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Corporate Governance Structure, Legal Environment, and Valuation

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Abstract

This study consists of two separate sections; both sections can be read individually but share a common theme in Corporate Governance (CG). In the first section, a unique approach is presented to test whether the manner through which corporate governance structure influence stock market liquidity depends on countries' legal systems, using data from 10 emerging countries. Additionally, this study also examine whether legal institutions (i.e., judicial efficiency and political stability) enhances the level of investors participation and hence stock market liquidity. The second section seeks to explore the value relevance of firm level CG practices and legal origin.

We employ governance rating consists of three categories. CG data and financial data covers the period 2003-2014. The final sample comprises of 644 firms from 10 countries. Ordinary Least Squares and System Generalized Method of Movement are employed to carry out the empirical analysis.

The findings from the first section favor the hypothesis that firm-level governance structure and country's legal origin complements each other. We find evidence that as compared to common law countries, costs of liquidity are larger for companies in countries with civil law origin. This result implies that countries with common law origin have lower illiquidity, implying higher stock market liquidity. Nevertheless, the findings also indicate that although higher firm-level governance structure enhances liquidity of the stock market, this result for countries with civil law origin is weaker. Yet, the findings reveal that stock market liquidity is much higher in countries with higher political stability and judicial efficiency. The results from second section reveal that CG plays a positive and significant role in market valuation. Furthermore, the analysis indicates that CG is more important in enhancing firm value in countries with common origin as compared to the countries with civil origin.

This study uses a broad CG measure to study its relation with stock market liquidity and market valuation, which has not been studied before, specifically in emerging markets. The findings of this study have important implications for managers, investors, and regulators, and may add significant contributions to the accounting and finance literature.

Keywords: corporate governance, liquidity, firm value, judicial efficiency, political stability, CG score, volatility, stock market liquidity, emerging markets.

1. Introduction and Background of the Study

Liquidity is one of the essential aspects of stock markets, Handa and Schwartz (1996) argue that, "*Investors want three things from the markets: liquidity, liquidity, and liquidity*." Other researchers are also of the view that corporate governance has a significant role to play in improvement of stock liquidity, mainly through mitigating information asymmetry. The relation between firm-level governance structure, country's legal origin, and stock market liquidity is an open debate in the literature. Some studies argue that both legal origin and firm-level governance structure should substitute each other (substitution hypothesis). In this context, country level higher shareholder protection rights will decrease the value of firm-level governance structure and thus, its impact on liquidity of stock market will be weakened. As an alternative, if firm-level governance structure and country's legal origin serve as complements (regulatory pressure hypothesis), then a strong legal environment will boost firms monitoring, akin to a "best practices" approach. Given this, the legal environment will strengthen the impact of firm-level governance structure on stock market liquidity. In principle, for governance structure to be effective, legal and regulatory environments and CG may work together.

Prior research suggests that the legal protection of shareholder right has important consequences on stock market liquidity. The legal system governs both the rights of management and the rights of investors. The recent strand of literature argues that there are significant variations in shareholder protection rights in different countries. There are two legal origins in the world i.e. Common law and Civil law, the former provides strong shareholder protection rights while the latter provides least amount of protection, specially the French Civil law. Recently, researchers have explored the link between firm-level governance structure and stock market liquidity by employing cross-country variations in country's legal origin. For instance, Brockman and Chung (2003), Chung (2006), and Shi (2015) show that poor liquidity is the result of weak investor protection. Another strand of literature focuses on corporate governance and stock market liquidity. For example, Jain et al. (2008), Chen et al. (2011), Chung et al. (2010), Godfred et al. (2011), Tang and Wang (2015), and Jiang et al. (2014) argue that the companies adopting better corporate governance and disclosure practices will experience lower costs of liquidity and provide empirical evidence that corporate governance significantly influences market liquidity.

This study finds that as compared to Common law countries, liquidity costs are higher for companies in countries with Civil law origin. Nevertheless, it is also found that although better firm level governance enhances liquidity of the stock market, the result for countries with Civil law origin is relatively weaker. These findings are in conformity with prior research, which provide strong evidence that the Common law countries have, on average,

higher shareholder protection rights due to better legal and regulatory environments as well as better corporate governance structures (Lee & Chung, 2015). The stronger investor protection in the Common law system may reduce information asymmetry among investors and hence increase stock market liquidity. Also stocks in countries with higher ratings for political stability and judicial efficiency have lower illiquidity. Hence, these findings are in favor of our prediction that countries with Common law origin have lower illiquidity, implying higher stock market liquidity. Hence, all things being equal, firms in countries with more stringent and fairer disclosure rules and better legal protection are likely to be valued higher (through their increased liquidity). The findings also favor the hypothesis that firm-level governance structure and country's legal origin complements each other.

1.1 Research Objectives and Significance

Using data from 10 emerging countries, this study examines whether the manner through which firm-level governance affects stock market liquidity depends on countries' legal systems.

Examination of this empirical issue is more important in emerging markets as publicly listed firms in emerging markets have a pyramid ownership structures, weak legal protection of both creditors and shareholders' rights (La Porta et al., 2000; Brockman & Chung, 2003), higher levels of insider trading, high market manipulation, price manipulation, and false disclosure (Cumming et al., 2011). The implications of such practices for stock liquidity in emerging markets remain largely unexplored.

The study also examines whether legal institutions (i.e., judicial efficiency & political stability) enhances level of investors' participation and hence stock market liquidity. Furthermore, the study investigates the value relevance of firm-level CG practices and legal origin.

Legal institutions/legal rules prevent minority shareholders expropriation and as a result shape their willingness to participate in equity markets. Independent judiciary is crucial for the implementation of the rule of law which in turn depends on stable political environment. La Porta et al. (1998) provide evidence that low investors participation in countries with weak legal institutions results in ownership concentration (i.e., smaller float) and narrow equity markets. Narrow capital markets and less float further results in less depth and higher liquidity costs.

This study uses a broad CG measure to study its relation with stock market liquidity and market valuation, which has not been studied previously, specifically in context of emerging markets. The findings of this study have important implications for managers, investors, and regulators, and may add significant contributions to the accounting and finance literature. The findings are in favor of our prediction that firms in countries with more stringent and fairer disclosure rules and better legal protection are likely to be valued higher (through their increased liquidity). The findings also favor the hypothesis that firm-level governance structure and country's legal origin complements each other.

2. Methodological Issues

In order to examine firm-level governance structure, we generally construct an index of CG. The CG index is even more relevant for empirical examination of stock market liquidity and transparency and investor protection. Therefore, we employ governance ratings relevant to operational/financial transparency and protection of investors (i.e., 18 governance standards) in three categories (see Appendix 1). The CG index is developed with regard to: (1) The OECD CG principles; and the items used in prior CG studies. A scale of 0 to 4 is used to construct corporate governance score. Corporate governance data is obtained from firm annual reports, whereas financial data is obtained from Thompson Worldscope database and Bloomberg for the period 2003-2014. Firms are selected on the basis of data availability. Hence, the final sample comprises of 644 firms from 10 countries – Pakistan, Singapore, Malaysia, Hong Kong, Turkey, Indonesia, Brazil, Korea, China, and Japan. To proxy stock market liquidity, this study uses the Amihud (2002) illiquidity ratio which is the best proxy for illiquidity and has a strong theoretical appeal (Marcelo & Quiros, 2006). The Amihud illiquidity is given as follow:

$$\mathrm{ILLIQ_{it}} = \frac{1}{\mathrm{D_{it}}} \sum_{\mathrm{d-1}}^{\mathrm{D_{it}}} \frac{|\mathrm{R_{idt}}|}{\mathrm{V_{idt}}}$$

Where, $ILLIQ_{it}$, R_{idt}, $V_{idt,}$ and D_{it} represent the illiquidity of share, daily return, daily volume of transactions and the number of trading of share *i* at time *t*, respectively. Theoretical and empirical studies suggest numerous determinants of stock market liquidity. This study explores the impact of legal institutions (i.e., judicial efficiency and political stability) on stock market liquidity. Low investors participation in countries with weak legal institutions results in ownership concentration (i.e., smaller float) and narrow equity markets. Narrow capital markets and less float further results in less depth and higher liquidity costs. Previous research provides evidence that attributes such as volume and volatility explain a significant portion of cross-sectional and time series variations in stock market liquidity. Further, we also utilize state ownership, insiders' ownership, institutional ownership, and number of analysts in regression model in order to explore whether firm-level CG has a direct and independent influence on the liquidity of stock market. Similarly, asset tangibility, firm age, firm size, R&D expenditure, and asset uniqueness are included as additional control variables in the specification. The following models are formulated based on these considerations:

$$\begin{aligned}\mathrm{Log\ (ILLIQ)_{it}} &= \alpha + \beta_1(\mathrm{CG-score})_{it} + \beta_2(\mathrm{Judicial\ efficiency})_{it} + \beta_3(\mathrm{Political\ stability})_{it} \\ &+\beta_4(\mathrm{Volatility})_{it} + \beta_5\mathrm{Log(Volume)}_{it} + \beta_6(\mathrm{Institutional})_{it} + \beta_7(\mathrm{State})_{it} \\ &+ \beta_8(\mathrm{Foreign})_{it} + \beta_9(\mathrm{INSIDOWN})_{it} + \beta_{10}(\mathrm{Family})_{it} + \beta_{11}(\mathrm{R\&}D)_{it} + \beta_{12}(\mathrm{Tangibility})_{it} \\ &+ \beta_{13}(\mathrm{Uniqueness})_{it} + \beta_{14}(\mathrm{Analysts})_{it} + \beta_{15}(\mathrm{LnAssets})_{it} + \beta_{16}(\mathrm{FRAGE})_{it} + \varepsilon_{it}\end{aligned} \quad (1)$$

Where, ILLIQ is dependent variable measuring stock liquidity, α is constant, βs are the coefficients of the variables, subscript *i* denotes firm *i* and t denotes fiscal year t, where t=1, 2, 3……..12. $\mathrm{CG-score}$ is corporate governance score, Judicial efficiency indicates effectiveness of Judicial system, whereas Political stability represents the extent of corruption in government and the nature of country's political system, Volatility is return volatility, Volume is trading volume, Institutional is institutional ownership, State is state

ownership, Foreign is foreign ownership, INSIDOWN is insider ownership, R&D is research and development expenditure, Tangibility is asset tangibility, Uniqueness is asset uniqueness, Analysts is number of analysts, LnAssets is firm size, FRAGE is firm listing age, Family represents %age of shares held by family members and ε is the error term. Table 1 shows the variables used in the study, their measurement procedure, and the data sources. Model 2 is given as follows:

$$\text{Log (ILLIQ)}_{it} = \alpha + \beta_1(\text{D}_{\text{Civil}}\text{law})_{it} + \beta_2(\text{D}_{\text{German}}\text{origin})_{it} + \beta_3(\text{D}_{\text{French}}\text{origin})_{it} + \beta_4(\text{CG} - \text{score} \times \text{D}_{\text{Civil}}\text{law})_{it} + \beta_5(\text{CG} - \text{score} \times \text{D}_{\text{German}}\text{origin})_{it} + \beta_6(\text{CG} - \text{score} \times \text{D\_French origin})_{it} + \beta_7(\text{Judicial efficiency})_{it} + \beta_8(\text{Political stability})_{it} + \beta_9(\text{Volatility})_{it} + \beta_{10}\text{Log(Volume)}_{it} + \beta_{11}(\text{Institutional})_{it} + \beta_{12}(\text{State})_{it} + \beta_{13}(\text{Foreign})_{it} + \beta_{14}(\text{INSIDOWN})_{it} + \beta_{15}(\text{Family})_{it} + \beta_{16}(\text{R\&}D)_{it+} + \beta_{17}(\text{Tangibility})_{it} + \beta_{18}(\text{Uniqueness})_{it} + \beta_{19}(\text{Analysts})_{it+} + \beta_{20}(\text{LnAssets})_{it} + \beta_{21}(\text{FRAGE})_{it} + \varepsilon_{it} \quad (2)$$

Where, D_Civil law is a dummy variable taking the value 1 if the firm belongs to Civil law and 0 otherwise. D_German origin is a dummy variable taking the value 1 if the firm belongs to German origin and 0 otherwise. D_French origin is a dummy variable taking the value 1 if the firm belongs to French origin and 0 otherwise. CG-score ×D_Civil law is an interaction term of CG-score and dummy variable for firm in countries with Civil law origin. CG-score×D_ German origin is an interaction term of CG-score and dummy variable for firm with German origin. CG-score×D_ French origin is an interaction term of CG-score and the dummy variable for firm with French origin.

Table 1: Summary of Variables

Variable	Label	Description	Data Source
Dependent Variables			
Illequidity	ILLIQ	Amihud (2002) illiquidity measure	Thompson Worldscope and Bloomberg
Tobin's Q	lnTQ	Sum of the market value of equity plus book value of debt scaled by book value of assets	Annual Report
Independent Variables			
Corporate Governance Score	CG-score	The CG-score is a checklist containing 32 items in 4 categories	Annual Report
Judicial Efficiency	Judicial Efficiency	Judicial Efficiency data are taken from country risk-rating agency (i.e., Business International Corp). A 1-10 rating scale is used where lower score indicates lower efficiency	Business International Corp

Political Stability	Political Stability	Political stability data are taken from country risk-rating agency (i.e., ICRG) ranging from 1-100, where lower score indicates unstable political system	ICRG
Return Volatility	Volatility	Standard deviation of daily stock returns	Thompson Worldscope and Bloomberg
Trading Volume	Volume	Mean daily dollar trading volume	Thompson Worldscope and Bloomberg
Institutional Ownership	Institutional	Total shares owned by institutions/total issued shares	Annual Report
State Ownership	State	Total shares owned by state/total issued shares	Annual Report
Foreign Ownership	Foreign	Total shares owned by foreigners/total issued shares	Annual Report
Insider Ownership	INSIDOWN	Total shares held by management and the board/total issued shares	Annual Report
R&D Expenditure	R&D	R&D expenditure/sales	Annual Report
Asset Tangibility	Tangibility	Net property, plants, and equipment/book value of total assets	Annual Report
Asset Uniqueness	Uniqueness	Selling, general, and administrative expenses/total sales	Annual Report
Number of Analysts	Analysts	The number of analysts following the company	Annual Report
Firm Size	LnAssets	Natural log of total assets	Annual Report
Firm Age	FRAGE	Actual listing status	Bloomberg
Family	Family	%age of shares held by family members	Bloomberg

Table 2 shows the distribution of governance index i.e. CG-score across countries and legal origin. The sample of firms are selected from 10 countries – Pakistan, Singapore, Malaysia, Hong Kong, Turkey, Indonesia, Brazil, Korea, China, and Japan. Overall, the mean CG-score is 51.46 and vary from a country average of 37.34 in Brazil to 67.32 in Singapore. The highest variability occurs in countries with French origin. The La Porta et al. (1998) classification is used to categories firms into Common-law or Civil-law regime.

The following table shows the summary statistics (i.e., mean, median, minimum, maximum, and standard deviation) of governance score for each country for the period 2003-2014. It also shows the distribution of CG-score across countries and legal origin. Firms are classified into English (4 countries), German (3 countries), and French origin (3

countries). We employ governance ratings relevant to operational/financial transparency and protection of investors (i.e., 18 governance standards) in three categories.

Table 2: Summary Statistics and Distribution of CG-score across Countries and Legal Origin

Legal Origin	Country	Obs	Mean	Median	Min.	Max.	Std Dev
English	**Pakistan**	1775	48.21	44.83	15.25	67.68	10.56
	Singapore	432	67.32	68.54	28.43	73.43	8.43
	Malaysia	504	65.45	62.21	21.56	77.34	9.34
	Hong Kong	476	58.51	53.32	11.24	81.87	7.76
French	**Turkey**	465	52.45	51.65	13.56	70.76	12.32
	Indonesia	433	38.21	37.87	19.61	68.86	14.41
	Brazil	354	37.34	36.45	14.50	72.25	11.17
German	**Korea**	546	46.28	47.76	18.41	61.80	7.43
	China	562	49.43	49.64	20.01	68.90	8.04
	Japan	514	51.76	50.16	25.65	69.82	11.45

3. Empirical Findings and Discussion

3.1 Descriptive Statistics

Table 3 shows the descriptive statistics of dependent and control variables employed in the study. The table shows the mean, standard deviation, median, minimum, and maximum values. The illiquidity proxy of Amihud ranges from 2.11 to 42 with the mean value of 22.34. CG-score has a mean value of 0.52 with minimum and maximum values of 0.09 and 0.85 respectively. The mean rating for judicial efficiency is 5.72, whereas the mean rating of Political stability is 58.59. Return volatility ranges from 0 to 0.56 with the mean value of 0.06, while trading volume ranges from 1,231 to 404,134 (in $ thousand) with the mean value of 20,439. The mean percentage of shares held by institutional investors is 0.43 with the minimum and maximum values of 0.01 and 0.98, respectively. Furthermore, the mean of state ownership is 0.28 with the minimum and maximum values of 0.03 and 0.87, respectively. On average, foreign investors own 19% of the equity capital. The averaged insiders' ownership is 0.16 with a maximum of 0.74. Table 3 further indicates that the percentage of shares held by family members is 12%. The mean R&D expenditure ratio of sample firms is 0.03 with a maximum value of 9.86. The variable tangibility and uniqueness has mean values of 0.37 and 0.14 respectively. The descriptive statistics show the mean number of analysts is (6.94). Further, it can be seen that sample firms has an average listing status of 20.98 years and mean total assets (firm size) of 15,509 million dollars.

Table 3 shows descriptive statistics of CG- score, illiquidity, and other control variables over the period 2003-2014. ILLIQ is dependent variable measuring stock liquidity, CG – score is corporate governance score, Judicial efficiency indicates effectiveness of judicial system whereas Political stability represent the extent of corruption in government and the nature of country's political system, Volatility is return volatility, Volume is trading volume, Institutional is institutional ownership, State is state ownership, Foreign is foreign

ownership, INSIDOWN is insider ownership, R&D is research and development expenditure, Tangibility is asset tangibility, Uniqueness is asset uniqueness, Analysts is number of analysts, LnAssets is firm size, FRAGE is firm listing age, Family is %age of shares held by family members.

Table 3: Descriptive Statistics

	Mean	SD	Min	25	50	75	Max
ILLIQ	22.34	12.24	2.11	12.87	21.12	26.45	42
CG-score	0.52	0.16	0.09	0.32	0.45	0.54	0.85
Judicial Efficiency	5.72	2.45	2.01	3.41	6.91	7.21	9.05
Political Stability	58.59	15.31	35.24	41.85	56.64	58.26	71.17
Volatility	0.06	0.04	0.00	0.01	0.03	0.07	0.56
Volume ($ in thousands)	20,439	31,546	1,231	2,742	12,567	16,856	404,134
Institutional	0.43	0.34	0.01	0.21	0.39	0.55	0.98
State	0.28	0.18	0.03	0.13	0.19	0.31	0.87
Foreign	0.19	0.18	0.01	0.12	0.15	0.21	0.79
INSIDOWN	0.16	0.15	0.00	0.05	0.09	0.18	0.74
Family	0.12	0.15	0.00	0.06	0.09	0.14	0.71
R&D	0.03	0.18	0.00	0.00	0.00	0.01	9.86
Tangibility	0.37	0.16	0.00	0.30	0.42	0.50	0.97
Uniqueness	0.14	0.15	0.00	0.6	0.14	0.18	1.99
Analysts	6.94	7.05	0	2	5	10	37
LnAssets ($ in millions)	15,509	68,564	7	687	1,945	6,335	1,485,111
FRAGE	20.98	18.73	1	8	18	33	81

3.2 Firm-Level Governance Structure, Legal Origin, and Stock Market Liquidity: Univariate Statistics

Table 4 shows the analysis of variations in stock market liquidity with respect to variations in firm-level governance structure as proxied by the CG-score. Firm-level governance structure is categorized into two groups' high governance firms and weak governance firms on the basis of their median score following Ronnie Lo (2009) and Cheung et al. (2011). The 2 × 2 matrix contains the change in illiquidity ratio due to variation in CG-score for each group of firms. Further, a comparison is made in mean illiquidity between firms from Common and Civil law origin. The results indicate that there is on average increase in illiquidity for companies that displays weaken firm-level governance and vice versa. Hence, it is proven that there is a correlation between firm-level governance structure and stock market liquidity regardless of the legal origin. Further, the difference (0.67) is even stronger for firms with a Common law origin as compare to the difference (0.22) in Civil

law origin. This result implies that better governance has more significant influence on stock market liquidity in Common law than Civil law countries.

This table reports the link between firm-level governance structure and liquidity in stock market. Firms are categorized as high or low corporate governance firms based on their median CG-score. Then, a comparison is made to identify the differences in mean illiquidity between firms from Common and Civil law origin. For determining the statistical significance of differences, the study employs T-test and Mann Whitney test.

Table 4: Firm-Level Governance Structure, Legal Origin and Stock Market Liquidity

	Low Governance	**High Governance**	
	Log (ILLIQ)	**Log (ILLIQ)**	**Mean Diff**
Common law	0.22	-0.45	0.67**
Civil law	1.33	1.01	0.22***
Mean Diff	-1.11***	-1.46**	-0.35***

*, **, ***= significance level at the 0.10, 0.05 and 0.01.

Table 5 shows the mean differences in Illiquidity, CG-score, and other control variables employ in the study with the objective to explore whether these indicators differs in countries with different legal and regulatory frameworks. For this purpose, t-test and Mann Whitney test is used to determine the statistical significance of the differences. From the results, it can be seen that Common law firms have lower illiquidity values implying high stock market liquidity, higher governance scores, higher efficiency of judicial system, stable political system, lower return volatility, and higher trading volume as compare to firms with Civil law origin.

Table 5 also shows mean differences in illiquidity, CG-score, and other control attributes between Common and Civil law origin firms. T-test and Mann Whitney test is used to determine the statistical significance of the differences. ILLIQ is dependent variable measuring stock liquidity, $CG-score$ is corporate governance score, Judicial efficiency indicates effectiveness of judicial system whereas Political stability represent the extent of corruption in government and the nature of country's political system, Volatility is return volatility, Volume is trading volume, Institutional is institutional ownership, State is state ownership, Foreign is foreign ownership, INSIDOWN is insider ownership, R&D is research and development expenditure, Tangibility is asset tangibility, Uniqueness is asset uniqueness, Analysts is number of analysts, LnAssets is firm size, FRAGE is firm listing age, Family is %age of shares held by family members.

Table 5: Uni-variate Test Results

	Common Law	Civil Law	Mean Diff	German	Mean Diff	French	Mean Diff
Log (ILLIQ)	-0.22	0.88	-1.1***	1.23	-1.45***	1.32	-1.54***
CG-Score	0.61	0.44	0.17*	0.38	0.23***	0.34	0.27***
Judicial Efficiency	7.12	4.32	2.8**	5.11	2.01	4.33	2.79
Political Stability	68.41	48.76	19.65***	53.17	15.24***	42.65	25.76*
Volatility	0.04	0.07	-0.03***	0.06	-0.02***	0.05	-0.01***
Volume	25,455	15,423	10,032*	17,432	8,023***	15,354	10,101***
Institutional	0.51	0.34	0.17***	0.36	0.15*	0.33	0.18**
State	0.26	0.29	-0.03	0.22	0.04**	0.24	0.02
Foreign	0.21	0.16	0.05**	0.13	0.08**	0.11	0.1**
INSIDOWN	0.13	0.19	-0.06**	0.17	-0.04*	0.21	-0.08***
Family	0.09	0.15	-0.06**	0.18	-0.09***	0.19	-0.1
R&D	0.04	0.02	0.02*	0.03	0.01**	0.01	0.03*
Tangibility	0.35	0.38	-0.03***	0.39	-0.04**	0.36	-0.01**
Uniqueness	0.14	0.13	0.01**	0.11	0.03*	0.08	0.06***
Analysts	8.45	5.43	3.02***	5	3.45***	4	4.45***
Lnassets	18,523	12,495	6,028**	13,634	4,889***	12,324	6,199**
FRAGE	23.43	18.53	3.9***	17.24	6.19**	16.21	7.22**

*, **, ***= significance level at the 0.10, 0.05 and 0.01.

Table 6 shows the results of pooled OLS. Columns (1) through (3) show the results when we regress Amihud's (2002) Illiquidity ratio on CG-score and other control variables by taking data from 10 emerging markets. Columns (4) show the findings when the sample is restricted to only Pakistani firms. Corporate governance is considered as a device to increase market transparency; whereas liquidity of stock market is strongly related to information transparency (Chung, Elder, & Kim, 2010). Hence, this article tests the association between firm-level governance structure and liquidity of stock market, utilizing a governance score consisting of attributes that are likely to affect operational/financial transparency. We first regress Log (Illiquidity) on CG-score and various control attributes. There is a statistically significant negative impact of CG-score on the Amihud illiquidity across all model specifications and estimation methods. The result implies that firms with better firm-level governance have higher stock market liquidity. The finding is in agreement with the result of Tang, and Wang (2015) in Chinese context. Hence, these findings confirm the notion that higher governance firms will have improved stock market liquidity through mitigating information based trading. Amihud illiquidity is significantly lower for stocks from countries with higher political stability and judicial efficiency. Hence, legal institutions (i.e., judicial efficiency & political stability) enhance level of investor's participation and hence stock market liquidity. Legal institutions/legal rules prevent minority shareholders expropriation and as a result shape their willingness to participate in equity markets. Independent judiciary is crucial for the implementation of the

rule of law which in turn depends on stable political environment. The evidence show that low investors participation in weak legal institutions countries results in ownership concentration (i.e., smaller float) and narrow equity markets (La Porta et al., 1998). Narrow capital markets and less float further results in less depth and higher liquidity costs.

Log (Illiquidity) is significantly and positively related to return volatility, and negatively to trading volume. As stock returns are volatile, the probability of negotiating with an informed investor increases. This finding favors the argument that liquidity providers generally face greater adverse selection risks in riskier stocks. The price impact of trades is smaller for stocks with larger trading volumes, perhaps indicating that the price of these stocks is more informative. This finding is in line with that of Tang and Wang (2015).

Table 6 also shows that both institutional ownership and Amihud illiquidity are significantly negatively correlated. It may be due to the fact that institutional investors help in reducing asymmetric information between insiders and liquidity providers through effective monitoring of CG. Indeed, institutional investors trade in significant trading volumes on their portfolio. Their presence is a guarantee for minority interest's protection (Ajina & Lakhal, 2010). The variable state ownership is insignificant, however, in case of Pakistan, we show that investors are more confident and prefer to raise capital in firms controlled by the government. As a consequence, the presence of the state increases the firm's liquidity due to their monitoring role in markets with weak regulation i.e. emerging markets (Ang & Ding, 2006; Wu et al., 2009) which decreases expropriation risk. The results show that the regression coefficients on foreign ownership (Foreign) are negative and significant across all model specifications and estimation methods. The reason for this result is the fact that in terms of lower trading costs foreign investors bring net benefit to the market by increasing competition in the price discovery process. The results further document that insider ownership is positively and significantly linked to stock illiquidity. That is, stock liquidity decreases as the percentage of capital owned by the insider shareholder increases. This result favors the findings of Attig et al. (2006) and Jacoby and Zheng (2010). This implies that insider either have private information or delay the disclosure of information to achieve their selfish agenda Al- Sharif et al. (2015). This in turn will create information asymmetry and thus, lower stock liquidity. The coefficients for family ownership are positive and significant indicating the unwillingness of investors to invest in firms controlled by families: They expect high expropriation risk in such firms, particularly when the market is poorly regulated (Chai et al., 2014).

Both R&D expenditures and analyst following have a significant and positive impact on Amihud's illiquidity measure. The result favor the notion that the extent of asymmetric information in a firm is likely to increase with the size of its intangible assets as asymmetric information problem increases with high R&D intensity due to difficulty of predicting payoffs from R&D. In addition, analysts have larger incentive to follow a stock with higher asymmetric information because private information value rises with asymmetric information and market makers post wider spreads for higher analysts following stocks. Firm size and asset uniqueness both have a negative impact on stock market illiquidity indicating bigger the firm higher the liquidity. This result supports the findings of Lee and Chung (2015) that larger firms generally disclose more inside information and thus the extent of insider trading is lower. Finally, asset tangibility and firm age does not appear to have an impact on liquidity of stock market. The results are remarkably robust to including

controls for industry, year, and country dummies. Furthermore, similar results were found when we run the regression using only Pakistani firms.

The various forms of regression equation 1 using OLS are shown in Table 6. The link between CG and liquidity is examined using the Amihud illiquidity as measure stock market liquidity. Model 1, 2, and 4 reports the findings when time and industry dummies are included in the model. Model 3 shows the findings when industry, time, and country dummies are included. Column 4 presents the results when the sample is restricted to only Pakistani firms.

Table 6: Firm-level Governance and Liquidity of Stock Market

	(1)	(2)	(3)	(4) PSX
CG-score	-0.1029*** (0.000)	-0.3827*** (0.000)	-0.1996*** (0.000)	-0.1232*** (0.000)
Judicial Efficiency	-0.0142* (0.063)	-0.0133* (0.057)	-0.0119* (0.071)	0.0212 (0.615)
Political Stability	-0.0131** (0.024)	-0.0143** (0.015)	-0.0231** (0.021)	-0.0101** (0.012)
Volatility	0.1223*** (0.000)	0.1543** (0.027)	0.4346*** (0.000)	0.2141*** (0.000)
Volume	-0.2195** (0.020)	-0.1947** (0.022)	-0.1433** (0.027)	-0.2353** (0.032)
Institutional		-0.0231** (0.024)	-0.0121** (0.034)	-0.0411** (0.021)
State		-0.0012 (0.234)	-0.0009 (0.435)	-0.0097* (0.064)
Foreign		-0.0231*** (0.000)	-0.0229** (0.013)	-0.0164** (0.014)
INSIDOWN		0.0027** (0.042)	0.0024** (0.037)	0.0011** (0.026)
Family		0.0009** (0.038)	0.0008** (0.032)	0.0021** (0.046)
R&D		0.0527*** (0.000)	0.0688*** (0.000)	0.0312*** (0.000)
Tangibility		0.0810 (0.231)	0.0387 (0.756)	0.0945 (0.465)
Uniqueness		-0.1835** (0.026)	-0.1528*** (0.000)	-0.0621*** (0.000)
Analysts		0.0036** (0.026)	0.0038** (0.019)	0.0031** (0.016)
Ln Assets		-0.0209*** (0.000)	-0.0234*** (0.000)	-0.0132*** (0.000)

FRAGE		0.0213 (0.243)	0.0324 (0.534)	0.0243 (0.745)
Intercept	1.1879*** (0.000)	1.272*** (0.000)	1.2389*** (0.000)	1.342*** (0.000)
R^2	0.5546	0.6134	0.6124	0.6335
No. of Observations	6,061	6,061	6,061	1,775
Industry Dummies	Added	Added	Added	Added
Country Dummies	No	No	Added	No
Time dummies	Added	Added	Added	Added

*, **, ***= significance level at 0.10, 0.05, and 0.01 percent

3.3 Governance Quality, Regulatory Framework, and Stock Market Liquidity

The CG literature is rather ambiguous on the link between legal and regulatory environments and corporate governance structure. Some studies argue that both legal origin and firm-level governance structure should substitute each other (substitution hypothesis). Hence, in this case country level higher shareholder protection rights will results in decreasing the value of firm-level governance structure and thus its impact on liquidity of stock market will be weakened. As an alternative, if firm-level governance structure and country's legal origin serve as complements (regulatory pressure hypothesis), strong legal environment will boost firms monitoring, akin to a "best practices" approach, hence strengthening the impact of firm-level governance structure on stock market liquidity.

In this article, a unique approach is presented to test whether the manner through which corporate governance structure influence stock market liquidity depends on countries' legal systems. We also shed additional light on these issues by analyzing the impact of corporate governance at the firm level and legal systems at the country level on stock market liquidity using data from 10 emerging countries. Prior research suggests legal environment for the protection of shareholder right have important consequences on stock market liquidity.

The legal system governs both the rights of management and the rights of investors. The recent strand of literature argues that there are significant variations in shareholder protection rights in countries. There are two legal origins in the world i.e. Common law and Civil law, the former provides strong shareholder protection rights while the latter provides least amount of protection specially the French Civil law. Table 7 shows the results of firm level governance structure and countries legal origin on the liquidity of the stock market. Columns (1) and (2) show the findings when Civil law (i.e. German & French) dummy variables are included in the regression. Columns (3) to (5) show the results when we include both the Civil law dummy variable and its interaction with firm level governance in the regression. Column (6) and (7) reports the findings when judicial efficiency and political stability are included in the model.

From the results, it can be seen that the coefficient on dummy variable D_Civil law (0.0966) is positive and significant. In addition, we also employ dummy variable for French and German legal origin (i.e., categories for Civil law). The result indicates that the coefficient on both the dummy variables French (0.0364) and German (0.0012) origin are significantly positive; however the dummy variable French origin coefficient is the highest. This result implies that liquidity costs are lower for firms in countries with common law origin as compare to Civil law countries, perhaps because of their better legal and regulatory environments that protect shareholder rights as well as higher corporate governance structures.

This study also tests the interaction of CG-score and country's legal origin on stock market liquidity. Hence, when we include both firm level governance and its interaction with Civil law dummy variable in the regression, we find that the coefficients are positive and statistically significant. More specifically, the results reveal that the coefficient on CG-score×D_Civil law (0.0884) is positive and significant as compare to the interaction term CG-score×D_Common law. Similarly, the coefficient on interaction term CG-score×D_German origin (0.0322) and interaction term CG-score×D_French origin (0.0960) is positive and significant. Nonetheless, it can be seen that the coefficient on interaction term CG-score×D_French origin (0.0960) is the highest. Nevertheless, although better firm level governance enhances liquidity of stock, this effect is weaker for companies in countries with Civil origin, as compare to companies in Common law countries. The result implies that CG role is more significant in enhancing liquidity in common law countries than in Civil law countries. This finding is in favor of prior research that the Common law countries have, on average, better legal environments for shareholders protection as well as better corporate governance structures (Lee & Chung, 2015). The stronger investor protection in the Common law system may reduce information asymmetry among investors and hence increase stock market liquidity. To sum up, using data from 10 emerging markets, we find strong evidence that countries with common law origin have lower illiquidity implying higher stock market liquidity. The findings favor the hypothesis that firm-level governance structure and country's legal origin complements each other.

The table shows the relation between corporate governance structure, legal origin, and stock market liquidity. The Amihud illiquidity is used as a measure of stock market liquidity. D_Civil law is a dummy variable taking the value 1 if the firm belongs to Civil law and 0 otherwise. D_German origin is a dummy variable taking the value 1 if the firm belongs to German origin and 0 otherwise. D_French origin is a dummy variable taking the value 1 if the firm belongs to French origin and 0 otherwise. CG-score ×D_Civil law is an interaction term of CG-score and dummy variable for firm in countries with Civil law origin. CG-score×D_ German origin is an interaction term of CG-score and dummy variable for firm with German origin. CG-score×D_ French origin is an interaction term of CG-score and dummy variable for firm with French origin. Judicial efficiency indicates effectiveness of judicial system whereas Political stability represent the extent of corruption in government and the nature of country's political system, Volatility is return volatility, Volume is trading volume, Institutional is institutional ownership, State is state ownership, Foreign is foreign ownership, INSIDOWN is insider ownership, R&D is

research development expenditure, Tangibility is asset tangibility, Uniqueness is asset uniqueness, Analysts is number of analysts, LnAssets is firm size, FRAGE is firm listing age, Family is %age of shares held by family members.

Table 7: Governance Quality, Legal Environment, and Market Liquidity

	1	2	3	4	5	6	7
D_Civil Law	0.0966 *** (0.000)						
D_German Origin		0.0012* (0.355)					
D_French Origin		0.0364** (0.019)					
CG-Score× D_Civil Law			0.0884 *** (0.000)				
CG-Score× D_German Origin				0.0322 *** (0.000)			
CG-Score× D_French Origin					0.0960** (0.031)		
Judicial Efficiency						-0.102 (0.354)	
Political Stability							-0.0242 *** (0.000)
Volatility	0.0912 *** (0.000)	0.0723 *** (0.000)	0.1143 *** (0.000)	0.0832 *** (0.000)	0.1242 *** (0.000)	0.1432 *** (0.000)	0.1143 *** (0.000)
Volume	-0.1932 *** (0.000)	-0.2243 *** (0.000)	-0.2165 *** (0.000)	-0.1532** (0.029)	-0.3214 *** (0.000)	-0.2543 *** (0.000)	-0.2143 *** (0.000)
Institutional	-0.0134 ** (0.017)	-0.0423 ** (0.033)	-0.0643 ** (0.038)	-0.0736 ** (0.031)	-0.0565 ** (0.042)	-0.0423 ** (0.035)	-0.0524 ** (0.026)
State	-0.0004 (0.856)	-0.0003 (0.947)	0.0018 (0.748)	-0.0020 (0.558)	-0.0019 (0.101)	-0.0015 (0.231)	-0.0020 (0.153)
Foreign	-0.0147 ** (0.026)	-0.01791 ** (0.018)	-0.0148 ** (0.043)	-0.0116 ** (0.031)	-0.0112 ** (0.049)	-0.0143 ** (0.042)	-0.0125 ** (0.034)

INSIDOWN	0.0023 *** (0.000)	0.0017 *** (0.000)	0.0022 *** (0.000)	0.0023 *** (0.000)	0.0035 *** (0.000)	0.0029 *** (0.000)	0.0031 *** (0.000)
Family	0.0016** (0.017)	0.0051** (0.012)	0.0001** (0.013)	0.0189** (0.015)	0.0071** (0.024)	0.0061** (0.011)	0.0059** (0.016)
R&D	0.0435 *** (0.000)	0.0654 *** (0.000)	0.0324 *** (0.000)	0.0243 *** (0.000)	0.0432 *** (0.000)	0.0342 *** (0.000)	0.0265 *** (0.000)
Tangibility	0.0314 (0.400)	0.0534 (0.892)	0.0211 (0.646)	0.0512 (0.154)	0.0142 (0.482)	0.0165 (0.536)	0.0178 (0.456)
Uniqueness	-0.1342 *** (0.000)	-0.1154 *** (0.000)	-0.0976 *** (0.000)	-0.1342 *** (0.000)	-0.0861 *** (0.000)	-0.0635 *** (0.000)	-0.0967 *** (0.000)
Analysts	0.0014** (0.019)	0.0043** (0.031)	0.0013** (0.035)	0.0065** (0.029)	0.0062** (0.021)	0.0075** (0.034)	0.0069** (0.043)
Ln Assets	-0.0543 *** (0.000)	-0.0243 *** (0.000)	-0.0432 *** (0.000)	-0.0213 *** (0.000)	-0.0865 *** (0.000)	-0.0798 *** (0.000)	-0.0847 *** (0.000)
FRAGE	0.0534 (0.354)	0.0765 (0.132)	0.0456 (0.232)	0.0823 (0.143)	0.0536 (0.121)	0.0721 (0.314)	0.0644 (0.534)
Intercept	4.5924 *** (0.000)	11.3399 *** (0.000)	1.7883 *** (0.000)	6.4081 *** (0.000)	0.0181 *** (0.000)	0.0175 *** (0.000)	0.0168 *** (0.000)
R2	0.5632	0.5689	0.5746	0.5767	0.5987	0.5834	0.5869
Industry Dummies	Added	Added	Added	Added	Added	Added	Added
Time Dummies	Added	Added	Added	Added	Added	Added	Added

*, **, ***= significance level at the 0.10, 0.05 and 0.01.

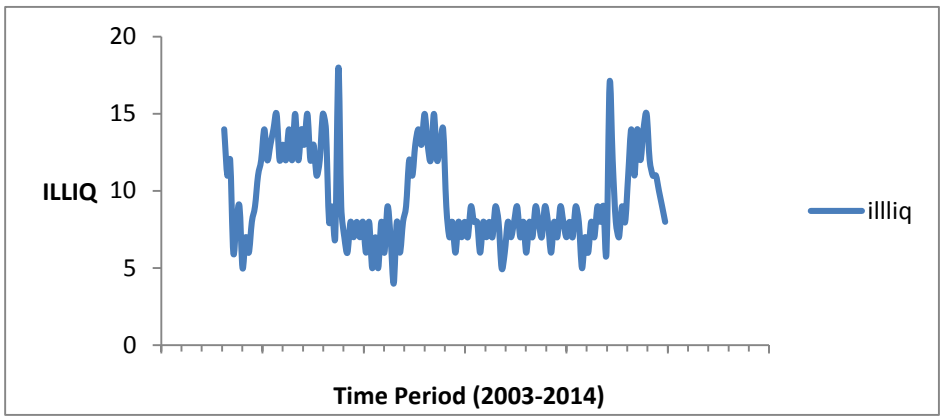

Figure. 1 Illiquidity-Malaysia

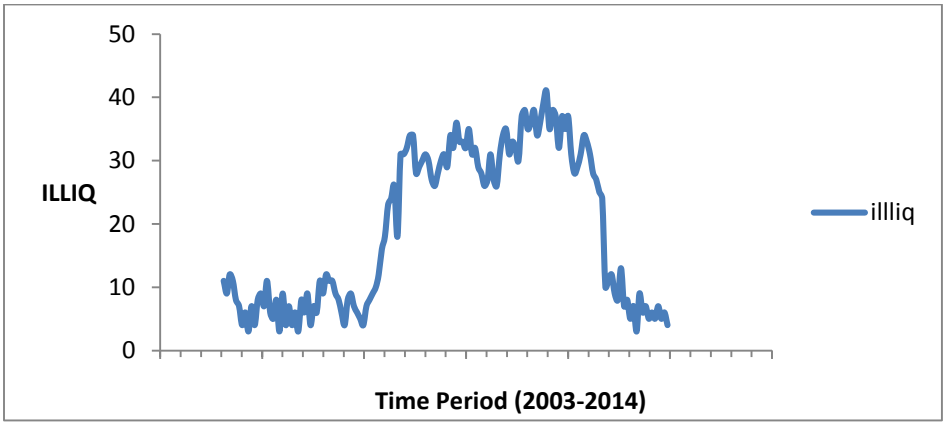

Figure. 2 Illiquidity-Pakistan

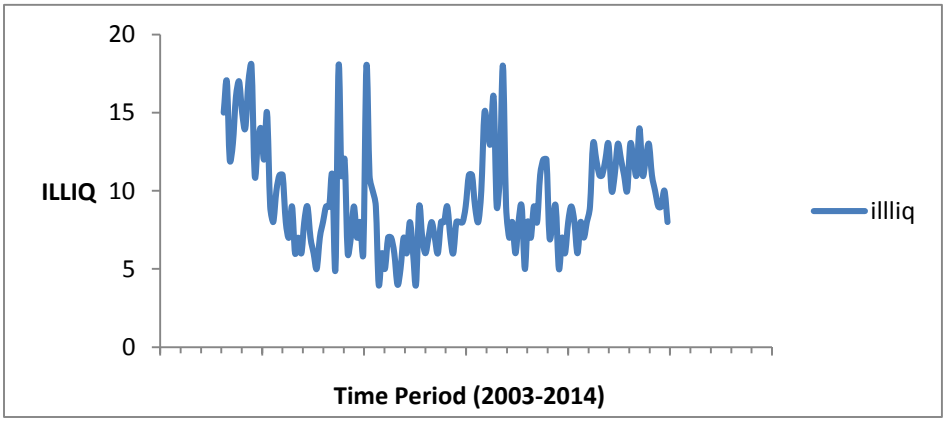

Figure. 3 Illiquidity-Singapore

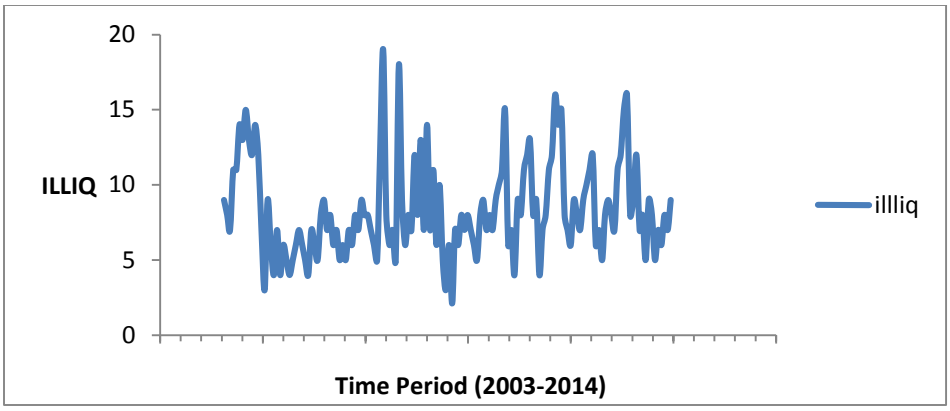

Figure. 4 Illiquidity-Hong Kong

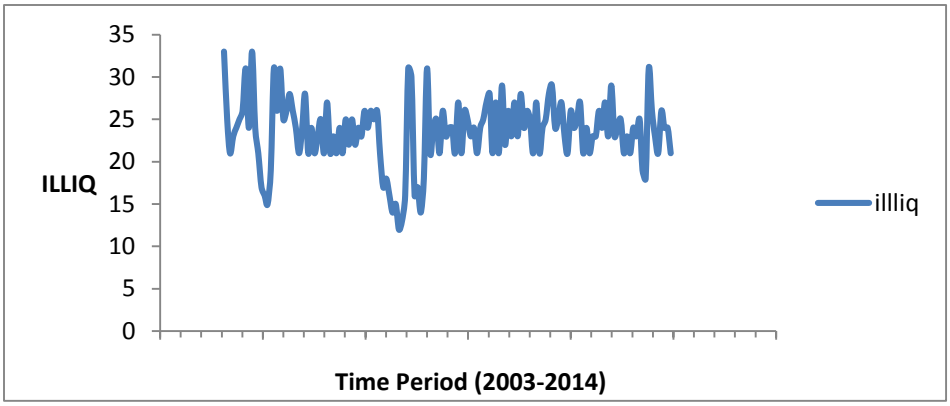

Figure. 5 Illiquidity-Turkey

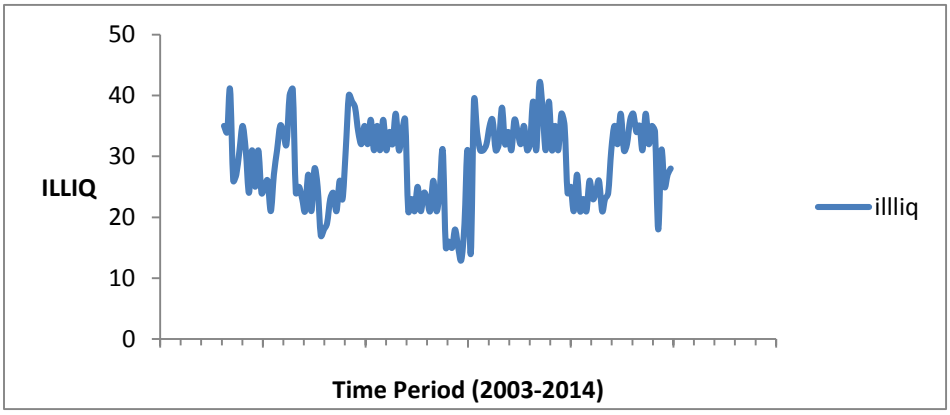

Figure. 6 Illiquidity-Indonesia

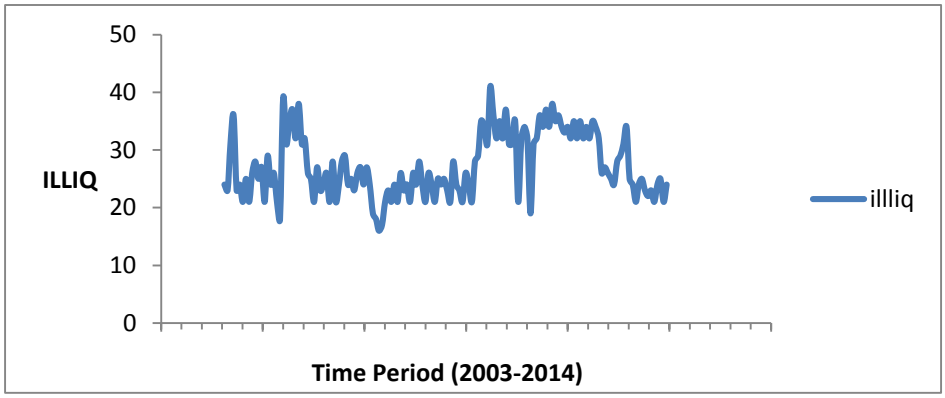

Figure. 7 Illiquidity-Brazil

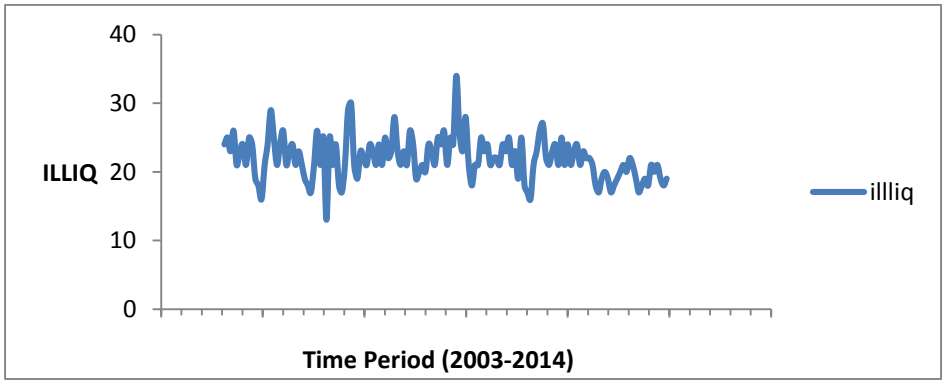

Figure. 8 Illiquidity-Korea

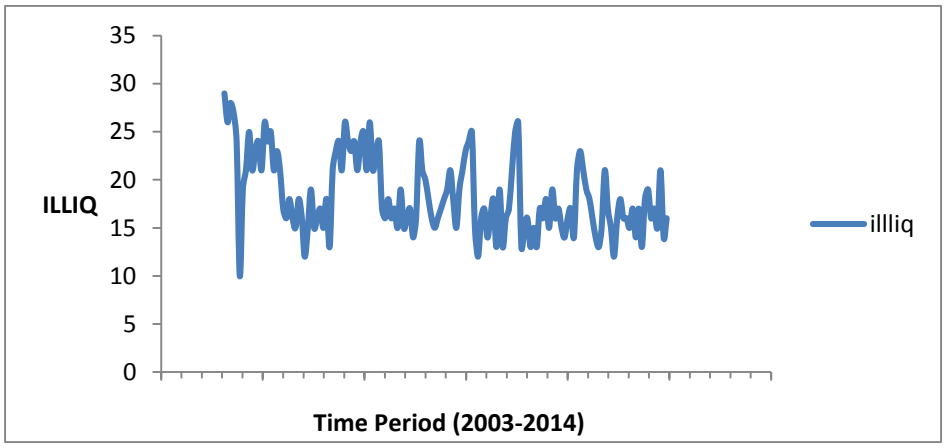

Figure. 9 Illiquidity-China

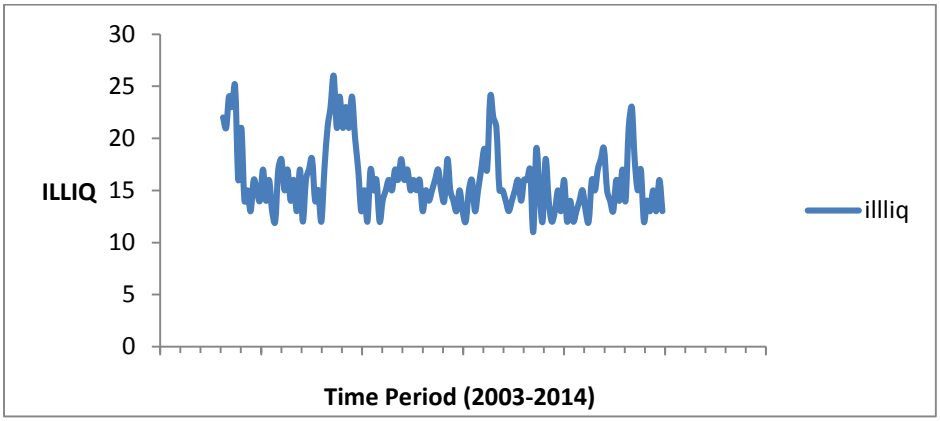

Figure. 10 Illiquidity-Japan

4. Corporate Governance and Market Value

4.1 Background and Theoretical Orientation

The theoretical foundation of this study is premised primarily on the agency theory. The agency theory is pertinent to this study as it explains the conditions under which a company is likely to adopt corporate governance practices. The influence of agency theory in the formulation of CG principles, standards, and codes has been instrumental. In the agency theory, shareholders are the firm owners and the firm has a binding fiduciary duty to put their needs first, to increase value for them. Morris (1987) suggests that the agency theory is based on the problem of information asymmetry between company's management and investors.

However, due to the differences in environmental characteristics such as culture, economic, and capital market developments, the applicability of agency theory may be different in developing countries because ownership structure of most of the firms is highly concentrated. Thus, monitoring costs for agency problems may be less. This could lead to a lesser problem in relation to ownership and control separation.

Contrary to the agency theory that only gives importance to shareholders interests, the theory of stakeholder is a broader concept that considers the interests of diverse constituents. Stakeholder theory revolves around social responsibility and ethical considerations rather than around directors monitoring roles or shareholder value maximization. The Stewardship theory unlike the agency theory is an alternative theory for researchers to pursue situations where management as stewards is motivated to act in the interests of its owners (Clark, 2004; Alghamdi, 2012). Furthermore, legitimacy and stakeholder theories can be regarded as complementing each other. The stakeholder theory provides the basis for legitimacy theory. Companies have to legitimize their actions to the society at large.

4.2 Literature Review

The CG practice developed primarily in the last few years (Elbadry et al., 2015) and has become a major issue in the corporate practices of developed as well as developing countries (Filatotchev et al., 2013). A vast literature examined the relation between CG and firms' market value. Nevertheless, most of this literature (e.g., Fosberg, 1989; Agrawal & Knoeber, 1996; Bhagat & Black, 2002; Lehn et al., 2009; Wintoki et al., 2010) has focused on firms from developed markets and employed distinct methodologies to address particular elements of CG in segregation, likewise shareholder activism, composition of board, insider share ownership, compensation of executives, or takeover defenses, which makes it difficult to draw conclusions regarding an integrated model of good CG.

According to Cheung et al. (2011) in recent times, a new approach for investigating CG has come into use, in order to gauge governance practices, researchers are establishing composite indices. The seminal paper of GIM (2003) investigates the association between CG and firm value, as well as long-term equity returns, and accounting measures of performance for the period 1990-1999. The sample of the study comprises of 1500 US firms. Using 24 measures of CG provided by IRRC, they develop a Governance Index (G-index) to measure the level of shareholders rights. Using Ordinary Least Square (OLS) regression, they present a positive link between CG and investment performance. Further, they show that firms have greater shareholder rights when they have lower G-Index and thus, have higher stock returns, higher valuations and better operating performance.

Black et al. (2006b) explore the association between CG and a firm's value for a sample of 515 firms listed on Korean Stock Exchange during the period 2001. They develop a CG index on the basis of 2001 Korean Stock Exchange survey comprising of six categories. Their OLS results indicate that a worst-to-best change in CG index predicts an increment of 0.47 in the value of Q (about a 160 percent rise in prices of shares). As compare to the OLS coefficients, 2SLS and 3SLS coefficients are highly significant and larger than OLS coefficients.

Using a sample of 2,106 firms for the period of 2002-2003, Larcker et al. (2007) construct a new set of indices from a comprehensive set of structural indicators of CG. Using logistic and OLS regression they document that theses governance indices are linked to excess stock returns and firm's operating performance but has a very modest and mixed relation with abnormal accruals and almost no association with accounting restatements.

For a sample of Fortune 100 largest listed Chinese firms, Cheung et al. (2008) examined the link between governance and firm value for the period 2004. They extract eighty six governance mechanisms from (OECD, 2004) principles to construct an index. They fail to find any significant association between CG and a firm's value. They conclude that further investigation is required to explore governance-performance link because their study consist of a single year 2004 and a limited sample of 100 firms.

Cheung et al. (2011) investigate whether variations in the quality of CG affect subsequent market valuation. They construct a composite CG scorecard from (OECD, 1999, 2004) which has 5 sub-indices and 86 CG questions. They use a sample of 168 firms in 2002 and 2004, and 174 firms in 2005. Using OLS estimation they show that variations in CG quality positively and significantly affect subsequent market valuation, which imply that firms

experience decline in market valuation when they show deterioration in the CG quality and vice versa.

Using OLS regression, Brown and Caylor (2009) investigate the association between CG measured by ISS governance standards and a firm's operating performance measured by ROA and ROE for the period 2003. The study pinpoints six provisions of CG that have a statistically significant positive association with operating performance in two of their six regressions, nonetheless they failed to find any significant association between the nine US stock exchanges mandated provisions and operating performance.

Arcot and Bruno (2012) study the link between CG practices and disclosure and firms performance between family and non-family firms during the period 1998 to 2004. They use industry-adjusted ROA performance measure. The sample of the study consists of FTSE 350 index. In a multivariate setting, they run the OLS regression and the results indicate that in widely held companies CG and disclosure are positively correlated with performance. Cheung et al. (2014) attempt to investigate the notion that CG quality has a positive relation with firm performance in five Asian emerging markets: Hong Kong, Thailand, China, Indonesia, and the Philippines for the period 2002-2008. The sample of the study comprises of 2,687 firm-year observations. They provide empirical evidence that in each of the five nations CG positively affect firm value. Stiglbauer and Velte (2014) find that compliance with the German code is mainly not a value relevant factor for German companies listed at the Frankfurt Stock Exchange.

Fan and Yu (2016) document a strong positive correlation between governance deviation and firm value in Civil law countries. The results provide evidence that firm-level effect matters in governance quality and the effect varies across countries. Shawtari et al. (2016) investigate the relationship between corporate governance and performance. The results show that quantile approach shows inconsistency in the result with OLS and hence indicating the impact depends on the scale size.

Klapper and Love (2004) explore the link between governance measured at the firm level, firm performance and the country-level legal environment. The sample of the study consists of 374 firms' from fourteen countries including Pakistan for the period 1999. They measure CG by rankings provided by Credit Lyonnais Securities Asia (CLSA). The results reveal that higher CG and disclosure standards are linked with higher Tobin's q and return on assets (ROA). They argue that enhancement in governance relative to the country-average are more important than the absolute value of the index. They further show that countries with week legal system have lower firm level governance. Durnev and Kim (2005) found that companies with higher dependency on external financing, higher sales growth, and good investment opportunity would maintain a better CG. Shaheen and Nishat (2005) relate CG to firm performance measured by Tobin's Q, return on equity, sales growth, profit margin, and dividend yield. The sample consists of 226 firms for the period 2003. Apart from Tobin's q, all other performance measures have positive impact on Gov-score and are significant in correlation analysis, decile analysis, or both.

Javid and Iqbal (2008) explore the nexus between CG and firm performance measured by Tobin's q for a three years period 2003-2005. The sample of the study consists of 50 firms listed on Karachi Stock Exchange. Following the prior literature they construct an index

comprising 22 CG proxies and three sub-indices: Board of directors, transparency and disclosure, and ownership and shareholding. The GMM results illustrate that in Pakistan, CG does matter but not all indicators are crucial. The literature review has suggested a number of issues that have remained unresolved by the newer strand of literature. First, most of the prior studies employ only the largest listed firms and focused on developed market. However, a number of prior studies in emerging countries find that CG have a stronger impact on performance in countries with weak legal institutions. In companies with concentrated ownership structures, company insiders have more discretion to make CG decisions that maximize their wealth instead of shareholder value (Aggarwal et al., 2009; Renders et al., 2010). Second, most of the studies are cross sectional in nature and examined governance-performance link for a limited time span. Hence, in this study we extend the current literature by employing an aggregate measure of CG. The number of studies examining the governance-valuation link in developing countries is still comparatively small because until a few years ago, suitable data was extremely hard to come by.

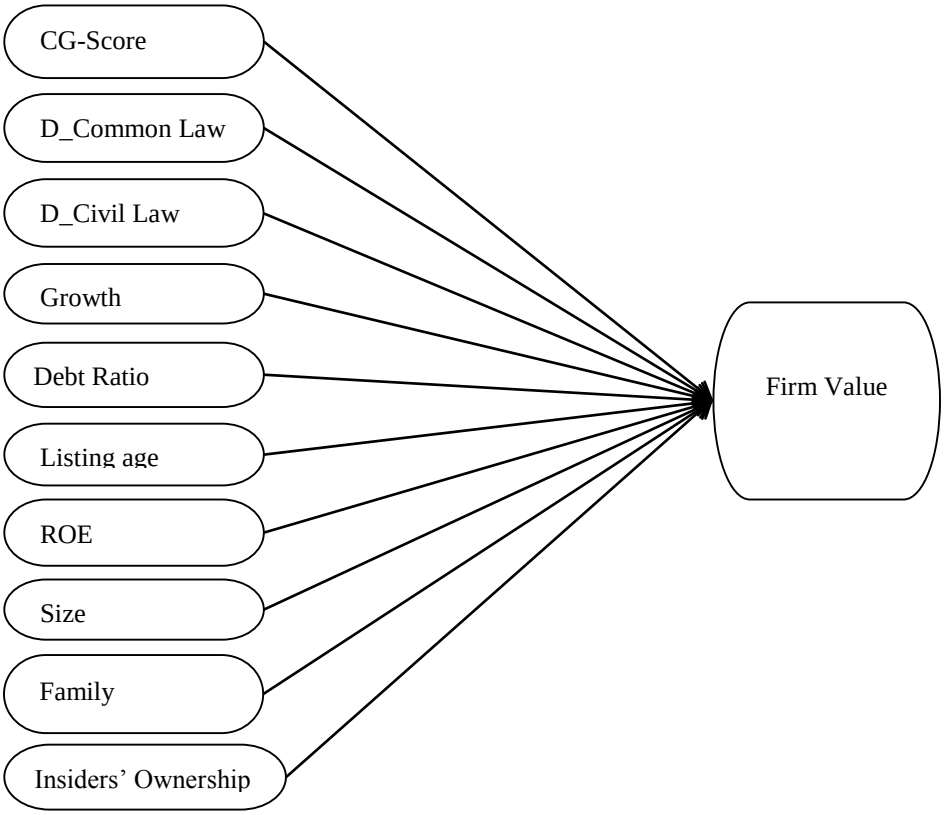

Figure 2: Conceptual Framework

5. Data and Methods

Firms are selected on the basis of data availability hence the final sample comprise of 644 firms from 10 countries – Pakistan, Singapore, Malaysia, Hong Kong, Turkey, Indonesia, Brazil, Korea, China, and Japan. Following, Gul et al. (2017) we divided the sample into three groups small, medium, and large. Companies below the 25th percentile (first quartile Q_1) are considered as small Cap firms, companies between the 25th percentile and the 75th percentile (third quartile Q_3) are considered as medium Cap firms, whereas companies above the 75th percentile are considered as large Cap firms. The system Generalized Method of Movement (SGMM) is employed in this study as an estimation procedure as it takes into account the dynamic endogeneity issue between CG and firm value. If dynamics are introduced in the model then Arrellano and Bond GMM technique becomes more appropriate.

The SGMM dynamic panel data model is given below:

$$\mathrm{lnTQi,t} = \alpha + \beta 1(\mathrm{lnTQ})\mathrm{i,t-1} + \beta 2(\mathrm{CG-score})\mathrm{i,t} + \beta 3(\mathrm{D_{Civil}law})\mathrm{i,t} + \beta 4(\mathrm{CG-score} \times \mathrm{D_{Civil}law})\mathrm{i,t} + \beta 5(\mathrm{CG-score} \times \mathrm{D_{German}law})\mathrm{i,t} + \beta 6(\mathrm{CG-score} \times \mathrm{D_{French}law})\mathrm{i,t} + \beta 7\left(\frac{\mathrm{Debt}}{\mathrm{Assets}}\right) + \beta 8(\mathrm{FRAGE})\mathrm{i,t} + \beta 9(\mathrm{GR})\mathrm{i,t} + \beta 10(\mathrm{LnAssets})\mathrm{i,t} + \beta 11(\mathrm{INSIDOWN})\mathrm{i,t} + \beta 12(\mathrm{Net\ income/Common\ equity})\mathrm{i,t} + \beta 13(\mathrm{Family})\mathrm{i,t} + \varepsilon \mathrm{i,t} \quad (3)$$

Where, lnTQ is natural log of Tobin Q, $\mathrm{CG-score}$ is corporate governance score. D_Civil law is a dummy variable taking the value 1 if the firm belongs to Civil law and 0 otherwise. CG-score×D_Civil law is an interaction term of CG-score and dummy variable for firm in countries with Civil law origin. CG-score×D_German origin is an interaction term of CG-score and dummy variable for firm with German origin. CG-score×D_ French origin is an interaction term of CG-score and dummy variable for firm with French origin, Debt/Assets is debt ratio, FRAGE is firm listing age; GR is firm growth, LnAssets is logarithm of total assets, INSIDOWN is insider ownership, $\mathrm{Net\ income/Common\ equity}$ is a proxy of return on equity, Family is a categorical variable, while ε is the error term.

6. Results and Discussion

6.1 GMM Estimation Results

Tables 8 to11 show the results of firm level governance structure and countries legal origin on firm valuation. The table shows the results of market valuation regressed on CG score for different market capitalization firms. The first column reports list of variables, while the next four columns presents the results from regressions. Dynamic panel GMM estimator suggested by (Arellano & Bond, 1991; Blundell & Bond, 1998) is used to estimate the regression. LnTQ is natural log of Tobin's Q (lag dependent variable), CG-score is corporate governance score. AR (1) is the first order, whereas AR (2) is the second order test of serial correlation. P-values are displayed in parentheses below the estimated coefficients. Sample period is from 2003 to 2014.

The results show that better firm-level governance results in higher market valuation. For pool sample firms, the results indicate that CG-score and firms value are significantly and positively correlated. The magnitude of this impact is high, as a change of one standard deviation in CG, results in an increase of 0.46 in the value of Q. Similarly, for large Cap

and medium Cap firms, positive relationship between CG-score and firms value is documented. Thus, the results suggest that corporate governance plays a major role in influencing market value. This result is consistent with the earlier stated argument that businesses use CG in annual reports as a means of signaling to the investors that they are following better governance practices and by implication, working in shareholders' interests. The results confirm the findings of prior studies using Q ratio (e.g., Gompers et al., 2003; Klapper & Love, 2004; Black el al., 2006b). Using GMM estimation, Javid and Iqbal (2008) find a positive but weak link between CG and Tobin's Q in Pakistan. The reason may be that they use only a sample of largest 50 firms listed on PSX for a relatively small period (2003-2005).

Furthermore, the results reveal that the coefficient of the dummy variable D_Civil law is negative and significant in all samples nevertheless in small samples the decrease is greater (-0.3174). This result implies that firms in countries with Civil law origin have lower market value as compare to firms in common law origin. The results reveal that the coefficient on CG-score×D_Civil law is negative and significant. Similarly, the coefficient on interaction term CG-score×D_German origin and interaction term CG-score×D_French origin is negative and significant.

The findings further suggest that for pool, large, medium, and small samples, the debt ratio is the significant variable with a positive sign, suggesting high leveraged firms generate greater shareholder values. Appropriate leverage will help firms to raise their value, because debt financing will support companies operation. This result is against the findings of (Agrawal & Knoeber, 1996; Renders et al., 2010; Cheung et al., 2014), who finds a significant negative relation of leverage with the Q ratio. However, the evidence supports the findings of previous research (e.g., Javid & Iqbal, 2008; Luo & Salterio, 2014; Nguyen et al., 2015). The positive association with Tobin's Q could also be explained by the agency theory. In particular, this implies that lenders are playing a large part in the monitoring role and reduces managerial expropriation. Moreover, the significant link between the debt ratio and firm value also suggests that market is more confident with firms' monitoring by creditors. However, the result is statistically insignificant in large Cap firms.

Overall, the relationship of variable LnAssets with the market based measures of performance is consistent with the a priori expectations in large and small Cap firms. This variable is also significant and the sign is positive, indicating that large firms can positively influence market perceptions of company performance. This positive association could be due to the advantages of being large in size, such as attaining innovation advantages in an emerging market (Barrachina et al., 2010) and accessibility to new technology. Thus, firm size can be considered an important factor in improving firm value. In addition, the superior performance of larger firms may also be due to the fact that such firms have less probability of bankruptcy, have optimal capital structure, and diversified workforce. This finding is in line with several existing studies (see, for example, Klapper & Love, 2004; Cheung et al., 2014) that find a positive association between firm size and performance. In contrast, Luo and Salterio (2014) find a negative link between firm size and performance, however, Nguyen et al. (2015) find a negative link between firm size and value in fixed-effect regression but insignificant in OLS and SGMM. Nevertheless, in medium Cap firms the result is in contrast to our hypothesis. The coefficient on insider's ownership is negative

and the result is significant. However, the result is partially significant in large and medium Cap firms.

The coefficient on firm age is positive and significant. This suggests that the longer the companies have been listed on the stock exchange, the higher is their market valuation. There are various factors associated with this relation such as longer listed firms have the advantage of operating in industries that are well-established for many years, and are equipped with enough resources. This result supports the findings of Hopenhayn (1992) that as firm age increases so is their productivity which results in higher profit and value. Nevertheless, Suphakasem (2008) failed to find any significant evidence between listing age and firm performance. Renders et al. (2010) find a negative link between age and firm value measured by Tobin's Q. However, when they use probit model as an estimation technique the relation becomes positive.

The study also includes growth rate as a control variable which is significantly and positively related to Tobin's Q in pool sample as well as large Cap firms, confirming our earlier intuition (i.e., past and future growth opportunities is likely to be correlated) market valuation is positively affected by growth opportunities. Conversely, the coefficient on growth variable is negative and significant in small and medium Cap firms. Chen et al. (2005) find empirical evidence that sales growth positively affects firm performance measured by ROA in whole and small Cap firms and negatively in large Cap firms. However, their results were statistically insignificant. Cheung et al. (2011) and Luo and Salterio (2014) also find a positive but insignificant association between growth and firm value. The results of Renders et al. (2010) reveal that growth positively affect firm value in OLS regression but the results become negative in probit regression, and the results are statistically significant.

The result further reveals that non-family firms outrun their family counterparts in pool, and medium Cap firms. However, in large Cap firms the result is insignificant but negative and significant in small Cap firms. Miller et al. (2007) argue that in the USA except for lone founder corporations, other true family corporations do not exhibit superior market valuation. In a similar vein, in the context of Norway and Sweden minority shareholders wealth is adversely affected by family ownership (Cronqvist & Nilsson, 2003; Barth et el., 2005). Nevertheless, small Cap family firms positively influence Tobin's Q. A stream of research (e.g., Anderson & Reeb, 2003a; Villalonga & Amit, 2006) provide evidence that the positive relation between family businesses and firm value only appears in those firms where founder influence is still present and also where family is directly represented on the board which is the case in small Cap firms in emerging markets.

Table 8: GMM Estimation Results for Market Valuation (Pool Sample)

	(1)	(2)	(3)	(4)
lnTQ L1.	0.4354** (0.012)	0.4423** (0.032)	0.5132** (0.024)	0.4621*** (0.000)
CG-score	0.6624*** (0.000)	0.6426*** (0.000)	0.6223*** (0.000)	0.5921*** (0.000)
D_Civil law	-0.3041** (0.042)			
CG-score× D_Civil law		-0.1201*** (0.000)		
CG-score× D_German origin			-0.1739 (0.231)	
CG-score× D_French origin				-0.1312*** (0.000)
Debt/Assets	0.3273*** (0.000)	0.3281** (0.043)	0.3723*** (0.000)	0.3573*** (0.000)
FRAGE	0.0634** (0.025)	0.0632** (0.043)	0.0834*** (0.000)	0.0172** (0.043)
GR	0.0436*** (0.006)	0.0542** (0.012)	0.0943*** (0.005)	0.0673*** (0.000)
LnAssets	0.0012 (0.534)	0.0043*** (0.000)	0.0024** (0.015)	0.0054** (0.032)
INSIDOWN	-0.0024** (0.033)	-0.0034*** (0.000)	0.0074 (0.324)	-0.0023* (0.054)
Net Income/Common Equity	0.0182 (0.232)	0.0123 (0.423)	0.0172 (0.121)	-0.0017 (0.534)
Family	-0.2123*** (0.000)	-0.1932** (0.023)	-0.1721*** (0.000)	-0.2173** (0.054)
Intercept	-0.321** (0.034)	-0.3723*** (0.000)	-0.3282** (0.016)	-0.3263*** (0.000)
AR (1)	-3.12	-2.21	-5.42	-2.64
P-Values	(0.012)	(0.001)	(0.021)	(0.000)
AR (2)	-0.11	-0.02	0.09	0.08
P-Values	(0.435)	(0.654)	(0.235)	(0.243)
Over-identification test (Hansen)	121.23	132.43	134.45	154.11
P-Values	(0.435)	(0.545)	(0.232)	(0.423)
F-Significance	(0.000)	(0.000)	(0.000)	(0.000)

Note: ***, **, *= significance level at the 0.01, 0.05 and 0.10

Table 9: GMM Estimation Results for Market Valuation (Large Sample)

	(1)	(2)	(3)	(4)
lnTQ L1.	0.5342** (0.023)	0.5642** (0.012)	0.5243** (0.032)	0.5134** (0.043)
CG-score	0.2543** (0.032)	0.2132*** (0.000)	0.2745** (0.054)	0.3165*** (0.000)
D_Civil law	-0.2512*** (0.000)			
CG-score× D_Civil law		-0.4235*** (0.000)		
CG-score× D_German origin			-0.0628*** (0.000)	
CG-score× D_French origin				-0.0965*** (0.000)
Debt/Assets	0.2134 (0.545)	0.1057 (0.654)	0.3143 (0.323)	0 .1654 (0.112)
FRAGE	0.0054*** (0.000)	0.0023*** (0.000)	0.0054 (0.432)	0.0076*** (0.008)
GR	0.0065*** (0.000)	0.0043** (0.034)	0.0034*** (0.005)	0.0056* (0.063)
LnAssets	0.1132*** (0.000)	0.1432*** (0.005)	0.1121** (0.032)	0.1632*** (0.000)
INSIDOWN	-0.0232 (0.132)	-0.0154*** (0.000)	0.0265 (0.121)	-0.0134 (0.266)
Net Income/Common Equity	0.0167* (0.532)	0.0524*** (0.000)	0.0645*** (0.000)	0.0176*** (0.000)
Family	-0.0056 (0.245)	0.0045 (0.121)	-0.0065 (0.435)	-0.0033 (0.647)
Intercept	-0.1243 ** (0.024)	-0.5434* (0.054)	-0.2343** (0.034)	-0.5432* (0.065)
AR (1)	-1.54	-6.34	-2.14	-4.21
P-Values	(0.000)	(0.012)	(0.006)	(0.000)
AR (2)	-0.52	-0.32	-0.14	-0.21
P-Values	(0.534)	(0.745)	(0.243)	(0.634)
Over-identification test (Hansen)	43.34	32.56	41.66	12.54
P-Values	(0.545)	(0.676)	(0.322)	(0.454)
F-Significance	(0.000)	(0.000)	(0.000)	(0.000)

Note; ***, **, *= significance level at the 0.01, 0.05 and 0.10.

Table 10: GMM Estimation Results for Market Valuation (Medium Sample)

	(1)	(2)	(3)	(4)
lnTQ L1.	0.6631** (0.013)	0.6234*** (0.000)	0.6576** (0.043)	0.5987*** (0.000)
CG-score	0.4235*** (0.000)	0.4564*** (0.000)	0.4354** (0.015)	0.4166*** (0.000)
D_Civil law	-0.2158*** (0.000)			
CG-score* D_Civil law		-0.1817*** (0.000)		
CG-score* D_German origin			-0.1967*** (0.000)	
CG-score* D_French origin				-0.2254*** (0.000)
Debt/Assets	0.0956*** (0.000)	0.0434** (0.042)	0.1132* (0.051)	0.1432*** (0.000)
FRAGE	0.0254** (0.043)	0.0657*** (0.005)	0.0342** (0.043)	0.0978*** (0.000)
GR	-0.0021*** (0.007)	-0.0043*** (0.000)	-0.0054*** (0.000)	-0.0065** (0.034)
LnAssets	0.1132 (0.213)	0.1143 (0.321)	0.1432 (0.245)	0.1256 (0.432)
INSIDOWN	-0.0232 (0.645)	-0.0645 (0.233)	-0.0423*** (0.000)	-0.0321*** (0.000)
Net Income/Common Equity	0.2132*** (0.000)	0.3145 (0.322)	-0.2342 (0.112)	0.3421*** (0.008)
Family	-0.0021*** (0.000)	-0.0034*** 0.000)	-0.0043*** (0.000)	-0.0032*** (0.000)
Cons	-0.2323*** (0.005)	-0.4534** (0.023)	-0.6576*** (0.000)	-0.2111*** (0.000)
AR (1)	-4.21	-5.45	-2.22	-3.11
P-Values	(0.000)	(0.022)	(0.006)	(0.000)
AR (2)	0.11	0.09	0.06	0.04
P-Values	(0.545)	(0.645)	(0.733)	(0.511)
Over-identification test (Hansen)	89.43	91.64	80.43	74.65
P-Values	(0.898)	(0.345)	(0.675)	(0.465)
F-Significance	(0.000)	(0.000)	(0.000)	(0.000)

Note. ***, **, *= significance level at 0.01, 0.05 and 0.10 percent

Table 11: GMM Estimation Results for Market Valuation (Small Sample)

	(1)	(2)	(3)	(4)
lnTQ L1.	0.4565*** (0.000)	0.4123*** (0.007)	0.4643* (0.062)	0.4442** (0.432)
CG-score	0.2312*** (0.005)	0.2036*** (0.001)	0.2376*** (0.001)	0.1465*** (0.001)
D_Civil law	-0.3174** (0.041)			
CG-score× D_Civil law		-0.5066*** (0.000)		
CG-score× D_German origin			-0.0787** (0.021)	
CG-score× D_French origin				-0.0867** (0.015)
Debt/Assets	0.2343*** (0.000)	0.2543** (0.043)	0.3145*** (0.000)	0.2343*** (0.000)
FRAGE	0.0054** (0.042)	0.0087 (0.421)	0.0001* (0.053)	0.0012*** (0.000)
GR	-0.1043** (0.035)	-0.1755** (0.021)	-0.1453*** (0.005)	-0.1132*** (0.000)
LnAssets	0.0034*** (0.000)	0.0056*** (0.000)	0.0012*** (0.000)	0.0023*** (0.000)
INSIDOWN	-0.0064* (0.054)	-0.0044** (0.033)	0.0022 (0.434)	-0.0045** (0.023)
Net Income/Common Equity	0.0232** (0.032)	0.0554*** (0.000)	0.0656** (0.0423)	0.0232*** (0.000)
Family	0.0054** (0.032)	0.0078*** (0.000)	0.0033** (0.042)	0.0655*** (0.000)
Intercept	-0.5434*** (0.000)	-0.6454*** (0.000)	-0.5532*** (0.000)	-0.4532*** (0.000)
AR (1)	-3.22	-4.36	-3.35	-1.22
P-Values	(0.000)	(0.000)	(0.000)	(0.000)
AR (2)	0.05	0.07	-0.09	0.11
P-Values	(0.434)	(0.545)	(0.767)	(0.232)
Over-identification test (Hansen)	43.55	43.55	32.44	54.66
P-Values	(0.343)	(0.534)	(0.634)	(0.223)
F-Significance	(0.000)	(0.000)	(0.000)	(0.000)

Note: ***, **, *= significance level at the 0.01, 0.05 and 0.10.

7. Conclusion

In this study, first a unique approach is presented to test whether the manner through which corporate governance structure influence stock market liquidity depends on countries' legal systems, using data from 10 emerging countries. Additionally, this study also examines whether legal institutions (i.e., judicial efficiency and political stability) enhances the level of investors' participation and hence stock market liquidity. The findings favor the hypothesis that firm-level governance structure and country's legal origin complements each other. We find evidence that as compared to Common law countries, costs of liquidity are larger for companies in countries with Civil law origin. The results imply that countries with Common law origin have lower illiquidity implying higher stock market liquidity. Nevertheless, the findings also document that although higher firm-level governance structure enhances liquidity of the stock market, this result for countries with Civil law origin is relatively weak. Also stock market liquidity is much higher for countries stocks with higher political stability and judicial efficiency. Second, this article seeks to explore the value relevance of firm level CG practices and legal origin. The results reveal that CG plays a major role in effecting market valuation positively. Furthermore, CG is more important in enhancing firm value in countries with Common origin as compare to civil origin.

7.1 Contributions

This study has several contributions: First this study examined whether the manner through which firm-level governance affects stock market liquidity depends on countries' legal systems. Thus this study contributes to the literature by examining this empirical issue at it is more important in emerging markets because publicly listed firms in emerging markets have a pyramid ownership structures, weak legal protection of both creditors and shareholders' rights (La Porta et al., 2000; Brockman & Chung, 2003), higher levels of insider trading, high market manipulation, price manipulation, and false disclosure (Cumming et al., 2011). Second, this study contributes to the research by separating the sample frame into large, medium, and small firms because ownership structure, analyst following, information asymmetry, listing history, and management style, amongst large, medium, and small firms is often different. Third, most of previous research has chosen only one or two years to analyze the effect and this has not provided a helpful explanation. Nevertheless, the panel nature of our data enables us to examine link over twelve years, thus allowing time for improved governance. Finally, CG measures in majority of previous studies are not devised to rank firms on CG quality but rather to determine those firms that prefer to tailor their governance practices to minimize agency costs. The findings of this study have several important implications for managers, investors, regulators, as well as accounting and finance researchers. For the managers, the empirical results clarify that the costly exercise of CG information can help in enhancing a firm's value. Similarly, the regulators may find the empirical evidence from this study useful in assessing the prowess of CG. Specifically, they may take the findings into consideration when they are going to determine the appropriate levels of mandatory disclosure in future.

7.2 Limitations

The scope of the study is limited to public non-financial listed companies. Moreover, it relies on one source of CG, the company annual reports.

7.3 Future Research Directions

Future work could extend the research by using the financial listed companies or non-listed companies. In relation to research method, future research might want to refine the CG scoring methods by giving weightings in relation to the importance of each item or category of CG information. The inclusion of new CG instruments could result in added Edge worth combinations of the internal CG mechanisms. Correspondingly, CG instruments like CEO tenure and executive remuneration etc. can be employed. Another avenue for future research is to examine other channels of CG, such as company websites.

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Appendix I: Corporate Governance Score

A. Sub Index-Board Composition
Percentage of Independent Non-Executive Directors (INED's) on board
Presence of Independent Chairman
Size of board
Is the role of Chairman and CEO split?
Number of board meetings held during the year
Percentage of total director's attendance at board meetings
Percentage of board meetings attended by INED's
Minority shareholders representation on board
Gender diversity on board
Board and individual directors performance evaluation
B. Sub Index- Transparency and Auditing
Does the company have an audit committee?
What percentage of audit committee constitutes INED's?
Independence of audit committee Chairman
Whether a system is in place to protect whistle blowers
C. Sub Index- Disclosure
Does the company disclose board members biographies? Does it list the other boards its directors sit on?
Policy for handling conflict of interest
Code of ethics for all directors and employees?
Attendance record of each director at committee meetings