.0352 | 0.0031 |
| | (0.0621) | (0.0488) | (0.0714) | (0.0349) | (0.0562) | (0.0427) | (0.0640) | (0.0312) |
| MB ratio | -0.0007 | -0.0053 | -0.0054 | -0.0180*** | -0.0015 | -0.0062 | -0.0056 | -0.0182*** |
| | (0.0064) | (0.0053) | (0.0070) | (0.0056) | (0.0064) | (0.0054) | (0.0070) | (0.0056) |
| Financial Leverage | 0.5298** | 0.7016*** | 0.6028*** | 0.5300*** | 0.5265** | 0.7064*** | 0.6113*** | 0.5268*** |
| | (0.2485) | (0.1752) | (0.2162) | (0.1513) | (0.2493) | (0.1747) | (0.2169) | (0.1506) |
| R&D | -0.8831 | 0.0411 | -1.2257 | 0.6247 | -0.8305 | 0.1210 | -1.2660 | 0.6999 |
| | (2.5835) | (1.7389) | (2.2502) | (1.4196) | (2.6010) | (1.7655) | (2.2480) | (1.4156) |
| Capital expenditure | 0.0830 | 0.2830 | -0.1355 | -0.1031 | 0.0914 | 0.2954 | -0.1349 | -0.1006 |
| | (0.2516) | (0.2227) | (0.2706) | (0.2202) | (0.2522) | (0.2227) | (0.2710) | (0.2198) |
| Cash ratio | 0.7827* | 0.3656 | -0.2967 | 0.6247* | 0.7642 | 0.3579 | -0.2854 | 0.6049* |
| | (0.4699) | (0.3625) | (0.4966) | (0.3332) | (0.4684) | (0.3580) | (0.4935) | (0.3336) |
| PPE ratio | -0.0395 | -0.1273 | -0.4441* | -0.3547** | -0.0256 | -0.1188 | -0.4524* | -0.3462** |
| | (0.2850) | (0.1978) | (0.2671) | (0.1586) | (0.2868) | (0.1991) | (0.2681) | (0.1600) |
| ROA | 0.1129 | 0.2807 | 0.1028 | 0.6840** | 0.1063 | 0.2823 | 0.0915 | 0.6983** |
| | (0.4855) | (0.3948) | (0.4833) | (0.3428) | (0.4856) | (0.3963) | (0.4836) | (0.3461) |
| Export ratio | 0.4895*** | 0.3364*** | 0.0291 | 0.5182*** | 0.4834*** | 0.3272*** | 0.0253 | 0.5176*** |
| | (0.1427) | (0.1107) | (0.1407) | (0.1363) | (0.1423) | (0.1106) | (0.1409) | (0.1358) |
| Constant | -0.1875 | -0.7489*** | -0.3899 | -0.6029*** | 0.0028 | -0.5693*** | -0.3893 | -0.5182*** |
| | (0.2839) | (0.2114) | (0.2810) | (0.1706) | (0.2601) | (0.1894) | (0.2467) | (0.1525) |
| Observations | 2,715 | 2,715 | 2,426 | 2,715 | 2,715 | 2,715 | 2,426 | 2,715 |
| Number of firms | 303 | 303 | 304 | 303 | 303 | 303 | 304 | 303 |
| Industry FE | YES | YES | YES | YES | YES | YES | YES | YES |

The table presents the result of panel probit regression(eq 2 to 5). Tobin ESG and its factors are the dependent variable, and Ownership (Own) is the independent variable. The control variables are financial leverage, R&D, Log(total asset), Capital expenditure, cash ratio, PPE ratio, ROA, Export ratio, and MB ratio. Robust standard errors in parentheses and *** p<0.01, ** p<0.05, * p<0.1 denotes significant at 10%,5% and 1%, respectively.

## Table (8): OIIs and MF ownership and ESG relationship

| Dependent Variable: | ESG(D) | E(D) | S(D) | G(D) | ESG(D) | E(D) | S(D) | G(D) |
|---|---|---|---|---|---|---|---|---|
| OIIs Own | 2.0561* | 1.8602** | -0.3630 | 1.4447** | | | | |
| | (1.0942) | (0.7964) | (0.9606) | (0.6597) | | | | |
| MF Own | | | | | -2.6149*** | -1.7948*** | 0.0899 | -2.7454*** |
| | | | | | (0.8701) | (0.6646) | (0.7429) | (0.6189) |
| ScDummy | -0.0778 | -0.3643*** | 0.1332 | -0.2763*** | -0.1516 | -0.5419*** | 0.2512** | -0.4833*** |
| | (0.0825) | (0.0830) | (0.1042) | (0.0825) | (0.0944) | (0.0997) | (0.1275) | (0.0937) |
| ScDummy* Own | 0.9633 | 1.0125 | -0.0899 | -0.9176 | 1.7604* | 3.0421*** | -1.4640 | 2.6925*** |
| | (1.5713) | (1.4143) | (1.8727) | (1.4041) | (1.0062) | (1.0042) | (1.2907) | (0.9746) |
| Log(total asset) | -0.0299 | -0.0182 | 0.0866* | -0.0343 | 0.0548 | 0.0410 | 0.0746 | 0.0432* |
| | (0.0451) | (0.0318) | (0.0476) | (0.0260) | (0.0439) | (0.0318) | (0.0494) | (0.0230) |
| MB ratio | 0.0010 | -0.0043 | -0.0069 | -0.0163*** | -0.0039 | -0.0078 | -0.0061 | -0.0201*** |
| | (0.0066) | (0.0053) | (0.0071) | (0.0055) | (0.0064) | (0.0053) | (0.0070) | (0.0055) |
| Financial Leverage | 0.4785* | 0.6539*** | 0.6406*** | 0.5060*** | 0.5044** | 0.6972*** | 0.6004*** | 0.5269*** |
| | (0.2519) | (0.1768) | (0.2149) | (0.1511) | (0.2517) | (0.1747) | (0.2148) | (0.1513) |
| R&D | -0.8113 | 0.0909 | -1.0295 | 0.6149 | -0.8515 | 0.1140 | -1.1593 | 0.5481 |
| | (2.6295) | (1.7952) | (2.2198) | (1.4034) | (2.6723) | (1.7987) | (2.2504) | (1.4032) |
| Capital expenditure | 0.0740 | 0.2901 | -0.1184 | -0.1182 | 0.0741 | 0.2808 | -0.1282 | -0.1547 |
| | (0.2558) | (0.2268) | (0.2736) | (0.2241) | (0.2529) | (0.2257) | (0.2723) | (0.2223) |
| Cash ratio | 0.7222 | 0.3123 | -0.2363 | 0.5541 | 0.7287 | 0.3029 | -0.2985 | 0.5454 |
| | (0.4759) | (0.3767) | (0.4941) | (0.3414) | (0.4739) | (0.3670) | (0.4967) | (0.3459) |
| PPE ratio | 0.0373 | -0.0491 | -0.4585* | -0.3049* | 0.0471 | -0.0703 | -0.4288 | -0.2803* |
| | (0.2907) | (0.2014) | (0.2637) | (0.1604) | (0.2921) | (0.2015) | (0.2678) | (0.1641) |
| ROA | 0.1200 | 0.3035 | 0.1422 | 0.7159** | 0.0808 | 0.2939 | 0.1157 | 0.6987** |
| | (0.5003) | (0.4005) | (0.4895) | (0.3468) | (0.4879) | (0.3945) | (0.4809) | (0.3410) |
| Export ratio | 0.5053*** | 0.3686*** | 0.0101 | 0.5507*** | 0.4522*** | 0.3117*** | 0.0257 | 0.5080*** |
| | (0.1425) | (0.1139) | (0.1416) | (0.1377) | (0.1438) | (0.1128) | (0.1408) | (0.1324) |
| Constant | -0.1150 | -0.6341*** | -0.2032 | -0.7358*** | 0.3080 | -0.3278* | -0.2371 | -0.3517*** |
| | (0.2243) | (0.1681) | (0.2015) | (0.1502) | (0.2305) | (0.1696) | (0.1992) | (0.1304) |
| Observations | 2,688 | 2,688 | 2,400 | 2,688 | 2,715 | 2,715 | 2,426 | 2,715 |
| Number of cid1 | 300 | 300 | 301 | 300 | 303 | 303 | 304 | 303 |
| Industry FE | YES | YES | YES | YES | YES | YES | YES | YES |

The table presents the result of panel probit regression(eq 2 to 5). Tobin ESG and its factors are the dependent variable, and Ownership (Own) is the independent variable. The control variables are financial leverage, R&D, Log(total asset), Capital expenditure, cash ratio, PPE ratio, ROA, Export ratio, and MB ratio. Robust standard errors in parentheses and *** p<0.01, ** p<0.05, * p<0.1 denotes significant at 10%,5% and 1%, respectively.

## *5.0 Conclusion*

This study examines the effect of stewardship codes on the with the relationship between institutional investors' (IIs) ownership and firm valuation and ESG factors. Contrary to previous findings of Nguyen & Shiu (2022), we find a negative relationship between future firm value and II's ownership. Classification of IIs shows that OIIs have a negative and statistically significant relationship with future firm valuation, supporting previous findings of Brickley et al. (1994). The study results show that adopting a stewardship code increased TII's negative effect on future firm value, especially on firms not listed in the S&P BSE 500 index. A quartile analysis is conducted to look into the presence of a negative link across various Tobin Q levels. The findings indicate a consistent negative association between institutional investor (IIs) ownership and the future value of firms across all quartiles. However, the effect of the stewardship code was found to be deferred throughout quartiles. OIIs interaction shows a significant coefficient for the top quantile, whereas MF ownership has a positive and significant coefficient in the lower quarter. The DID analysis study presents empirical evidence that the stewardship code positively affects firms' valuation, especially those firms with low promoter ownership compared to those with high (more than 50%) promoter ownership.

Furthermore, study results show that Indian IIs ownership is positively associated with ESG and the environment. We observed that mutual funds have a very low holding in the firm; due to that alone, they cannot positively effect change in ESG and its factors. However, it was interesting to find that bank and insurance ownership are positively associated with a change in governance score despite their negative effect on the firm value. The study results highlighted the positive impact of stewardship on firm governance. It shows that the MF ownership effect improves after adopting the stewardship code on the firm's ESG, environment, and governance factors.

We believe this study will be helpful for policymakers, firms' management, and investors in future decision-making processes. Policymakers can get insights from this study and should introduce some regulations to change OIIs' behaviour and improve quality engagement to improve corporate governance. They should take care of those firms with high promoter holdings; stewardship code may not be effective for them in improving the quality engagement of IIs. Firm management should be careful that this code can enhance agency costs if the quality engagement of IIs improves. They should frame internal grievance mechanisms to deal with such problems. Retail investors can also take advantage of the study findings. As we find the MF ownership relationship with future firm valuation improving after adopting the stewardship code, they can analyze mutual fund investors' holdings for better asset allocation decisions. Although the study thoroughly investigated the stewardship code effect, it still has some limitations as the study does not deal with the endogeneity issue.

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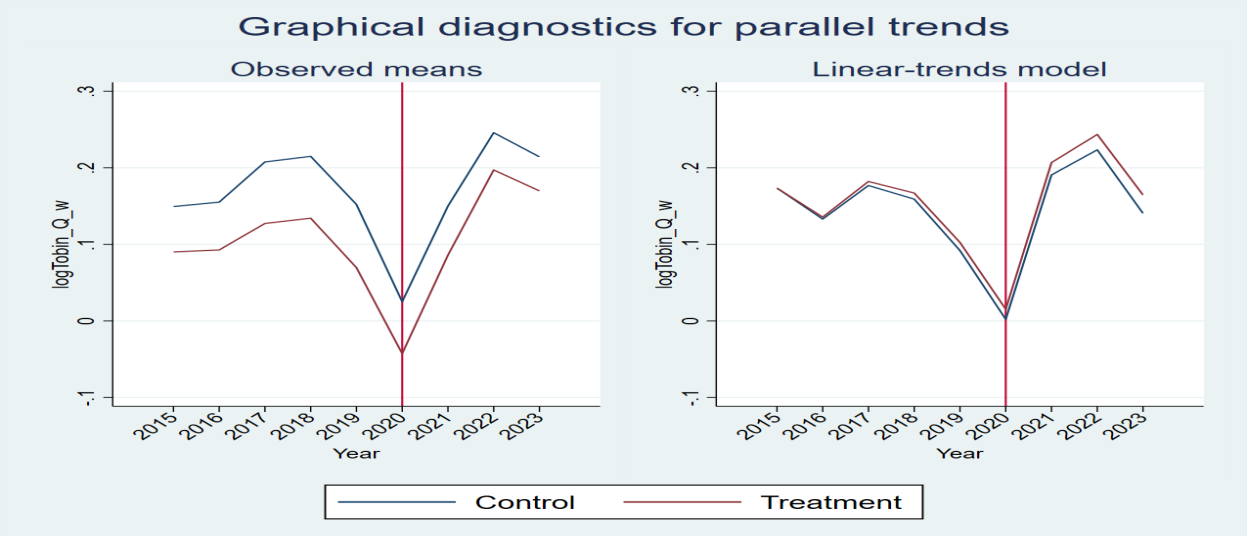
## Figures

Figure (1): Shows Trends Plot of DID analysis




## Appendix

Table (1A): Summary statistics of S&P BSE 500 listed non-financial firms.

| Variable | Obs | Mean | Std. dev | Min | Max |
|---|---|---|---|---|---|
| Tobin Q | 3,028 | 3.313125 | 3.11926 | 0 | 17.94555 |
| TIIs Own | 3,028 | 0.234802 | 0.134645 | 0.0008 | 0.5776 |
| IIIs Own | 3,028 | 0.199673 | 0.127222 | 0.0001 | 0.5548 |
| OIIs Own | 2,998 | 0.035242 | 0.0429 | 0 | 0.202 |
| MF Own | 3,028 | 0.068255 | 0.061647 | 0 | 0.2511 |
| Financial Leverage | 3,028 | 0.43537 | 0.216042 | 0 | 0.978075 |
| R&D | 3,028 | 0.007431 | 0.019121 | 0 | 0.115695 |
| Capital expenditure | 3,028 | 0.067889 | 0.113438 | -0.11151 | 0.756941 |
| Cash ratio | 3,028 | 0.047606 | 0.081341 | 0 | 0.394769 |
| PPE ratio | 3,028 | 0.242254 | 0.170607 | 0 | 0.65344 |
| ROA | 3,028 | 0.123983 | 0.094006 | -0.1127 | 0.439799 |
| Export ratio | 3,028 | 0.093095 | 0.204777 | 0 | 0.937449 |
| MB ratio | 3,028 | 5.360074 | 6.214437 | -0.29714 | 38.37148 |
| Tobin_Q(t+1) | 2,724 | 3.412761 | 3.23812 | 0 | 18.88056 |
| Log (sales) | 2,883 | 4.563524 | 0.619751 | 3.021727 | 6.38388 |
| Log(Tobin Q) | 2,884 | 0.413784 | 0.322693 | -0.14593 | 1.271732 |
| Log(Tobin Q(t+1)) | 2,580 | 0.428931 | 0.322182 | -0.14593 | 1.271732 |
| Log(total asset) | 3,028 | -1.74268 | 1.030815 | -7.1309 | -0.54887 |

Table (3A): Variable Definition

| Variable | Definition |
|---|---|
| Tobin Q | Total assets minus common equity minus deferred taxes plus market value of equity divided by total assets. |
| TIIs Own | % owned by non-promoters IIs |
| IIIs Own | % owned by non-promoters IIs minus % owned by bank and insurance companies |
| OIIs Own | % owned by banks and insurance companies |
| MF Own | % owned by MF |
| Financial Leverage | Total assets minus deferred tax minus common equity plus the total market value of equity divided by total assets. |
| R&D | R&D expenses divided by net sales |
| Capital expenditure | Capital expenditure on Per unit sale |
| Cash ratio | Cash plus short-term investment is divided by total assets. |
| PPE ratio | PPE is divided by total assets. |
| ROA | Operating income is divided by total assets. |
| Export ratio | The percentage of net sales that are exported as both goods and services. |
| MB ratio | The equity market value divided by the equity book value |
| sales | Net Sales in million |
| Total asset | Firms' Total Asset in Million |
| ESG(D) | This dummy variable has value one if the Bloomberg Database ESG score increases from the previous year. |
| E(D) | This dummy variable has value one if the Bloomberg Database Environment Score increases from the previous year. |
| S(D) | This dummy variable has value one if the Bloomberg Database Social Score |
| G(D) | This dummy variable has value one if the Bloomberg Database Governance Score increases from the previous year. |

Table (2A): Correlation of S&P BSE 500 listed non-financial firms.

| | Tobin Q | TIIs Own | IIIs Own | OIIs Own | MF Own | Financial Leverage | R&D | Capital expenditure | Cash ratio | PPE ratio | ROA | Export ratio | MB ratio | Tobin_Q(t+1) | Log (sales) | Log(Tobin Q) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Tobin Q | 1 | | | | | | | | | | | | | | | |
| TIIs Own | 0.591 | 1 | | | | | | | | | | | | | | |
| IIIs Own | 0.008 | -0.0311 | 1 | | | | | | | | | | | | | |
| OIIs Own | -0.2127 | -0.096 | 0.0509 | 1 | | | | | | | | | | | | |
| MF Own | 0.0742 | 0.0117 | -0.0059 | -0.1184 | 1 | | | | | | | | | | | |
| Financial Leverage | 0.0475 | -0.0041 | 0.0645 | 0.0938 | 0.0115 | 1 | | | | | | | | | | |
| R&D | 0.0807 | 0.009 | -0.0163 | -0.3788 | -0.0266 | -0.0726 | 1 | | | | | | | | | |
| Capital expenditure | -0.095 | 0.0078 | 0.0071 | 0.2043 | -0.0802 | 0.3628 | -0.1669 | 1 | | | | | | | | |
| Cash ratio | 0.0728 | -0.0053 | -0.1186 | -0.3944 | -0.0197 | -0.1643 | 0.3005 | -0.0948 | 1 | | | | | | | |
| PPE ratio | 0.0401 | -0.0166 | -0.1023 | -0.106 | 0.1817 | -0.0191 | 0.0156 | -0.0298 | 0.1512 | 1 | | | | | | |
| ROA | -0.0083 | -0.0796 | -0.1129 | 0.027 | 0.0434 | -0.1289 | 0.0944 | -0.1491 | 0.4151 | -0.0524 | 1 | | | | | |
| Export ratio | -0.0026 | -0.0615 | -0.1741 | -0.1582 | 0.0661 | -0.1114 | 0.173 | -0.143 | 0.4938 | -0.0189 | 0.7706 | 1 | | | | |
| MB ratio | 0.2179 | 0.062 | 0.4467 | 0.2231 | 0.0203 | 0.0646 | -0.0462 | 0.1162 | -0.0002 | -0.0902 | -0.0728 | -0.1484 | 1 | | | |
| Tobin_Q(t+1) | 0.1075 | 0.0033 | -0.2254 | -0.2891 | 0.1271 | -0.1627 | 0.2397 | -0.2237 | 0.5619 | 0.0063 | 0.7954 | 0.8079 | -0.1627 | 1 | | |
| Log (sales) | 0.0588 | -0.0019 | -0.2458 | -0.2587 | 0.1001 | -0.1464 | 0.2137 | -0.201 | 0.5144 | 0.02 | 0.7082 | 0.9025 | -0.209 | 0.8851 | 1 | |
| Log(Tobin Q) | 0.7413 | 0.4724 | 0.0509 | -0.2171 | 0.0699 | 0.0388 | 0.1069 | -0.1472 | 0.0768 | 0.0052 | 0.0413 | -0.0061 | 0.3444 | 0.1053 | 0.0332 | 1 |