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## Change in Illiquidity of Family Firms with Institutional Pressure: Evidence from India

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## Change in Illiquidity of Family Firms with Institutional Pressure: Evidence from India

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### ABSTRACT

This paper investigates the impact of the family business on illiquidity in an emerging market and how it evolves with regulatory changes. The study uses panel data multiple regression on a sample of 25,418 observations on 3,606 firms from India within nine years from 2006 to 2014. The study finds that family firms have significantly higher illiquidity compared to non-family firms. Moreover, family businesses have successfully resisted the institutional pressure to decrease illiquidity and have also defied these coercive pressures to increase the illiquidity of family businesses finally. The study also found heterogeneity in the behaviour of family businesses based on their ownership characteristics.

### KEYWORDS

Stock Liquidity, Emerging Economy, Family Firms, Market Reforms

### INTRODUCTION

The illiquidity of a stock, i.e., the discount that a seller concedes or the premium that a buyer pays, results from adverse selection costs and inventory costs (Amihud, 2002). Conversely, scholars (Chang et al., 2017; Holden et al., 2014) also define stock liquidity as the ability to quickly and efficiently buy or sell a substantial amount of a company's stock. Liquidity increases with the number of shareholders (Demsetz, 1968), while illiquidity increases when a few active investors hold the stock. The study of stock liquidity is crucial as it is one of the critical factors affecting a firm's value (Amihud & Mendelson, 2008; Jawed & Kotha, 2020) and is a reflection of the corporate governance of the firm (W. X. Li et al., 2012; Prommin et al., 2014). The limited empirical literature on the relationship between family firms and illiquidity provides conflicting results. On the one hand, evidence suggests that concentrated ownership, such as in family businesses, leads to higher illiquidity (Al-Jaifi, 2017; Prommin et al., 2014). A set of active shareholders from the family usually own family business by definition. These active shareholders internally monitor the firm's day-to-day operations (Claessens et al., 2002; Claessens & Fan, 2002; Claessens & Yurtoglu, 2013). But in the process, they reduce the stock liquidity (Bhide, 1993) due to long-term orientation (Le Breton-Miller & Miller, 2006; Lumpkin & Brigham, 2011), higher information asymmetry (Attig et al., 2006) and consequently higher informed trading (R. C. Anderson et al., 2012). On the other hand, at times, family firms have lower illiquidity than non-family firms (Yu-Thompson et al., 2016). The lower illiquidity in family firms is driven by better internal monitoring, encouraging managers to improve firm value (K. H. Chung et al., 2010). It is also due to better disclosure norms that lead to efficient prices (Ali et al., 2007) and reduced auditor risk (Ho & Kang, 2013). What has been largely overlooked in this line of literature is the effect of institutions that create and/or regulate "the rules of the game" (North, 1990, p. 3) as well as the effect of heterogeneity

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among family firms that may be the cause of the conflicting results. This paper intends to fill this gap by examining how a regulatory change may affect the illiquidity of a heterogeneous group of family firms, especially in a large and important emerging economy, India. Taking such a perspective from a relatively unexplored yet unique institutional context, India offers the potential to gain noteworthy insights into the contextual influences affecting family firm governance and thereby enrich corporate governance literature.

India presents an interesting context for this study due to its weak institutional environment (Singla et al., 2014) as it affects firms' governance in multiple ways. For instance, high concentrated ownership is one of the distinct characteristics of Indian firms, with founders owning more than 50% of outstanding shares (Chauhan et al., 2017). Accordingly, the study analyzed the impact of ownership on the stock liquidity of family businesses in India, which has the world's third-largest number of listed family-owned companies<sup>1</sup> and how it changes during a period of institutional transition. The study utilizes a regulatory change in India – the Securities Contracts (Regulation) (Amendment) Rules, 2010, to decrease illiquidity in the financial market, as a natural experiment, to analyze the impact of market reforms on family businesses.

The Securities Contracts (Regulation) Act, 1956 was enacted by the Parliament of India to prevent undesirable transactions in securities by regulating the working of stock exchanges in India. Over the years, there were several amendments to this regulation to protect investors' interests and for the development of the securities market. In most Indian companies, the promoters – majority shareholders, are at the helm of all the decision-making, and they undermine the interests of the minority shareholders. The promoters had greater scope to manipulate the share prices by releasing fake information. Also, the lower free float hindered liquidity in the market. Hence, a regulatory amendment - Securities Contracts (Regulation) (Amendment) Rules, 2010 was issued on June 4, 2010.<sup>2</sup> This amendment was to raise the minimum public shareholding of all listed companies from 10 per cent to 25 per cent in a 3-year window through a follow-on offer, offer for sale, institutional placement programme and rights/bonus issue non-promoter shareholders. According to the amendment, “Every listed company shall maintain public shareholding of at least twenty-five per cent”. The companies got a time frame of three years to comply with the same. A dispersed shareholding structure offers liquidity to the investors and helps to discover fair prices. This amendment was a tool to promote market depth by increasing the free float, thereby improving the liquidity in the market for investors, which helped ascertain fair share prices. Forcing the promoters to sell out their stake to increase the public holding also ensures better corporate governance wherein the non-promoter investors could have a voice in these listed companies' decision-making process. Higher public shareholding also means the public's participation in the profits earned by these private enterprises. It thereby facilitates the efficient redistribution of wealth and fostering economic development in general.

This study is interested in analyzing how this coercive institutional pressure (Dimaggio & Powell, 1983; Oliver, 1991) affects family firms' illiquidity in India. Also, this study explores the impact on stock liquidity of the different types of family firms such as family managed business (FMB), family-owned business (FOB), and family business group (FBG). The study posits that it would be interesting to investigate how family businesses' heterogeneity affects their stock liquidity and their responses to the reforms. This heterogeneity among family firms is driven by a) resource dependence considerations (Hrebiniak & Joyce, 1985; Pfeffer & Salancik, 1978); and b) preservation of socioemotional wealth (Berrone et al., 2010; Gomez-Mejia et al., 2007).

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<sup>1</sup> November 11, 2020. India has third highest number of family-owned businesses. Retrieved from <https://www.thehindubusinessline.com/economy/india-has-third-highest-number-of-familyowned-businesses/article9925495.ece>

<sup>2</sup> November 11, 2020. The requirement of minimum public shareholding. Retrieved from [https://www.sebi.gov.in/sebi\\_data/attachdocs/1370362546391.pdf](https://www.sebi.gov.in/sebi_data/attachdocs/1370362546391.pdf)

This study argues that family businesses, in general, would have higher illiquidity due to their high ownership concentration. The study also expects that the formal institutions' coercive pressures to decrease illiquidity would directly conflict with the informal institutions such as the family. Family businesses would end up defying such coercive pressures to maintain their legitimacy with the informal institutions. Thus, the illiquidity of family firms would increase rather than decrease due to institutional pressures. Finally, the study argues that the increase in illiquidity with institutional pressures would vary across different family firms because of differences in resource dependence and socio-emotional wealth.

Empirical analysis on a database of 25,418 observations belonging to 3,606 firms from India within nine years from 2006 to 2014 supports our arguments. The study finds that illiquidity increases after the market reforms, which implies that the companies are reluctant to change their ownership structure. Firms are willing to forgo the benefits of lower illiquidity to retain control rights. This effect is more pronounced for family firms as opposed to non-family firms. While analyzing the impact of reforms on different types of family firms, the study finds that reforms accentuate the increase in FOB firms' stock liquidity compared to FBG firms. Also, the increase in the illiquidity of FMB firms is higher compared to FBG firms.

This paper makes several significant contributions to the existing literature. Firstly, this paper adds to the literature on the governance of family businesses (Ashwin et al., 2015; Cheng & Firth, 2006; Claessens et al., 2002; Claessens & Fan, 2002; Claessens & Yurtoglu, 2013; Herrero, 2011; Schulze et al., 2003) by reconciling the positive and negative views on the effect of the family business on stock liquidity (Al-Jaifi, 2017; Prommin et al., 2014; Yu-Thompson et al., 2016) by focusing on the heterogeneity among family firms. Secondly, this paper establishes the linkages between institutional pressures and illiquidity. This paper adds to the literature on the impact of institutional change on family businesses (Carney & Gedajlovic, 2002; C.-N. Chung & Luo, 2008; Luo & Chung, 2005) by showcasing how family businesses in India have resisted institutional pressures to reduce illiquidity.

## THEORY AND HYPOTHESIS

Existing theoretical models have predicted both positive (Al-Jaifi, 2017; Prommin et al., 2014) and negative (Yu-Thompson et al., 2016) impacts of the family nature of the business on stock liquidity. One of the critical factors affecting stock liquidity is its corporate governance (W. X. Li et al., 2012; Prommin et al., 2014). In an emerging market context, firms operate in a unique institutional environment that is weak (Chacar & Vissa, 2005). Consequently, emerging market firms depend more on internal monitoring mechanisms than external monitoring due to institutional voids (Claessens & Fan, 2002; Claessens & Yurtoglu, 2013). Ownership concentration is one such internal monitoring mechanism preferred by firms from emerging markets (La Porta et al., 2002; Shleifer & Vishny, 1997).

Family firms in emerging markets have concentrated ownership (Miller et al., 2013; Schulze et al., 2001; Sharma & Chua, 2013). These family businesses are usually hesitant to include new equity owners (Wu et al., 2007). They prefer debt financing over equity to avoid intervention in their family businesses, dilution of ownership, and losing control of voting rights (ElBannan, 2017). Consequently, a set of active shareholders own these firms, and they also internally monitor the firm's day-to-day operations (Claessens et al., 2002; Claessens & Fan, 2002; Claessens & Yurtoglu, 2013). These active shareholders maintain their dominant position through higher informed trading (R. C. Anderson et al., 2012), further increasing illiquidity.

While active shareholders reduce agency costs by internally monitoring the firm, they also increase information asymmetry and increase illiquidity (Bhide, 1993). Large shareholders have more information than minority shareholders, resulting in adverse selection. This information asymmetry reduces the incentive for traders to trade actively, and consequently, the illiquidity is high (Prommin

et al., 2014). Hence, concentrated ownership results in high information asymmetry (Attig et al., 2006) and increased illiquidity (Al-Jaifi, 2017).

Several authors (Le Breton-Miller & Miller, 2006; Lumpkin & Brigham, 2011) have further argued that family firms' concentrated shareholders have a long-term orientation. This long-term orientation encourages the owners to reduce crash risk from transient investors' by preferring higher illiquidity (Chang et al., 2017; Chauhan et al., 2017). The long-term orientation also leads to family firms maintaining greater corporate liquidity to reduce bankruptcy risks (Gentry et al., 2016). Family firms try to minimize risk and increase the survival of the firm through generations. So, they hoard cash and short-term investments and monitor the managers' investments closely. Hence, they have high corporate liquidity (Yu-Thompson et al., 2016). This high corporate liquidity allows the block holders to buy back their shares in times of distress, thereby further reducing stock liquidity. The increased concentration of ownership increases illiquidity (Holmstrom & Tirole, 1993; Sarin et al., 1996). Since the promoter's family owns most of the shares, they are not available for trading in a family business. Lower availability of the firm's stocks leads to higher illiquidity.

Since the study is rooted in an emerging economy context, it expects that compared to a non-family firm, a family firm's stocks would have higher illiquidity due to concentrated ownership, higher information asymmetry, and long-term orientation. Accordingly, our first hypothesis is as follows:

**Hypothesis 1:** *Family businesses will have higher illiquidity compared to non-family firms.*

To improve firms' external governance through the threat of exit as a monitoring mechanism (Maug, 1998), regulators in many emerging countries have sought to push market reforms that aim to reduce illiquidity (Chowdhury et al., 2018). The argument is that a liquid stock market would make external corporate governance more effective. A liquid stock market would allow large investors to benefit from monitoring through informed trading (R. C. Anderson et al., 2012). Empirical evidence in this area suggests that higher liquidity results in a higher firm Q (Fang et al., 2009), and exogenous shocks to liquidity lead to more significant increases in firm value for stocks with a higher level of block holders (Bharath et al., 2013). Thus, the market reform mandating a minimum public shareholding was introduced to decrease illiquidity by increasing the overall investor base in firms (Amihud & Mendelson, 2008). A dispersed shareholding structure would provide liquidity to the investors and help to discover fair prices. By complying with the reforms, the illiquidity would decrease, and firms would benefit from a lower cost of capital and higher valuation.

Although the market reforms aim to decrease all firms' illiquidity, there is likely to be an optimal level of illiquidity for a family firm. There exists a trade-off between the benefits of lower illiquidity against the agency costs that tend to come with less concentrated ownership (Amihud & Mendelson, 2008).<sup>3</sup> Family firms are hesitant to include new equity owners. They prefer debt financing over equity to avoid intervention in their family businesses, dilution of ownership and lose control of voting rights (ElBannan, 2017; Wu et al., 2007). Thus, one of the driving forces behind the capital structure as well as the stock performance of family businesses is an aversion to risk and loss of control (Gallo et al., 2004; González et al., 2013) as well as the preservation of the socio-emotional wealth or affective endowment of family owners (Gomez-Mejia et al., 2011). Existing literature (González et al., 2013; Gürsoy & Aydoğan, 2002) shows that family firms are reluctant to use equity financing because the market perceives them as less transparent. The family firms are also concerned that equity will undermine the majority shareholders' control position and dilute their power. Consequently, with the progress of market reforms, the family firms would resist the mandate to decrease illiquidity, thus sacrificing all the benefits associated with it.

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<sup>3</sup> Tradeoff between reducing liquidity costs by increasing dispersion and reducing agency costs by increasing ownership concentration.

In emerging economies, where the formal institutions are often weak, the informal institutions, such as family, often shape organizational behaviour through their system of beliefs (Uzo & Mair, 2014; Webb et al., 2009). In fact, due to the presence of institutional voids in emerging markets (Hoskisson et al., 2000), the business family is one of the most important institutions (Banalieva et al., 2015; Liu et al., 2012) that provides continuity, stability (Royston Greenwood et al., 2008; Scott, 2008; Zucker, 1987) as well as legitimacy to organizations. Moreover, in a context such as India, owing to the primordial loyalties based on caste, language, and kinship (Vissa, 2011), an organization's corporate culture is closely tied to the culture of the controlling family (Lamb, 1955; Panini, 1988). The importance of family as an institution among family businesses grows over time through institutionalization (Royston Greenwood et al., 2002). It consequently results in isomorphism (Meyer & Rowan, 1977) concerning corporate policies such as illiquidity.

Changing such an institutionalized practice is difficult. Usually, an external jolt such as social upheaval, technological disruptions, competitive discontinuities, or regulatory changes is required for institutional change to take effect (Tolbert & Zucker, 1996). In the present context, a regulatory change is pressing for institutional change. Organizations may respond to such institutional pressures in five ways – acquiescence, compromise, avoidance, defiance, and manipulation (Clemens & Douglas, 2005; Oliver, 1991). While acquiescence is a passive response, the other four responses represent active strategic responses. The responses vary depending on the degree of resistance to the institutional pressures (Oliver, 1991). In the present case, the regulatory norms are likely to create an institutional incongruence (Webb et al., 2009) between the formal (regulatory body) and the informal (family) institutions. While the formal institution would want to uplift the firms' governance and the market, the family would strive to retain control. As a result, organizations are likely to defy formal institutional norms due to differences in what is regarded as legitimate by the formal versus informal institutions (Centeno & Portes, 2006; Uzo & Mair, 2014). Organizational defiance is “an organization's purposive pursuit of economic activity aligned with informal institutions despite the fact that formal rules are readily available” (Uzo & Mair, 2014, p. 57).

Thus, family businesses would resist institutional pressures to decrease illiquidity to maintain their legitimacy with informal institutions. They would resist but rather attempt to strengthen their hold on the organizations by increasing illiquidity in such institutional pressures. Hence, family firms with less initial public shareholding compared to non-family firms would end up increasing their illiquidity post-reforms as a sign of defiance.

**Hypothesis 2:** *Market reforms are likely to moderate the relationship between a family business and illiquidity positively.*

There is heterogeneity in defiance across organizations (Uzo & Mair, 2014). Consequently, in this section, the study argues for differences in organizational defiance related to illiquidity's regulatory norm based on family business heterogeneity. In line with the above, the study divides family businesses into three sub-categories. A firm is a family managed business (FMB) if, in addition to ownership, family members also control the firm by holding executive positions on such firms' board. A firm in its early lifecycle will be FMB in nature.

Similarly, a firm is a family-owned business (FOB) if the majority ownership rests with a business family, but the management is professionalized. This family firm (FOB) category would be more advanced in its lifecycle than the FMB firms. The final category is also one of the critical types of family businesses in emerging markets like India, i.e., the family business groups (FBG, in short). They are a unique category of family firms, also affiliated with a group of firms tied together by a shared ownership network. They are known by different names in different countries (e.g., Chaebol in South Korea; Grupos in Latin America) (Khanna & Rivkin, 2001; Khanna & Yafeh, 2007; La Porta et al., 1999).

The control and coordination in FBG affiliated firms are through a complex web of multiple and reciprocated equity, debt and commercial ties (Carney et al., 2011; Lincoln & Gerlach, 2004) in their network.

The degree of compliance with the regulatory body's coercive pressures will depend on resource dependence relationships (Dimaggio & Powell, 1983; Oliver, 1991; Pfeffer & Salancik, 1978). The strategic choice of managers (Andrews, 1971; Child, 1972) is constrained by the firm's resource dependencies (Hrebiniak & Joyce, 1985; Pfeffer & Salancik, 1978). Hence, at every life cycle stage of the firm, specific stakeholders gain importance due to their control, monopoly, or discretion over the allocation of resources critical to the firm (Jawahar & McLaughlin, 2001). For instance, for FMBs which are at the early stage of their lifecycle, securing financial resources and developing customer loyalty and satisfaction are critical (Jawahar & McLaughlin, 2001; Tagiuri & Davis, 1992). Consequently, shareholders and creditors as suppliers of finance, and customers as suppliers of revenue, become the critical stakeholders (Jawahar & McLaughlin, 2001). To address the concerns of creditors and shareholders, FMBs would temper their defiance towards the regulatory norms to some extent.

The FOBs, on the other hand, are at the growth stage of their lifecycle. They find the environment neither threatening nor constraining (Hrebiniak & Joyce, 1985; Jawahar & McLaughlin, 2001). The critical stakeholders become suppliers and business partners (Jawahar & McLaughlin, 2001), most of which would be other family businesses for FOBs. In a weak institutional environment, contract enforcement is through informal familial ties rather than the formal institutional route (Ellis, 2011; Khanna & Yafeh, 2007). Thus, these firms would work to maintain their business's family identity through higher defiance of the regulatory norms.

Finally, the FBG firms, which are at a mature stage of their lifecycle and are much larger, are expected to attract more scrutiny from external parties. Additionally, since there is a higher degree of professionalization in FBG firms than FOB and FMB firms (Martínez et al., 2007; Smith & Amoako-Adu, 1999; Villalonga & Amit, 2006), they would have more significant links with the external environment. Moreover, since their capital is more diversified through pyramidal ownership (Almeida & Wolfenzon, 2006), they would be more amenable to formal institutional goals (Davis & Pett, 2000). Hence, these firms would exhibit their defiance to the regulatory norms to a muted extent.

In addition to the above, the degradation of socio-emotional wealth (SEW) concerns would vary across the different types of family businesses, which would influence the resistance to institutional pressures. SEW is a collection of noneconomic utilities comprising a sense of self and identity, positive family image and reputation, personal prestige in the community, and accumulation of social capital among others (Berrone et al., 2010; Gomez-Mejia et al., 2007). In FMBs, since the owner is also the firm's manager, all strategic choices can be directly linked to the family. Hence, going against the State's coercive agenda may tarnish the family's reputation among the external audience. Consequently, these firms' response to the institutional pressures would be defiance but to a limited extent. On the other hand, the FOBs have professionalized management, which acts as a buffer between the family and the firm's strategic choices. As a result, they can adopt more active and aggressive response choices. The SEW concerns in these firms would also be more restrictive in nature (Miller & Le Breton-Miller, 2014), resulting in these firms primarily being concerned with the firm's family control. Hence, these firms would exhibit a response of extreme defiance. Finally, the FBG firms would have a longer-term outlook and exhibit extended SEW concerns compared to restricted SEW in FOB firms (Miller & Le Breton-Miller, 2014). These firms would be concerned about relations with stakeholders and the community (Miller & Le Breton-Miller, 2014). For instance, FBG firms develop formidable political connections over a period of time (Kochanek, 1995; Yaprak & Karademir, 2010). Open defiance to the regulatory norms by the FBGs would cause embarrassment to the political relationships and thereby affect the SEW of the family. Hence, the FBGs would be guarded in their defiance to regulatory norms.

In sum, based on resource dependence considerations and concerns for the maintenance of SEW, the regulatory bodies' response to the coercive institutional pressures would vary across different family business firms. The FOB firms would exhibit the highest defiance, followed by the FMB and the FBG firm. Accordingly:

**Hypothesis 3:** *With market reforms, the growth in illiquidity will be the highest for FOB, followed by FMB and FBG firms.*

## METHODS

### DATA AND SAMPLE

The data for this study was obtained from the *Prowess* databases of the Centre for Monitoring of Indian Economy (CMIE). This database has been frequently used by other researchers studying Indian firms (Chittoor et al., 2015; Gubbi et al., 2010; Kumar et al., 2012). This study began with the population of all firms for which data were available for the period of nine years from 2006 to 2014 (30,922 observations pertaining to 4,484 firms). After that, 5,369 observations of firms that belonged to the financial services sector were removed. The industry classification was done based on the National Industrial Classification (NIC) codes.<sup>4</sup> Moreover, 135 observations that belonged to joint ventures, departmental bodies, and statutory organizations was also removed. Our final sample, thus, includes 25,418 observations pertaining to 3,606 firms.

In our final sample of 25,418 firms, 16 per cent of the observations were from the wholesale trade industry. Approximately 8 per cent of the sample observations belonged to the chemical industry, 6 per cent to the manufacture of textiles, and the rest belonged to 67 different industries. Overall, close to 60 per cent of the observations belonged to the manufacturing sector. Additionally, 75 per cent of the firm-year observations belonged to family businesses. Among the family businesses, 42 per cent of firm-year observations were from FOB, 37 per cent from FBG, and the rest were FMB.

### VARIABLES AND MEASURES

#### ILLIQUIDITY

The study used the cost-per volume measure of illiquidity (Amihud, 2002) as our dependent variable. Liquidity, by its very nature, is difficult to define and estimate. Liquidity is a slippery and elusive concept, in part because it encompasses several transactional properties of markets such as tightness, depth, and resilience (Kyle, 1985). The literature has documented various proxy measures to capture stock markets' liquidity, such as effective spread (Chordia et al., 2000) and mean-adjusted illiquidity measure (Amihud, 2002). The study used Amihud (2002)'s measure where stock illiquidity is defined as the average ratio of the daily absolute return to the trading volume on that day, which is averaged over a financial year. It measures the cost of trading relative to the volume being traded or, in other words, the absolute price change per unit volume of trading (Edmans et al., 2013; Prommin et al., 2014).

#### FAMILY BUSINESS

The primary independent variable in the study is family business. It was sub-divided into three dummy

<sup>4</sup> The National Industrial Classification (NIC) codes are based on the United Nations International Standard Industrial Classification (ISIC) – revision 4.



variables: *family managed business (FMB)*, *family-owned business (FOB)*, and *family business group (FBG)*. A firm was termed as FOB if it had family ownership of more than 50 per cent for private firms or more than 30 per cent for public companies (Astrachan & Kolenko, 1994). Family owners in India often control firms through intercompany cross-holdings and holding companies. Hence, corporate promoters were included while measuring this variable in line with existing studies (Ashwin et al., 2015; Singla et al., 2014). A FOB in which promoters hold executive positions on the board was termed as an FMB. If a FOB belonged to a business group as defined by the Prowess database, it was termed an FBG. The classification provided by the Prowess database to define business group affiliated firms have been used in previous studies (Chacar & Vissa, 2005; Chari & Banalieva, 2015; Khanna & Palepu, 2000).

#### MARKET REFORMS

The moderating variable used in this study is market reforms initiated to decrease illiquidity in the market. The Securities Contracts (Regulation) (Amendment) Rules, 2010 was issued to increase the minimum non-promoter holdings in Indian companies from 10 per cent to 25 per cent on June 4, 2010. According to the amendment, “Every listed company shall maintain public shareholding of at least twenty-five percent”. The companies were given a time frame of three years to comply with the same. Listed companies could use several routes, such as issuing shares to the public through a prospectus, selling shares held by promoters through a secondary market institutional placement programme, rights issue and bonus shares to public shareholders, to comply with the minimum public shareholding requirements. The study used a dummy variable coded as zero for the year before 2010 and one after 2010.

#### CONTROL VARIABLES

A variety of factors may influence illiquidity. Hence a comprehensive list of controls for all possible confounds was used. The *Size of the firm* was controlled using the natural logarithm of the sales of the firm (Caruana et al., 1998). The study also controlled for the *Age of the firm* (B. S. Anderson & Eshima, 2013). *R&D intensity* was controlled for as the percentage of annual research and development (R&D) expenses to sales (Q. Li et al., 2010; Miller & Le Breton-Miller, 2011). The firm's existing marketing capability was controlled using *Marketing intensity*, which was operationalized as the percentage of total annual marketing expenses to sales (Sciascia et al., 2006). The control for *manpower intensity* was measured through labour intensity or the ratio of expenditure on salary and wages to the sales of the firm (Finkelstein & Boyd, 1998; J. Li & Tang, 2010). *Leverage* was controlled through the debt-to-equity ratio. *Quick ratio*, which denotes the firm's short-term ability to generate cash, was controlled through quick ratio or current assets less inventories divided by current liabilities. The study also controlled for the *firm's past performance* through the firm's return on assets in the previous year. Finally, industry dummies were incorporated to control industry-specific effects, each representing an industry classification at the firm's two-digit NIC level.

To minimize the potential impact of outliers, the regressors were winsorized at the 1st and 99th percentiles (Chari & Banalieva, 2015; Kennedy et al., 1992; Srivastava et al., 2009) wherever necessary. Before running the regressions, influential observations are also identified through Cook's distance and removed if Cook's distance is greater than one (Cook, 1977). Incidentally, none of the observations was marked as influential.

## METHOD OF ANALYSIS

This study tests the effect of the family nature of the business on stock liquidity and the factors such as market reforms that may moderate the relationship between various categories of a family business and stock liquidity. The study adopted a two-stage modelling approach. In the first stage, the impact on a family business's illiquidity compared to a non-family business was investigated. In the second stage, the sub-sample of family businesses was analyzed for the extent of illiquidity among the different categories of family businesses.

The study used panel data multiple regressions. Since many of the important variables in the study were dummy variables i.e., time-invariant in nature, they would be lost in a fixed-effect model. Hence, the study used the two-way random effects model. To account for industry and year effects, the study incorporated additional industry and year dummies in each of the models. The results of these dummies are suppressed for parsimony. Moreover, the individual coefficients were estimated using a two-way random effects model with cluster-robust standard errors at the firm level.

For the first stage, the study used a multiple ordinary least square regression on the unbalanced panel data using Equation 1 (Baron and Kenny, 1986), where  $i$ ,  $t$ , and  $l$  represent firms, years, and different controls for the second stage model. The value of the coefficient  $\beta_{11}$  in equation 1 captures the main effect of family business affiliation on stock liquidity. Similarly, the value of the coefficient  $\beta_{21}$  in equation 1 captures the main effect of market reforms on stock liquidity. Meanwhile, the value of the coefficient  $\beta_{31}$  in equation 1 captures the conditional effect of family business and reforms on stock liquidity.

$$\text{Illiquidity}_{it} = \alpha_{11} + \beta_{11} \times \text{Family business}_i + \beta_{21} \times \text{Reforms}_t + \beta_{31} \times \text{Family business}_i \times \text{Reforms}_t + \beta_{41l} \times \text{Controls}_{lit-1} + \mu_i + \lambda_t + v_{it} \quad (1)$$

For the second stage, the study also used a multiple ordinary least square regression on the unbalanced panel data using Equation 2 (Baron & Kenny, 1986), where  $i$ ,  $t$ , and  $l$  represent firms, years, and different controls, respectively, for the second stage model. The value of the coefficients  $\beta_{12}$  and  $\beta_{22}$  in equation 2 captures the main effect of FMB and FOB affiliation on stock liquidity. Similarly, the value of the coefficient  $\beta_{32}$  in equation 2 captures the main effect of market reforms on stock liquidity. Meanwhile, the value of the coefficients  $\beta_{42}$  and  $\beta_{52}$  in equation 2 captures the conditional effect of the various family business categories and reforms on stock liquidity.

$$\text{Illiquidity}_{it} = \alpha_{12} + \beta_{12} \times \text{FMB}_i + \beta_{22} \times \text{FOB}_i + \beta_{32} \times \text{Reforms}_t + \beta_{42} \times \text{FMB}_i \times \text{Reforms}_t + \beta_{52} \times \text{FOB}_i \times \text{Reforms}_t + \beta_{62l} \times \text{Controls}_{lit-1} + \mu_i + \lambda_t + v_{it} \quad (2)$$

To ensure normality and homoscedasticity (constant variance) of residuals, the independent variables were subjected to strictly monotonic transformations wherever required using natural logarithm. Since this power transformation assumes that all the transformed variable values are positive and greater than zero, a small constant was added before applying the logarithmic transformation whenever variables have values less than or equal to zero (Cohen et al., 2003). The study used the cluster-robust standard errors to control for both heteroskedasticity and serial autocorrelation (Cameron & Trivedi, 2009). To prevent multicollinearity problems present in models with interaction terms, the study centred and standardized the continuous variables (Aiken & West, 1991). The study checked for the presence of variables with the variance inflation factor (VIF) values greater than 10 (Niresh & Velampy, 2014). None of the VIF values was greater than three, thereby ruling out the problem of multicollinearity.

## RESULTS

Table 1 reports the descriptive statistics for the variables of interest for the entire sample as well as the subsample of FOB, FBG and FMB firms. The study found that (a) the average firm is approximately 29 years old, while the average age of an FMB and FOB firm is around 25 years, while the age of an FBG firm is 34 years; (b) the FBG firms are bigger than their FOB and FMB counterparts while the FMB firms are the smallest among the three categories; (c) none of the firms spends much on R&D activities; (d) the average family firm spends nearly 4 per cent of its sales revenue on marketing; (e) the average family firm spends almost 11 per cent of its sales revenue on manpower related expenses; (f) the leverage or the debt to equity ratio on average is 1.58; however FMB firms are the most leveraged among the lot; (g) the average liquidity measured through the quick ratio is also high for the firms at 1.81, it is highest for FOB firms; and (h) the average family firm has a past performance (return on assets) of almost 20 per cent.

**Table 1.** Descriptive Statistics (Mean and Standard Deviation in Parenthesis) of Key Variables for All Subgroups of Family Firms

Variables	All Firms		FOB Firms		FBG Firms		FMB Firms	
<b>1. Size<sup>a</sup></b>	7.31	(1.63)	6.73	(1.26)	8.05	(1.60)	7.09	(1.24)
<b>2. Age</b>	28.79	(18.37)	25.59	(15.48)	34.31	(21.88)	24.90	(13.89)
<b>3. R&amp;D Intensity</b>	0.00	(0.02)	0.00	(0.01)	0.00	(0.02)	0.00	(0.02)
<b>4. Marketing Intensity</b>	0.04	(0.05)	0.03	(0.05)	0.04	(0.05)	0.04	(0.04)
<b>5. Manpower Intensity</b>	0.11	(0.16)	0.11	(0.16)	0.10	(0.13)	0.09	(0.12)
<b>6. Leverage</b>	1.58	(3.87)	1.58	(3.92)	1.68	(3.61)	1.70	(3.79)
<b>7. Quick Ratio</b>	1.81	(4.37)	2.03	(4.86)	1.27	(3.23)	1.43	(3.41)
<b>8. Past Performance</b>	0.20	(0.83)	0.20	(0.89)	0.22	(0.80)	0.19	(0.71)

**Note.** Reported means and standard deviations in parenthesis are before standardization.

<sup>a</sup> Logarithmic transformation

Table 2 provides results of the univariate analysis on the DV, i.e., illiquidity. The mean and median of illiquidity of the full sample of family and non-family firms is presented. Thereafter the mean and median of the family and non-family firms before and after the reforms is also shown. A similar analysis is repeated for all sub-samples of different types of family firms. A t-test on the equality of means is conducted with the t-statistics being reported along with the significance level associated with the difference in the means (Welch, 1947). While testing the equality of medians, the Wilcoxon test is used (Wilcoxon, 1945). In all the cases, the study found a statistically significant difference in means and medians between the samples. The only exception being the difference in the median of FBG firms before and after the reforms.

The results show that family firms' illiquidity has been consistently high both before and after the reforms. The illiquidity of both family and non-family firms has increased post-reforms. FOB firms have the highest illiquidity among the family firms, followed by FMB firms and FBG firms. The above trend is consistent both before and after the reforms. There is a substantial increase in illiquidity after the reforms among FOB and FMB firms. In comparison, the rise in illiquidity among FBG firms is somewhat muted.

Thus, the results from Table 2 show that family businesses have higher illiquidity. After the reforms, all the firms have registered an increase in illiquidity. However, there is heterogeneity in the rise in illiquidity among the firms across the different types of family businesses. For instance, the rise in illiquidity among family businesses is slightly higher as compared to non-family companies. Among the

family businesses, most of the increase in illiquidity can be accounted for by the FOB and FMB firms. In comparison, the FBG firms show a marginal rise in illiquidity.

**Table 2.** Results of Univariate Analysis Using t-tests (Equality of Means) and Wilcoxon-Test (Equality of Medians) to Highlight the Change in Illiquidity of Sample Before and After Reforms.

Mean / Median of Illiquidity <sup>a</sup>	Full Sample	Pre-Reforms	Post-Reforms	t-test/ Wilcoxon Test <sup>b</sup>
Mean (Nonfamily Firm)	0.07 (0.24)	0.04 (0.15)	0.10 (0.28)	-10.45***
Mean (Family Firm)	0.09 (0.28)	0.06 (0.29)	0.11 (0.28)	-12.01***
t-test (Equality of Means)	-6.17***	-6.05***	-2.66**	
Median (Nonfamily Firm)	0.0009	0.0007	0.0013	16.76***
Median (Family Firm)	0.0043	0.0023	0.0075	100.47***
Wilcoxon-test (Equality of Medians)	189.85***	98.16***	82.79***	
Mean (FOB Firms)	0.12 (0.36)	0.09 (0.39)	0.15 (0.33)	-7.84***
Mean (FBG Firms)	0.05 (0.17)	0.03 (0.09)	0.07 (0.21)	-9.93***
t-test (Equality of Means)	16.77***	8.74***	14.85***	
Median (FOB Firms)	0.0148	0.0075	0.0235	118.61***
Median (FBG Firms)	0.0005	0.0005	0.0005	1.23
Wilcoxon-test (Equality of Medians)	838.62***	323.22***	561.63***	
Mean (FMB Firms)	0.10 (0.25)	0.07 (0.23)	0.12 (0.25)	-5.87***
Mean (FBG Firms)	0.05 (0.17)	0.03 (0.09)	0.07 (0.21)	-9.93***
t-test (Equality of Means)	11.51***	6.17***	9.05***	
Median (FMB Firms)	0.0110	0.0044	0.0170	41.94***
Median (FBG Firms)	0.0005	0.0005	0.0005	1.23
Wilcoxon-test (Equality of Medians)	463.09***	130.32***	308.68***	
Mean (FOB Firms)	0.12 (0.36)	0.09 (0.39)	0.15 (0.33)	-7.84***
Mean (FMB Firms)	0.10 (0.25)	0.07 (0.23)	0.12 (0.25)	-5.87***
t-test (Equality of Means)	4.00***	1.84+	4.61***	
Median (FOB Firms)	0.0148	0.0075	0.0235	118.61***
Median (FMB Firms)	0.0110	0.0044	0.017	41.94***
Wilcoxon-test (Equality of Medians)	7.22**	6.51*	8.56**	

**Notes:** <sup>a</sup> Reported means, medians and standard deviations in parenthesis are before standardization.

<sup>b</sup> This column reports the t statistics in the case of means and the chi-squared statistics in case of medians for differences in means/medians between the pre and post reform periods.

The t-tests reports the results of two-sample mean-comparison t-tests, assuming unpaired data with unequal variances. The t statistics are reported, while the significance level is assigned to the difference in means.

The nonparametric Wilcoxon k-sample test reports the results on the equality of medians. The chi-squared test statistics is reported, while the significance level is assigned to the difference in medians.

Significance level (two-tailed):

† for p < 0.10

\* for p < 0.05

\*\* for p < 0.01

\*\*\* for p < 0.001.

Table 3 depicts the correlation matrix among the key variables used in the regression. All correlation of all variables is below the threshold of 0.4 (Aldamen et al., 2012; used in several recent papers such as Fernandes, 2008; Pangarkar, 2008), indicating multicollinearity is not a problem in the model. Only the dummy variables of FOB and FBG exhibit a high degree of correlation at -0.44, and hence, they are not used together in the models. The VIF values mentioned in Table 4 further corroborate these results.

**Table 3.** Descriptive Statistics and Correlations

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
<b>1. Illiquidity</b>	1														
<b>2. Family Business<sup>a</sup></b>	0.03*	1													
<b>3. FOB<sup>a</sup></b>	0.09*	0.39*	1												
<b>4. FBG<sup>a</sup></b>	-0.08*	0.33*	-0.44*	1											
<b>5. FMB<sup>a</sup></b>	0.02*	0.23*	-0.30*	-0.26*	1										
<b>6. Reforms<sup>a</sup></b>	0.09*	0.04*	-0.00	0.00	0.05*	1									
<b>7. Size<sup>b</sup></b>	-0.22*	-0.03*	-0.25*	0.28*	-0.05*	0.06*	1								
<b>8. Age</b>	0.01*	-0.01*	-0.11*	0.17*	-0.07*	0.09*	0.22*	1							
<b>9. R&amp;D Intensity</b>	-0.04*	-0.01*	-0.04*	0.03*	0.00	-0.00	0.07*	0.00	1						
<b>10. Marketing Intensity</b>	-0.02*	-0.03*	-0.05*	0.04*	-0.02*	-0.02*	0.02*	0.07*	0.03*	1					
<b>11. Manpower Intensity</b>	0.06*	-0.09*	0.00	-0.04*	-0.06*	0.05*	-0.26*	-0.01	0.06*	0.18*	1				
<b>12. Leverage</b>	-0.01*	0.12*	-0.00	0.07*	0.05*	0.00	0.14*	0.03*	-0.03*	-0.02*	-0.12*	1			
<b>13. Quick Ratio</b>	0.05*	-0.11*	0.04*	-0.11*	-0.04*	-0.02*	-0.22*	-0.11*	0.00	-0.05*	0.13*	-0.37*	1		
<b>14. GDP Growth Rate</b>	-0.11*	-0.02*	0.00	-0.00	-0.02*	-0.14*	-0.03*	-0.03*	-0.00	0.01*	-0.01*	-0.00	0.02*	1	
<b>15. Past Performance</b>	0.00	0.00	-0.00	0.01	-0.00	-0.04*	0.04*	-0.01*	-0.00	-0.08*	-0.13*	-0.16*	0.14*	0.00	1
<b>Mean</b>	0.09	0.77	0.34	0.28	0.15	0.59	7.31	28.79	0.00	0.04	0.11	1.58	1.81	7.50	0.20
<b>Std. Dev.</b>	0.28	0.42	0.47	0.45	0.36	0.49	1.63	18.37	0.02	0.05	0.16	3.87	4.37	1.96	0.83
<b>Min</b>	0	0	0	0	0	0	3.04	0	0	0.00	0.00	0.00	0.02	3.89	-2.18
<b>Max</b>	12.68	1	1	1	1	1	15.38	151	0.49	0.29	1.00	31.25	34.13	10.26	6.00

**Note:** n = 25,418. Reported means and standard deviations are before standardization.

\* p < 0.05

<sup>a</sup> dummy variable <sup>b</sup> Logarithmic transformation

Table 4 reports the results of the main effect of the family business as well as the conditional effect of market reforms on illiquidity. The models are arranged incrementally, with the main baseline specification followed by the model with interaction variables added. The study also conducted a hierarchical regression analysis (in line with Kemme et al., 2020), which indicates that the inclusion of the interaction terms in Models 2, 5 and 6 increases the share of the explained variation in the dependent variable and that this increase is statistically significant at the 1% level. Thus, the study found that the model increasingly fits the data better.

As per hypothesis 1, family businesses, on average, are more likely to have more illiquidity. Model 2 of Table 4 shows that, in predicting illiquidity, the coefficient of family business is positive and statistically significant, i.e., (*Family business*,  $\beta = 0.065$ ;  $p < 0.01$ ). Hence, compared to non-family firms, family businesses enjoy more illiquidity. Thus, hypothesis 1 is supported.

As per hypothesis 2, family businesses are likely to show a higher increase in stock liquidity with the advent of reforms than non-family firms. Model 2 of Table 4 shows that, in predicting illiquidity, the

coefficient of reforms is positive and statistically significant, i.e., (*Reforms*,  $\beta = 0.215$ ;  $p < 0.001$ ). This result suggests that post reforms, the firms, on average, are likely to have more illiquidity. The above result also illustrates that the reforms did not have the expected impact on firms' illiquidity. Thus, Model 2 of Table 4 shows that, in predicting illiquidity, the coefficients of Family business and Reforms are both positive and statistically significant, as mentioned earlier. Additionally, Model 3 of Table 4 shows that, in predicting illiquidity, the coefficient of the interaction term of Family business and Reforms is positive and statistically significant, i.e., (*Family business*  $\times$  *Reforms*,  $\beta = 0.054$ ;  $p < 0.05$ ). In other words, reforms accentuate the increase in the illiquidity of family businesses compared to non-family firms. Thus, hypothesis 2 is supported. However, the results of the hierarchical regression suggest weak support for Hypothesis 2. The effect is stronger for family businesses as can be found in Model 5 of Table 4, which consists of a sub-sample of family firms. In predicting illiquidity, the coefficient of reforms is positive and statistically significant, i.e., (*Reforms*,  $\beta = 0.223$ ;  $p < 0.001$ ). This result suggests that post reforms, the family firms, on average, are likely to have more illiquidity. The above result also illustrates that the reforms did not have the expected impact on family firms' illiquidity. The study found that FOB firms' illiquidity was higher, at a statistically significant level than FBG firms (*FOB*,  $\beta = 0.045$ ;  $p < 0.05$ ). Meanwhile, FMB firms do not exhibit statistically significant higher illiquidity compared to FBG firms (*FMB*,  $\beta = 0.035$ ;  $p > 0.1$ ).

As per hypothesis 3, the increase in illiquidity with reforms would be highest for FOB, followed by FMB and FBG firms. The sub-sample analysis of the family firms reveals several exciting results. In Model 5 of Table 4, the study found that, in predicting illiquidity, the coefficient of FOB is positive and statistically significant, i.e. (*FOB*,  $\beta = 0.045$ ;  $p < 0.05$ ). This result suggests that FOB firms have higher illiquidity compared to FBG affiliated firms. Similarly, in Model 5 of Table 4, the study found that, in predicting illiquidity, the coefficient of FMB is positive but not statistically significant, i.e., (*FMB*,  $\beta = 0.035$ ;  $p > 0.1$ ). The above result also suggests that FMB firms have similar illiquidity as FBG affiliated firms. The study also found in Model 6 of Table 4 that, in predicting illiquidity, the coefficient of the interaction term of FOB and Reforms is positive and statistically significant, i.e., (*FOB*  $\times$  *Reforms*,  $\beta = 0.124$ ;  $p < 0.001$ ). In other words, reforms accentuate the increase in FOB firms' stock liquidity compared to FBG firms. Similarly, in Model 6 of Table 4, the study finds that, in predicting illiquidity, the coefficient of the interaction term of FMB and Reforms is also positive and statistically significant, i.e., (*FMB*  $\times$  *Reforms*,  $\beta = 0.083$ ;  $p < 0.01$ ). In other words, with the advent of reforms, the increase in the illiquidity of FOB is the highest, followed by FMB and FBG firms.

**Table 4.** Random Effects OLS Panel Regression of Family Business and Reforms on Stock Liquidity

Variables	Model 1 Illiquidity	Model 2 Illiquidity	Model 3 Illiquidity	Model 4 Illiquidity	Model 5 Illiquidity	Model 6 Illiquidity
Size	-0.190*** (0.011)	-0.231*** (0.012)	-0.232*** (0.012)	-0.181*** (0.013)	-0.230*** (0.014)	-0.228*** (0.014)
Age	0.124*** (0.010)	0.065*** (0.009)	0.065*** (0.009)	0.124*** (0.011)	0.063*** (0.010)	0.062*** (0.010)
R&D Intensity	-0.011*** (0.003)	-0.012*** (0.003)	-0.012*** (0.003)	-0.011*** (0.003)	-0.010** (0.003)	-0.010** (0.003)
Marketing Intensity	-0.017+ (0.009)	-0.001 (0.009)	-0.001 (0.009)	-0.021* (0.010)	-0.001 (0.009)	-0.001 (0.009)
Manpower Intensity	0.012 (0.014)	-0.009 (0.014)	-0.009 (0.014)	0.014 (0.017)	-0.011 (0.017)	-0.011 (0.017)
Leverage	0.019+ (0.010)	0.016+ (0.010)	0.017+ (0.010)	0.017 (0.011)	0.017 (0.011)	0.016 (0.011)
Quick Ratio	-0.013 (0.011)	-0.010 (0.011)	-0.01 (0.011)	-0.012 (0.013)	-0.011 (0.012)	-0.011 (0.012)
GDP Growth Rate	-0.039*** (0.004)	-0.031*** (0.004)	-0.031*** (0.004)	-0.041*** (0.004)	-0.035*** (0.004)	-0.034*** (0.004)
Past Performance	0.008 (0.011)	0.015 (0.011)	0.015 (0.011)	0.014 (0.013)	0.021+ (0.013)	0.021+ (0.013)
Family Business		0.065** (0.023)	0.039+ (0.022)			
Reforms		0.215*** (0.011)	0.172*** (0.021)		0.223*** (0.013)	0.155*** (0.015)
Family Business × Reforms			0.054* (0.024)			
FOB					0.045* (0.020)	-0.02 (0.023)
FMB					0.035 (0.025)	-0.012 (0.026)
FOB × Reforms						0.124*** (0.029)
FMB × Reforms						0.083** (0.028)
Constant	-0.01 (0.019)	-0.184*** (0.024)	-0.163*** (0.023)	-0.001 (0.023)	-0.160*** (0.026)	-0.125*** (0.026)

<b>chi-squared</b>	480.374***	640.028***	642.987***	391.273***	540.109***	556.491***
<b>Adjusted R<sup>2</sup></b>	0.075	0.103	0.103	0.078	0.107	0.108
<b>Nos. of Obs.</b>	19861	19861	19861	15686	15686	15686
<b>Highest VIF</b>	1.79	1.80	2.96	1.78	1.79	2.7
<b>Δ Adjusted R<sup>2</sup></b>		0.019	0.000		0.02	0.001
<b>Δ F</b>		212.767***	2.347		117.074***	7.811***

**Note:** Models 1 to 3 report the results of the random effects OLS panel regression run on the full sample with robust standard errors in parenthesis. Models 4 to 6 report the results of the random effects OLS panel regression run on the sub-sample of family firms with cluster robust standard errors in parenthesis. Standardized regression coefficients are reported. All models include industry and year dummies at two-digit NICs, which are suppressed for parsimony.

Significance level (two-tailed):

† for p < 0.10

\* for p < 0.05

\*\* for p < 0.01

\*\*\* for p < 0.001

Thus far, the study established three vital empirical results. First, family businesses, on average, have more illiquidity. Second, with reforms, the illiquidity increases average for all firms, but the increase is higher for family firms. Finally, the rise in illiquidity with reforms is heterogeneous across different types of family businesses. Figures 1 and 2 graphically depict the interactions between reforms and the various family businesses in predicting illiquidity. These figures further corroborate the above results.

## DISCUSSION

Stock liquidity has significant implications on the governance (Holmstrom & Tirole, 1993); firm value (Lang et al., 2012) and cost of raising capital (Weston et al., 2002). Hence, the State as well as the market regulators, have routinely intervened in recent times to keep illiquidity levels in the capital market at manageable levels (Chowdhury et al., 2018). However, given the unique priorities of family businesses (Le Breton-Miller et al., 2015; Naldi et al., 2013; Stewart & Hitt, 2012), this study investigates the illiquidity among family businesses in an emerging market context, India, and how it changes with such institutional pressure.

This paper finds that in the Indian context, family businesses have higher illiquidity compared to non-family firms. As such, this paper aligns itself with the opinion that concentrated ownership diminishes the benefits of market monitoring by reducing liquidity (Holmstrom & Tirole, 1993) and adds to the literature on the governance of family businesses (Ashwin et al., 2015; Cheng & Firth, 2006; Herrero, 2011; Schulze et al., 2003). Holmstrom & Tirole (1993) argue that a firm's ownership structure influences the value of market monitoring through its effect on market liquidity. The increased information flow into the market improves the stock price's information content, which enables the firm to design a more efficient managerial compensation. Accordingly, high ownership concentration increases agency costs and reduces firm value (Lang et al., 2012). However, concentrated ownership also improves corporate governance through internal monitoring since large investors have incentives to monitor the manager (Edmans & Manso, 2011). This phenomenon is especially true in an emerging market context, such as India, where the capital markets are not well developed. In family firms, where the concentration of ownership is high, agency problems cause high information asymmetry. Thus, active stockholders who reduce agency costs by providing internal monitoring also reduce stock liquidity (Bhide, 1993).



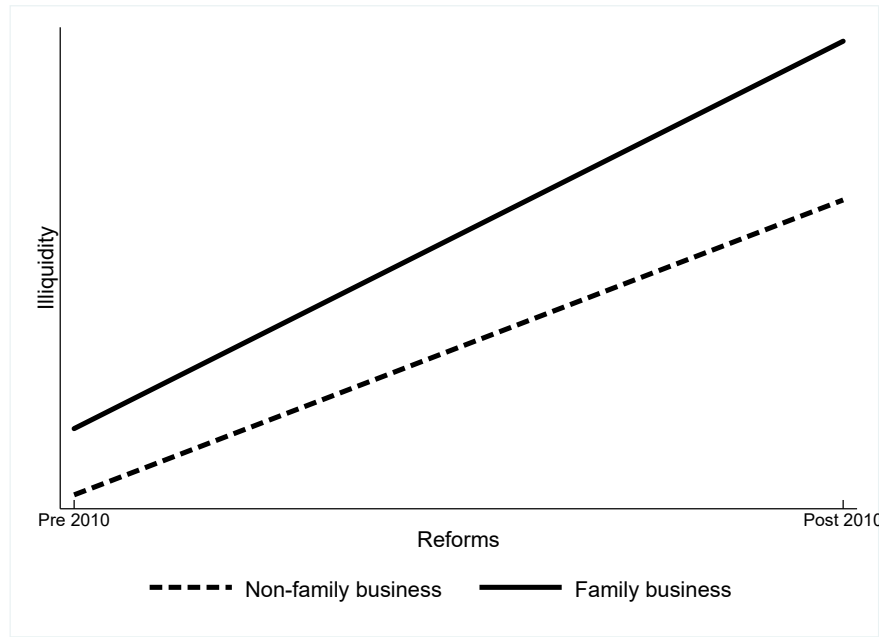


Figure 1: Interaction of Family Business and Reforms in Predicting Stock Liquidity

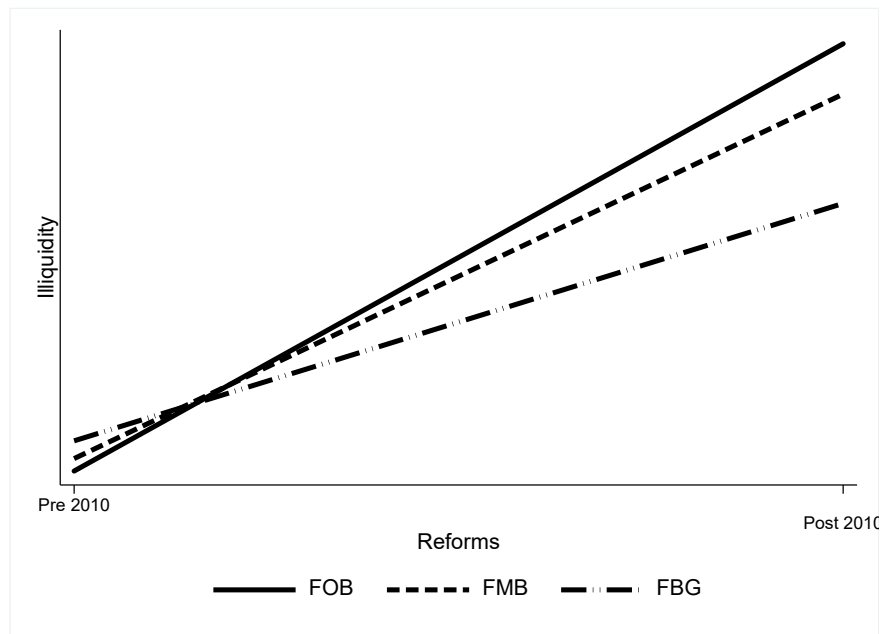


Figure 2: Interaction of Different Family Businesses and Reforms in Predicting Stock Liquidity

The study also found that FOB firms have significantly higher illiquidity compared to FMB and FBG firms. This finding may be attributed to the family's desire to retain control of the firm even when the firm is being professionally managed. Thus, this paper helps to reconcile the positive and negative views on a family business's effect on stock liquidity (Al-Jaifi, 2017; Prommin et al., 2014; Yu-Thompson et al., 2016). It argues that in an emerging market context, family firms prefer to maintain higher shareholding even at the cost of lower stock liquidity.

This paper also finds that the market reforms led to increase in firms' illiquidity in sharp contrast to the decreasing trend forecasted by the authors. This finding has important implications for policymakers, who generally prefer liquid stock markets (Amihud & Mendelson, 2008). Policy makers' efforts to induce greater stock liquidity in Indian capital markets seem to have not worked. As of June 2010, more than 200 firms had a public shareholding less than the minimum requirement. After the expiry of this deadline in June 2013, 105 listed companies were found to be non-compliant with these norms (NDTV, 2014). Though these market reforms were intended to improve liquidity, the firms' lack of compliance made these norms ineffective. With the advent of market reforms, family firms have exhibited conservative behaviour related to stock liquidity compared to non-family firms. This study, however, highlights that stock liquidity is contingent on institutional pressures.

Finally, this paper finds that family firms further reduce their stock liquidity in the face of institutional pressures. Investors demand a premium for trading in illiquid stocks (Amihud, 2002; Amihud & Mendelson, 1986). Thus, family firms knowingly increase their cost of raising capital by lowering the market liquidity (Lang et al., 2012; Weston et al., 2002). High liquidity leads to better monitoring and more efficient prices, encouraging managers to improve firm value (Jawed & Kotha, 2020). Thus, to retain control in the face of institutional pressures, family firms forego the lower cost of raising capital as well as higher firm valuations. Considering the non-availability of financial credit due to underdeveloped or poorly functioning financial institutions (Chakrabarty, 2009), it is evident that family firms prefer to rely on internal markets for capital requirements. By highlighting this behaviour of family businesses in India, this paper adds to the literature on socio-emotional wealth (Berrone et al., 2010, 2012; Cennamo et al., 2012; Gomez-Mejia et al., 2007, 2011; Le Breton-Miller et al., 2015; Naldi et al., 2013) and the impact of institutional change on family businesses (Carney & Gedajlovic, 2002; C.-N. Chung & Luo, 2008; Luo & Chung, 2005).

This study also adds to the literature on corporate compliance (Bannier et al., 2020; Gunningham et al., 2005; Hartmann et al., 2018; Parker & Nielsen, 2009). As per this literature firms comply to regulations because they find it as a necessary condition to obtain legitimacy and resources (financing). The family firms in India did not comply to the regulations because they are used to working in institutional voids (Gaur et al., 2014; Gollakota & Gupta, 2006; Singh et al., 2018; Singla & George, 2013). These firms obtain legitimacy from the family as an institution rather than external formal institutions (Monticelli et al., 2020). Moreover, these firms very often develop close ties to the political hierarchy in the country (Hillman et al., 1999; W. Li et al., 2012; Schuler et al., 2002; Wang & Qian, 2011). As such they are less concerned about consequences of non-compliance. Finally, since most of these firms rely on their internal markets for access to funds, their dependence on external resources is minimal. When all the above explanations are taken together, it comes as no wonder that firms in an emerging market, such as India, fail to comply with regulations.

The following limitations of the study should be noted while interpreting the results. First, this study employs a sample of Indian firms only, and hence, the authors cannot rule out the possibility of the country-specific nature of the findings. More empirical studies to test our models in other emerging economies with multi-country samples and using more fine-grained measures would contribute to our findings' generalizability. Second, this paper has anchored its arguments in the institutional theory and the agency theory to tease out the heterogeneity in family firms' illiquidity. Future researchers can adopt other theoretical lenses such as behavioural agency theory and

stewardship theory and investigate the governance dimensions of family heterogeneity and their possible effect on illiquidity. Third, while this paper defines family firms in line with prior research (Chrisman & Patel, 2012; Patel & Chrisman, 2014), future research should explore the effects of a family's intention for transgenerational control (Chrisman et al., 2010; Zellweger et al., 2012).

Despite these limitations, our study has important implications for practice. Managers in family-owned firms might expect their firm to exhibit lower stock liquidity under stable environmental conditions due to the concentrated ownership discussed earlier. However, managers working in family firms during an institutional transition phase should expect a further reduction in these firms' illiquidity. In such circumstances, they would face a decline in the firm's valuation, and it would also be challenging to raise capital for new projects. Since family firms appear to be at a disadvantage relative to non-family firms under institutional reforms, family firms need to be incredibly strategic in their responses to market reforms. Future research should identify strategies that can be utilized to best adapt to such transitional phases.

Similarly, this study highlights the implication for institutional transition through reforms on a vital part of the economy from the policy perspective. Since family businesses form the backbone of the entrepreneurial investments in the economy, policymakers must be sensitive to the repercussions on this category of firms. Special targeted policy packages in the form of credit facility and R&D tie-ups with incoming multinationals can be made such that these firms are better able to withstand the environmental turbulence.

## CONCLUSION

This study investigates the illiquidity among family businesses in an emerging market context, i.e., India, and how it changes with institutional pressure. The empirical results show that family firms have significantly higher illiquidity compared to non-family firms. The market reforms to increase the public shareholding mandatorily have not increased the stock liquidity of family businesses. The study illustrates how family businesses in India have resisted institutional pressures to reduce stock liquidity. For a family firm, the trade-off between the benefits of greater liquidity against the agency costs that tend to come with less concentrated ownership might lead to an optimal level of illiquidity. Family firms, in general, are hesitant to include new equity owners to avoid ownership dilution and lose control of voting rights.

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