

# “Effect of market and corporate reforms on firm performance: evidence from Kuwait”

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# EFFECT OF MARKET AND CORPORATE REFORMS ON FIRM PERFORMANCE: EVIDENCE FROM KUWAIT

## Abstract

Following the global financial crisis in 2008, many countries have introduced economic and corporate reforms to assure fair markets and mitigate the risk of management misconduct. In this context, Kuwait has implemented two new major laws to restructure its capital markets and improve corporate governance. The two laws are the Capital Market Authority Law (CMAL) and Kuwait Companies Law (KCL). In this paper, the authors sought answers to two questions: (1) has the performance of the listed companies changed in response to the enforcement of the laws? and (2) was there a direct influence of the laws on that change? The authors found some evidence of significant change in performance. Moreover, they provide evidence of KCL viability as a determinant of better performance. Interestingly, CMAL was found to be inadequate for improving firm performance. Implications and recommendations for further research are provided.

## Keywords

corporate governance, firm performance, market  
reforms, corporate reforms

## JEL Classification

G30, G34, G38

## INTRODUCTION

It is widely accepted that value maximization is the ultimate goal of business firms. Owners of these firms usually hire professionals to manage the business. When these managers do not act in the best interest of the owners, the firm is said to suffer from agency problems. Corporate governance (CG) is the set of rules and regulations by which a firm is directed and controlled to protect owners' interests and avoid agency problems and managers' misconduct. Financial markets and certainly business firms operating under weak governance are more vulnerable to exploitation and abuse. Recent global market and corporate financial regulatory reforms were the results of the latest mega business scandals and global financial distresses.

Ever since the pioneering work of La Porta et al. (1999a), an extensive research was conducted to explore how firm value can be influenced by the introduction of new CG rules and regulations. Evidence of the effect, however, is inconclusive. For example, La Porta et al. (1999b) found that stronger governance practices provide positive signal to the market, leading to value appreciation. Wang et al. (2011) provide evidence of association between governance reforms and better performance. Others believe that corporate governance (ownership concentration) or lack of it is irrelevant to firm value (Omran et al., 2008). Another argument against a very strict governance code and heavy

market regulations was raised by Carney (2006). Others (Bruno & Claessens, 2010) argue that the level of corporate governance strength, at the country and company level, may have different impact on performance. Indeed, negative effects are possible for some firms. Their results implied that a stringent regulation can harm the performance of companies with strong governance structure and has no effect on companies with poor governance structure. A similar conclusion can be found in Brickley et al. (1997) and Jomini (2011).

The key question here is how much CG rules and regulations should firms apply before harming financial results and the desired goal of value maximization?

In this paper, we attempt to contribute to the possible answers to this question with regard to less developed markets. These markets had less attention from researchers mainly because of the lack of adequate information on corporate governance factors. The scope of our research is limited to the Kuwait Stock Exchange (KSE) after the implementation of the new Capital Market Authority Law (CMAL) applied in 2010 and Kuwait Companies Law (KCL) introduced in 2012. Our aim is to explore the possible effects of applying the new laws on the performance of the firms listed in the KSE.

In the section, we discuss the relevant literature with the goal of developing our research hypotheses. We, then, relate these hypotheses to the CG articles included in the CMAL and KCL while discussing the new regulations. In the following section, we provide a discussion of our data, test variables and methodology. We, then, discuss the results in the following section. Finally, we end with concluding remarks, implications and recommendations.

## 1. LITERATURE REVIEW

The literature on CG was initiated by La Porta et al. (1999a) who used data on ownership structures of large corporations in 27 wealthy countries excluding insignificant market of Kuwait, UAE and Saudi Arabia. The main finding was that “*controlling shareholders typically have power over firms significantly in excess of their cash flow rights, primarily through the use of pyramids and participation in management*”. This result was later confirmed by Al-Deehani and Al-Saad (2007) for Kuwait. Using data of the same sample of La Porta et al. (1999a), La Porta et al. (1999b) explored investor protection and corporate valuation and found evidence of positive relations between higher valuation and better protection of minority shareholders. The question, however, is do CG rules and regulations, always, lead to better corporate values while preserving owners’ interests?

This question is addressed by Daines (2001). He examined the effect of Delaware corporate law on firm value using Tobin’s Q as a proxy for firm value. The evidence supported the view that firms incorporated in Delaware worth significantly higher than firms incorporated elsewhere. Delaware law

is considered one of the best corporate laws, as it attracts more than 50% of public firms incorporated in the US. Clear and well known rules, courts precedent and quick rules update are among the reasons for its attractiveness. Moreover, Delaware State has a specialized Chancery Court for resolving corporate disputes. Accordingly, the evidence indicates that corporate law quality, which fairly protect investors, create positive investment environment that promote firm value, hence, increasing investor return.

Several CG factors were tested and their effects on firm value were assessed. One CG variable is associated with board size. There are two conflicting evidence regarding board size. The first argues that smaller board-size firms are generally associated with better performance (Yermack, 1996; Jensen, 1993; Eisenberg, 1988; Singh & Davidson, 2003), whereas the second argues that larger boards are associated with stronger firm performance (Zahra and Pearce, 1989; Kiel & Nicholson, 2003; Coles et al., 2008). Another variable is associated with the leadership structure of the CEO to avoid conflict of interest and, hence, lower agency cost. For better governance, regulators and institutional investors enforce firms to separate the positions of board

member and CEO, as it is easier to abuse power and authority for self-interest when one person is holding the two positions. In fact, the majority of empirical evidence supports the separation of the two positions. Dahya et al. (2009) showed that market regulators in 15 developed markets separated the positions of CEO and chairperson. Chen, Lin and Yi (2008) showed that many firms in the period from 1999 to 2003 altered their policies and bylaws to change the leadership structure from duality to non-duality. Jensen (1993) argued that duality would mitigate the monitoring role of the board and supervision of management and, hence, increase agency cost. Another key component of governance framework is board independence and the presence of independent directors. Beasley (1996) examined the relation between board structure and financial scandals and found that the higher the percentage of independent directors, the lower the cases of financial manipulation. Daily et al. (2003) argue that, during financial crisis, firms with more independent directors have lower probability of facing bankruptcy. Investigating the risk faced by investors, La Porta et al. (2002) found evidence of positive relation between higher valuation and better protection for minorities. Risk facing investors was also addressed by Emil et al. (2014). Bhagat and Black (2001) explored the relation between the ratio of independent directors and short-term performance. They documented a positive relation between the presence of independent directors and performance. Wu, Lin, Lin and Lai (2010) examined the impact of corporate governance mechanism on firm performance. They found that firm performance was positively associated with board independency, CEO/chairman position separation and with smaller boards. Duc and Thuy (2013) found that board compensation has a positive effect on performance measured by ROA and that the board size has a negative effect.

Globally, and specifically in smaller economies, applying governance framework is relatively a new trend and further evidence is needed to assess its impact. Khatab et al. (2011) documented a strong evidence in line with the positive relation between firm performance and corporate governance mechanism for Karachi stock market. Al Haddad et al. (2011) provide supporting evidence for a positive relation between governance application and profitability for Amman stock exchange; a MENA

region market. For the Gulf Council Countries (GCC) market, Ahmed and Hamdan (2015) found a positive influence of corporate governance provisions on firm performance measured by return on assets and equity for Bahrain.

In less developed markets, large publicly traded firms are generally closely held and their shares are held by controlling entrenched shareholders. Such dominating owners can expropriate minority shareholders (see, for example, Shleifer & Vishny, 1997). La Porta et al. (2000) believe that expropriation of minority shareholders by controlling shareholders can take many forms. Controlling shareholders can: steal the profits, divert business opportunities, appoint unqualified family members in key managerial positions and sell valuable assets of the firm they control to another firm they control at lower fair price. Hence, the above forms of expropriation of minority shareholders are consistent with the agency theory (see, for example, Jensen & Meckling, 1976).

Stronger market regulations that secure sound protection for investors signify developed markets. Following the 2008 global financial crisis, developing market and less developed markets are working hard to introduce new CG rules and regulations to protect investors from power abuse of the controlling managing minority. Regulators believe that well protected investors reduce agency cost, induce market growth, enhance firm value and that investors are willing to pay more for stocks of firms listed in such well-regulated, fair markets. They also believe that creditors are more willing to finance firms when their rights are well protected by the legal system. However, a conclusive evidence of these believes is yet to be supported by scientific research.

For Kuwait Stock Exchange (KSE), there were two major sets of regulations that were introduced lately. The first was the CMAL to regulate the stock market in 2010. The second was the 2012 KCL or the Ministry Law (MLaw) to regulate shareholding companies. The new laws imposed many CG articles and provisions that forced all listed companies to make necessary changes in their bylaws and internal policies. We present, in the following section, a discussion of some of the articles included in the new law relevant to CG.

## 2. HYPOTHESES

### 2.1. KSE and the reception of CAML

KSE was officially established in 1983 following Almanakh stock market crisis, a major local financial crisis, which started in 1981 and was caused by severely inflated stock prices, unregulated market transactions and uncontrolled trading. Since official establishment, KSE has been regulated by a market committee headed by the Minister of Commerce with four representatives from the Chamber of Commerce and representatives from the Central Bank and Ministries of Commerce and Finance. A major structural change happened in 2010 when a new regulator took over market supervision from KSE. CMAL was issued in 2010 in an attempt to regulate Kuwait financial markets and to separate supervision from management roles. Up until the implementation of CMAL, Kuwait Stock Exchange played double role as a regulator and as an administrator of stock market trading, which caused conflict of interest. However, following the 2008 global financial crisis and after the institution of capital market authorities in the entire GCC region, the need for an independent regulator in Kuwait has increased. The new regulatory body aimed to discipline the market through higher transparency requirements, protection of shareholders, governance rules, defining responsibilities, etc.

The new CMAL carried many new provisions with significant amount of legal burden on firms that were mostly recovering from the financial crisis. A major issue associated with the capital markets authority (CMA) is its budget and sources of operations finance. As mentioned in article 19, CMA shall finance its operations from market fees and violations fines. This provision increased the incentives for the regulator to increase costs, hence, the broad increase in market fees and accordingly an increase in market burden. This provision was lately amended to engage the government in financing CMA's budget in addition to market fees and fines. Another related issue associated with the CMAL was the separation of responsibilities between the stock exchange as a self-regulatory organization and the regulator. This separation was associated with a huge amount of overlapping in duties and ambiguity

for market participants during the first years of CMA's launch. This element also increased the burden on market participants and listed firms, which led to a decrease of their activities in the market. Consequently, trading volume decreased significantly from an average Kuwaiti Dinar (KWD) 148.9 million and 147.4 million in 2007 and 2008, respectively, to KWD 24.3 million and 28.9 million in 2011 and 2012, respectively. The excessive fines and penalties and the number of legal cases filed against traders and market makers during the first 2 years of operations caused the market to freeze and all major players to stop trading.

According to article 63 of CMAL, all market participants shall receive a formal license from the CMA to participate in market activities including dealers, brokers, investment funds, etc. Licensing requirements were very strict and, in some cases, hard to obtain or apply. Accordingly, article 66 imposed a set of requirements all related to governance codes, such as separating activities, risk management, avoiding conflict of interest and reports requirements. Furthermore, articles from 71 to 75 set out shareholders provision protection for minorities. The law dealt also with provisions related to transparency and disclosure requirements. The last chapter of the law imposed market violation provisions, which added strong enforcement factor to the market.

### 2.2. KCL relevance to KSE

The other law relevant to the operations of KSE is KCL. We counted 18 articles included in the new law that are related to issues of CG. Starting with article 181 and ending with article 216, these issues are summarized as follows:

1. Imposed minimum number of board members for public firms (article 181).
2. The positions of the chairman of the board and chief executive officer shall not be combined (article 183).
3. Regulatory bodies were given the right to impose the appropriate corporate governance code on firms under their jurisdiction, and thereby governance is mandated by law.

Therefore, all public firms reacted to this article by changing their bylaws and internal policies (article 186).

4. Imposed presence of independent directors, at least one, and determined an upper cap of their number, surprisingly, not to exceed half of the board. Independent directors are exempted from the minimum ownership requirement (article 187).
5. Imposed a minimum number of 6 board meetings per year. This is in line with governance codes for having higher number of board meetings to keep the board well informed for an efficient decision making process (article 190).
6. A person, even if in the capacity of representative of a natural or legal person, may not be a member of the board of directors, of more than five public companies headquartered in Kuwait (article 194).
7. Board members are not to exploit information to benefit selves or others, nor can they dispose shares they own in the company during tenure (article 195).
8. Board members are not allowed to disclose confidential information except through general assembly meetings (article 196).
9. Board members of companies cannot serve in boards of two competing companies at the same time. This restriction is to prevent self-dealing, as well as to protect against conflict of interest; major elements in any proper corporate governance framework (article 197).
10. Remunerations for the board members shall not exceed 10% of net profit after dividends distribution of 5% for 5 years, otherwise, it should not exceed KD 6,000 annually for each member (article 198).
11. Board members, executive management and their families are banned from having interest in business deals with the company without the approval of the general assembly (article 199).

12. With the exception of banks and loan-extending companies, board members, CEO and families are not to receive loans from company without the approval of the general assembly (article 200).

13. Board members are legally responsible for fraud actions, misuse of authority and violation of this law.

14. Articles 206 and 208 call for fair general assembly meetings, sending invitations to all shareholders with proper agenda and complete set of information.

15. Articles 209, 212 and 216 provide minority shareholders the power to dismiss the board and the chairman when required.

The Kuwaiti public companies listed in the KSE have been complying with this law for about 5 years. Therefore, it is logical to hypothesize a positive effect of applying this law on all performance indicators of these companies.

To test for this effect, we discuss, in the following section, our data and methodology and measures to test specific hypotheses.

### 3. DATA AND METHODOLOGY

To study the effect of applying the new CG laws on the performance of the listed public companies, we need first to measure the significance of differences in performance indicators before and after the introduction of each law. If significant differences exist, then, we measure the effect of introducing each law on each indicator. As CMAL was introduced in 2010 and the KCL was enforced during 2012. We collected fundamental data for the years 2007 to 2014 sourced from the annual published reports of the Institute of Banking Studies in Kuwait.

We elected the fundamental data of five sectors. We canceled out companies in other sectors, which were unrepresentative of the nature of the sector to which they belong. For example, health care, communication and educational companies were included in one sector called services. The

companies of each of the five sectors we chose were of the same nature. Originally, there were data for 147 companies. However, because of missing data for some of the years, some were canceled out. The number of companies remaining are 102 with 816 observations.

The data are organized in the form of long format of longitudinal data involving the dimensions of time and individual companies. The data are considered strongly balanced, as each individual company has the same number of years.

Based on the reviewed literature, certain performance indicators were elected for investigation. These indicators represent profitability, valuation, assets management, debt and agency costs. The variables in question are profit multiplier, total assets turnover, debt ratio, return on equity and market to book ratio and equity to assets ratio. With these indicators, we presume to cover the most important performance aspects.

The following is a brief description of these indicators and the specific relevant hypotheses:

**Total assets turnover** is calculated as total revenue to total assets. This is an indicator of the company's efficiency in managing its assets. Higher numbers indicate better assets management efficiency. The hypothesis related to this indicator is that enforcing CMAL and KCL's CG rules will prevent managers from investing in unnecessary assets leading to better assets turnover.

**Debt ratio** is the total debt to total assets. Although the ratio is important for measuring company financial distress, when it comes to cost efficiency, more debt leads to lower cost of capital and higher value. However, more increase of debt may lead to major financial distress or even bankruptcy. Our hypothesis, in relation to this indicator, is that enforcing CMAL and KCL's CG rules will encourage managers to raising new external funds to finance viable investment leading to a higher debt ratio and better value.

**Return on equity** is a widely acceptable measure of profitability related to the owners' equity. It is calculated as the net profit to owners' equity. The logical hypothesis is that enforcing CMAL and

KCL's CG rules will ensure the alignment of the management interests with owners' interest leading to better profitability for the owners.

**PE ratio** is directly related to company valuation. We calculate it as closing price at the end of the year to earnings per share, which we estimate as net profit divided by number of shares outstanding. *PE* ratio is also called the profit multiplier. It indicates how much investors are willing to pay, profit multiples, to acquire the share. Higher *PE* ratio indicates higher value of the firm. Our hypothesis, in relation to this indicator, is that enforcing CMAL and KCL's CG rules will lead to a higher *PE*, hence, a higher firm value.

**MB ratio** is also related to company valuation. It is calculated as the market stock price over book value per share (BVPS). BVPS divided is calculated as owners' equity over the number of shares outstanding. When *MB* is less than one, the company is seen as an opportunity for takeover. This is because owner's equity worth more than its market stock value. A buyer will be encouraged to sell it in pieces. On the other hand, a higher *MB* ratio indicates that investors are valuing the company higher than its equity. Our hypothesis, in relation to this indicator, is that enforcing CMAL and KCL's CG rules will lead to a higher *MB*, hence, a higher firm value.

**Agency cost** is the money charged to the firm because of management misconduct. There are many proxies for agency costs measures. We choose the equity to total assets ratio for representation of agency costs as suggested by Berger and Patti (2006). They argue that higher leverage or lower equity to total assets is associated with lower agency costs. This is in line with our hypothesis on debt ratio. The hypothesis for this specific indicator is that enforcing CMAL and KCL's CG rules will lead to a lower equity to total assets ratio leading to lower agency cost.

In this paper, we investigate:

1. the significance of differences in the performance indicators before and after the implementation of each law;
2. the effect of each law on each performance indicator for the different sectors.

Here is a summary of our null against research hypotheses in relation to KCL:

**Hypothesis 1:**

*H0: Total assets turnover before and after the enforcement of KCL's CG rules is the same.*

*H1: Total assets turnover before and after the enforcement of KCL's CG rules is significantly different.*

**Hypothesis 2:**

*H0: Debt ratio before and after the enforcement of KCL's CG rules is the same.*

*H1: Debt ratio before and after the enforcement of KCL's CG rules is significantly different.*

**Hypothesis 3:**

*H0: Return on equity before and after the enforcement of KCL's CG rules is the same.*

*H1: Return on equity before and after the enforcement of KCL's CG rules is significantly different.*

**Hypothesis 4:**

*H0: PE ratio before and after the enforcement of KCL's CG rules is the same.*

*H1: PE ratio before and after the enforcement of KCL's CG rules is significantly different.*

**Hypothesis 5:**

*H0: MB ratio before and after the enforcement of KCL's CG rules is the same.*

*H1: MB ratio before and after the enforcement of KCL's CG rules is significantly different.*

**Hypothesis 6:**

*H0: Agency cost before and after the enforcement of KCL's CG rules is the same.*

*H1: Agency cost before and after the enforcement of KCL's CG rules is significantly different.*

In addition, the following is a summary of our null against hypotheses in relation to CMAL:

**Hypothesis 7:**

*H0: Total assets turnover before and after the enforcement of CMAL's CG rules is the same.*

*H1: Total assets turnover before and after the enforcement of CMAL's CG rules is significantly different.*

**Hypothesis 8:**

*H0: Debt ratio before and after the enforcement of CMAL's CG rules is the same.*

*H1: Debt ratio before and after the enforcement of CMAL's CG rules is significantly different.*

**Hypothesis 9:**

*H0: Return on equity before and after the enforcement of CMAL's CG rules is the same.*

*H1: Return on equity before and after the enforcement of CMAL's CG rules is significantly different.*

**Hypothesis 10:**

*H0: PE ratio before and after the enforcement of CMAL's CG rules is the same.*

*H1: PE ratio before and after the enforcement of CMAL's CG rules is significantly different.*

**Hypothesis 11:**

*H0: MB ratio before and after the enforcement of CMAL's CG rules is the same.*

*H1: MB ratio before and after the enforcement of CMAL's CG rules is significantly different.*

**Hypothesis 12:**

*H0: Agency cost before and after the enforcement of CMAL's CG rules is the same.*

*H1: Agency cost before and after the enforcement of CMAL's CG rules is significantly different.*

To test for significant differences in the performance indicators, we choose the nonparametric, Mann-Whitney *U* test. This is a two-independent-sample test procedure to compare two groups of cases on one variable. This test does not assume normality. It is considered more robust and more efficient than the student *t*-test, as it is less likely to show statistical significance in the case of outliers' presence. Given the limited sample of this research, the Mann-Whitney *U* test is our best choice.

To investigate the effect of introducing the CG laws on performance, we use a generalized least square (GLS) model with panel data. We use a random effect model, as we believe that the variation across companies and sectors is random and uncorrelated having some influence on the performance indicator variable.

Our GLS panel regression model is of the form:

$$Y_{it} = \beta_1 \cdot KCL_{it} + \beta_2 \cdot CMAL_{it} + \alpha + u_{it} + \varepsilon_{it}, \quad (1)$$

where  $Y_{it}$  is the dependent variable representing the performance indicator.  $i$  is the entity and  $t$  is time.  $KCL_{it}$  represents Kuwait company law binary variable, assigned 0 for the period before applying the law and 1 otherwise.  $CMAL_{it}$  represents the capital market law binary variable, assigned 0 for the period before applying the law and 1 otherwise.  $\beta_1, \beta_2$  and  $\alpha$  are coefficients.  $u_{it}$  is the between-entity error and  $\varepsilon_{it}$  is the within-entity error.

Table 1 below presents a summary of the mean and standard deviation of the selected performance

indicators before and after the introduction of CMAL. An interesting observation is the negative ROE for the banking sector. The mean was affected by the huge losses made by one of the banks in 2008. The Gulf Bank in Kuwait was the only bank in the GCC region to be rescued by a government as a result of the 2008 global financial crisis. The bank reported losses in excess of \$1 billion.

A noticeable lower standard deviation after the introduction of the Capital Market Authority Law, in almost all the performance indicators across the board (except for the banking sector), indicates the reduced risks in this period.

Figure 1 exhibits plots of the six performance indicators. Panel *a* shows a big increase in the valuation indicator represented by the *PE* ratio after applying

**Table 1.** Summary results of the mean and standard deviation before and after CMAL

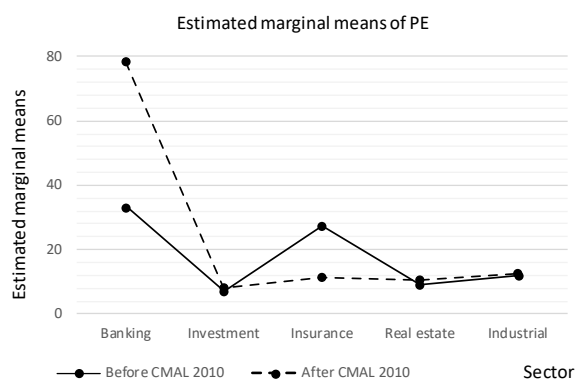
|             | Sector      |     | Mean   | Std. deviation |        | Mean  | Std. deviation |
|-------------|-------------|-----|--------|----------------|--------|-------|----------------|
| Before CMAL | Banking     | PE  | 33.387 | 56.077         | MB     | 3.593 | 5.225          |
|             | Investment  |     | 7.1411 | 35.738         |        | 1.364 | .824           |
|             | Insurance   |     | 27.476 | 79.058         |        | 1.413 | .828           |
|             | Real estate |     | 9.176  | 26.655         |        | .893  | .681           |
|             | Industrial  |     | 12.125 | 36.436         |        | 1.542 | .746           |
| After CMAL  | Banking     |     | 78.367 | 181.441        |        | 1.963 | .941           |
|             | Investment  |     | 8.205  | 31.614         |        | .738  | .609           |
|             | Insurance   |     | 11.505 | 10.811         |        | 1.072 | 1.148          |
|             | Real estate |     | 10.696 | 24.001         |        | .756  | .659           |
|             | Industrial  |     | 12.590 | 27.816         |        | 1.094 | .493           |
| Before CMAL | Banking     | ROE | -.212  | 1.693          | D/A    | .865  | .041           |
|             | Investment  |     | -.080  | .405           |        | .460  | .240           |
|             | Insurance   |     | .038   | .144           |        | .399  | .228           |
|             | Real estate |     | -.029  | .204           |        | .416  | .183           |
|             | Industrial  |     | .044   | .200           |        | .293  | .209           |
| After CMAL  | Banking     |     | .067   | .030           |        | .865  | .028           |
|             | Investment  |     | -.050  | .293           |        | .418  | .279           |
|             | Insurance   |     | -.167  | 1.103          |        | .473  | .208           |
|             | Real estate |     | -.001  | .165           |        | .429  | .195           |
|             | Industrial  |     | .060   | .080           |        | .287  | .195           |
| Before CMAL | Banking     | ATO | .064   | .013           | AGCOST | .130  | .0363          |
|             | Investment  |     | .052   | .150           |        | .540  | .2403          |
|             | Insurance   |     | .104   | .092           |        | .601  | .2278          |
|             | Real estate |     | .057   | .086           |        | .584  | .1831          |
|             | Industrial  |     | .130   | .099           |        | .711  | .2142          |
| After CMAL  | Banking     |     | .047   | .008           |        | .135  | .0280          |
|             | Investment  |     | .074   | .113           |        | .585  | .2793          |
|             | Insurance   |     | .136   | .162           |        | .528  | .2094          |
|             | Real estate |     | .056   | .058           |        | .570  | .1946          |
|             | Industrial  |     | .117   | .065           |        | .713  | .1948          |

CMAL reflecting the figures in Table 1. Investment, real estate and industrial sectors indicated no noticeable change in the *PE* ratio. The insurance sector exhibits another noticeable change after the introduction of the law. This is understandable, since insurance companies were expected to suffer more as a result of the crisis due the increased claims.

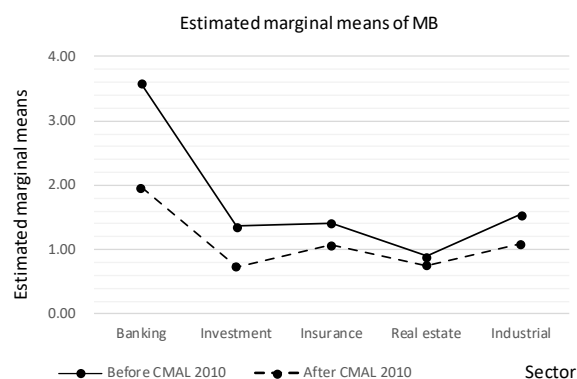
Panel B of Figure 1 shows a decrease of value for all the sectors, as indicated by the *MB* ratio. This

is also understandable, as equity decreased after 2008 across the board. The big losses of the banking sector as represented by the *ROE* ratio are evident in panel C. The same plot shows the big decrease of the ratio for the insurance sector after CMAL. Except for the banking and real estate sectors, the asset management, as represented by the *ATO* ratio, has improved after CMAL. Panels E and F exhibit unnoticeable change in the debt ratio and agency cost ratio.

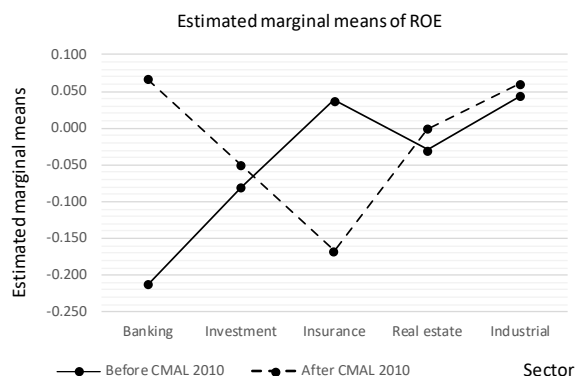
**Panel A: PE**



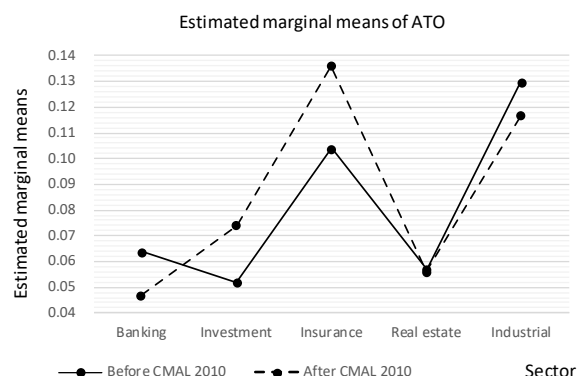
**Panel B: MB**



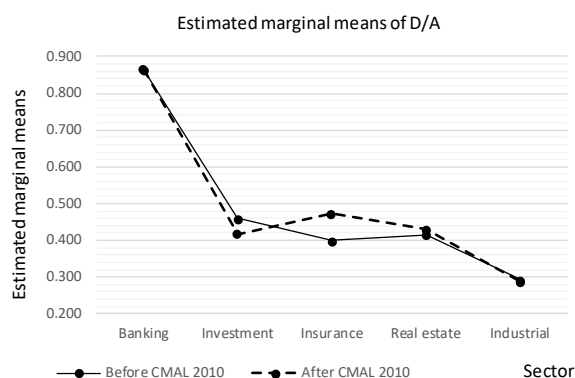
**Panel C: ROE**



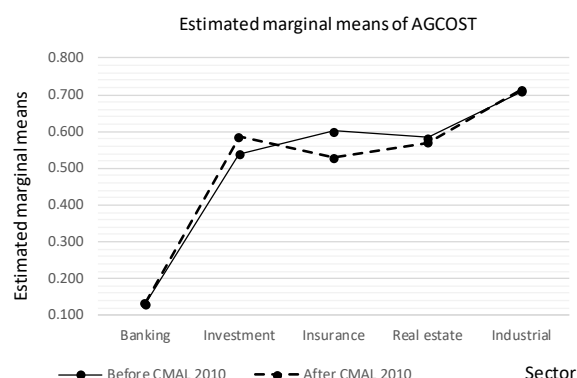
**Panel D: ATO**



**Panel E: D/A**



**Panel F: AGCOST**



**Figure 1.** Plot of means before and after CMAL

Table 2 below presents a summary of the mean and standard deviation of the selected performance indicators before and after the introduction of KCL. The negative *ROE* for the banking sector is smaller compared to the one in Table 1. The reason for that is including more years in the before-KCL period with positive results due to the government rescue of \$1.4 billion for the Gulf Bank. The negative *ROE* before KCL results for banking, investment and real estate sector may be a direct result of the global financial crisis in 2008.

Figure 2 below exhibits plots of means for the six performance indicators before and after applying KCL. The banking sector in panel A shows the negative *ROE* as explained earlier.

In panel C, we can observe the big plunge of *ROE* for the insurance sector after applying the law. This huge drop in profitability can only be explained in

the context of the 2008 global financial crisis. In general, the plots show a general drop in valuation and profitability and an increase in agency cost due to the same reason.

## 4. TESTING RESEARCH HYPOTHESES

Table 3a below presents the results of the Mann-Whitney two-independent-sample test to compare two groups of cases on each performance variable using CMAL binary as the grouping variable for each of the five sectors in KSE.

The results indicate that for the banking sector *PE* and *MB* are significant at the 5% level and *ROE* and *ATO* are statistically significant at the 10% level. This means that valuation, profitability and asset management performance indicators before and after the in-

**Table 2.** Summary results of the mean and standard deviation before and after KCL

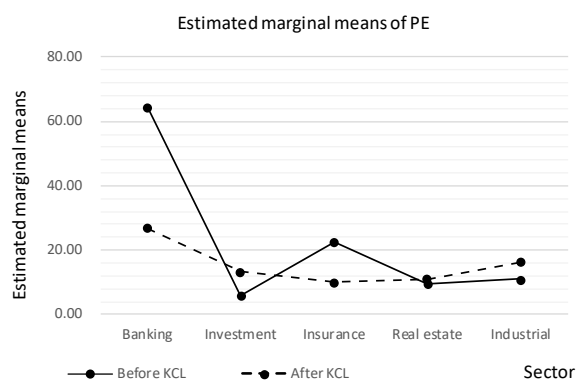
|            | Sector      |     | Mean    | Std. deviation |        | Mean   | Std. deviation |
|------------|-------------|-----|---------|----------------|--------|--------|----------------|
| Before KCL | Banking     | PE  | 64.4919 | 152.75552      | MB     | 3.1417 | 4.33674        |
|            | Investment  |     | 5.8442  | 33.24522       |        | 1.1500 | .78938         |
|            | Insurance   |     | 22.6496 | 64.98649       |        | 1.2340 | .74806         |
|            | Real estate |     | 9.5881  | 27.01401       |        | .8360  | .70746         |
|            | Industrial  |     | 11.0221 | 32.35847       |        | 1.3960 | .70983         |
| After KCL  | Banking     | PE  | 26.8107 | 16.96063       | MB     | 1.6686 | .64413         |
|            | Investment  |     | 13.1603 | 34.62610       |        | .7552  | .71141         |
|            | Insurance   |     | 10.0140 | 7.08740        |        | 1.2686 | 1.58722        |
|            | Real estate |     | 10.9820 | 19.53665       |        | .7907  | .55702         |
|            | Industrial  |     | 16.3622 | 32.24901       |        | 1.0843 | .46164         |
| Before KCL | Banking     | ROE | -.1198  | 1.38280        | D/A    | .8637  | .03782         |
|            | Investment  |     | -.0902  | .39467         |        | .4564  | .25857         |
|            | Insurance   |     | .0421   | .12343         |        | .4239  | .21653         |
|            | Real estate |     | -.0308  | .19555         |        | .4267  | .18693         |
|            | Industrial  |     | .0443   | .17313         |        | .2924  | .20730         |
| After KCL  | Banking     | ROE | .0687   | .01600         | D/A    | .8704  | .02391         |
|            | Investment  |     | .0097   | .15787         |        | .3849  | .26082         |
|            | Insurance   |     | -.3837  | 1.55193        |        | .4723  | .23208         |
|            | Real estate |     | .0335   | .14119         |        | .4090  | .19522         |
|            | Industrial  |     | .0743   | .05251         |        | .2842  | .18550         |
| Before KCL | Banking     | ATO | .0589   | .01324         | AGCOST | .1329  | .03477         |
|            | Investment  |     | .0543   | .13671         |        | .5442  | .25896         |
|            | Insurance   |     | .1041   | .07982         |        | .5766  | .21724         |
|            | Real estate |     | .0513   | .07703         |        | .5733  | .18691         |
|            | Industrial  |     | .1236   | .09057         |        | .7108  | .21069         |
| After KCL  | Banking     | ATO | .0443   | .00797         | AGCOST | .1296  | .02391         |
|            | Investment  |     | .0874   | .11770         |        | .6179  | .26118         |
|            | Insurance   |     | .1683   | .22301         |        | .5277  | .23209         |
|            | Real estate |     | .0715   | .05718         |        | .5892  | .19470         |
|            | Industrial  |     | .1245   | .06020         |        | .7158  | .18549         |

roduction of the CMAL are statistically different in the banking sector. For the other four sectors, only *MB* is statistically significant at the 5%. This means that the value performance indicator before and after applying the law is statistically different.

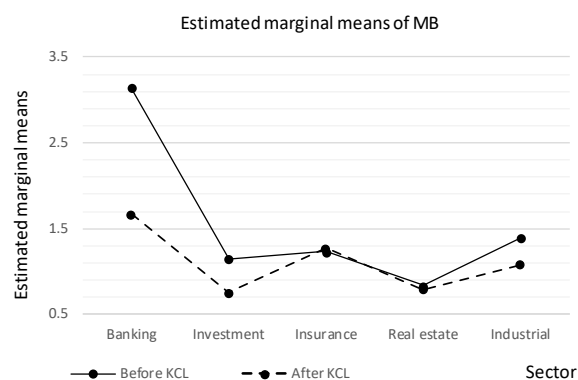
Table 3b shows the results of the Mann-Whitney two-independent-sample test to compare two groups of cases on each performance variable using KCL binary as the grouping variable.

Table 3b shows that only *PE* and *ATO* indicators are statistically significant at the 5% level for the banking sector. That is the value and asset management performance indicators for the banking sector before and after the introduction of the KCL are statistically different. For the investment sector, however, all performance indicators except *ATO* are statistically different. The results also indicate that none of the performance indicators is statistically different for the insurance sector. For the

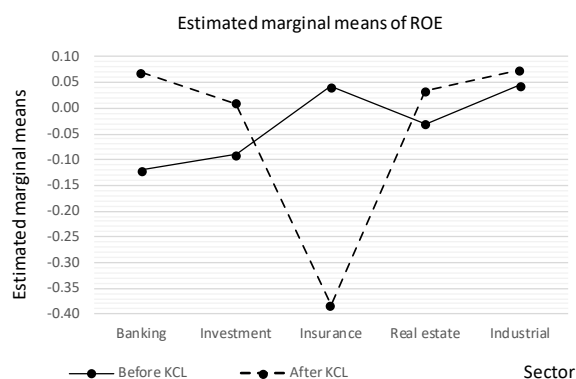
**Panel A: PE**



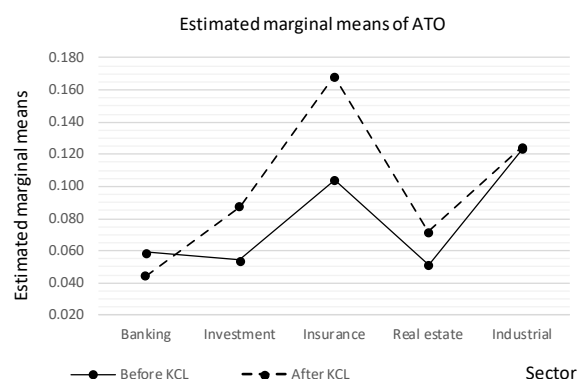
**Panel B: MB**



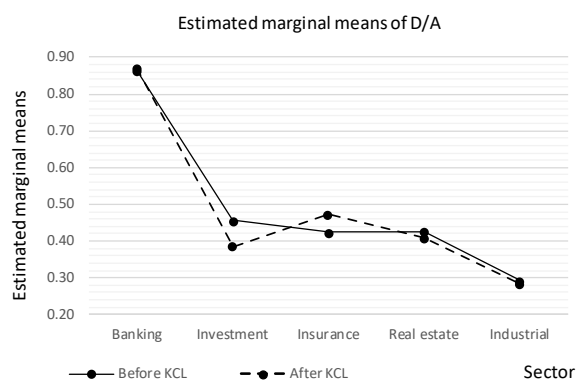
**Panel C: ROE**



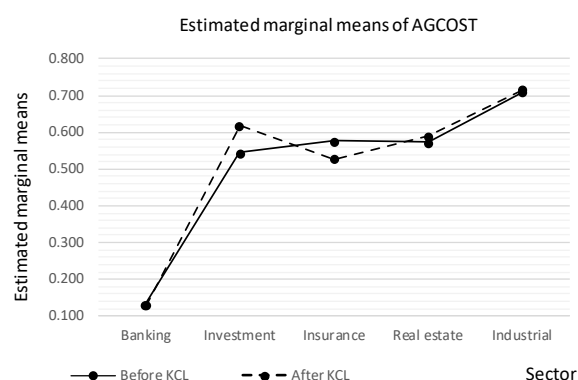
**Panel D: ATO**



**Panel E: D/A**



**Panel F: AGCOST**



**Figure 2.** Plot of means before and after KCL

**Table 3a.** Mann-Whitney *U* test with CMAL grouping

|                          |             | PE       | MB       | ROE      | D/A      | ATO      | AGCOST   |
|--------------------------|-------------|----------|----------|----------|----------|----------|----------|
| Sector 1:<br>Banking     | Mann-W. U   | 348.00   | 292.00   | 382.00   | 497.00   | 131.00   | 487.00   |
|                          | Wilcoxon    | 876.00   | 820.00   | 910.00   | 1025.00  | 627.00   | 1015.00  |
|                          | Z           | -2.202   | -2.954   | -1.746   | -.201    | -5.018   | -.336    |
|                          | Asymp. Sig. | .028*    | .003*    | .081**   | .840     | .000**   | .737     |
| Sector 2:<br>Investment  | Mann-W. U   | 8027.50  | 3541.00  | 8509.50  | 7871.50  | 8571.50  | 7821.50  |
|                          | Wilcoxon    | 16805.50 | 12319.00 | 17287.50 | 16649.50 | 17349.50 | 16599.50 |
|                          | Z           | -1.104   | -8.336   | -.326    | -1.355   | -.227    | -1.436   |
|                          | Asymp. Sig. | .270     | .000*    | .744     | .175     | .821     | .151     |
| Sector 3:<br>Insurance   | Mann-W. U   | 390.00   | 233.000  | 384.00   | 313.00   | 376.00   | 314.00   |
|                          | Wilcoxon    | 796.00   | 639.000  | 790.00   | 719.00   | 782.00   | 720.00   |
|                          | Z           | -.033    | -2.606   | -.131    | -1.295   | -.262    | -1.278   |
|                          | Asymp. Sig. | .974     | .009*    | .896     | .195     | .793     | .201     |
| Sector 4:<br>Real estate | Mann-W. U   | 6594.50  | 5715.00  | 6929.00  | 7033.00  | 6913.00  | 7011.00  |
|                          | Wilcoxon    | 13854.50 | 12975.00 | 14189.00 | 14293.00 | 14173.00 | 14271.00 |
|                          | Z           | -1.126   | -2.761   | -.504    | -.311    | -.534    | -.351    |
|                          | Asymp. Sig. | .260     | .006*    | .614     | .756     | .594     | .725     |
| Sector 5:<br>Industrial  | Mann-W. U   | 4601.00  | 2916.00  | 4379.00  | 4587.00  | 4338.50  | 4525.50  |
|                          | Wilcoxon    | 9257.00  | 7572.00  | 9035.00  | 9243.00  | 8994.50  | 9181.50  |
|                          | Z           | -.018    | -4.395   | -.595    | -.055    | -.700    | -.214    |
|                          | Asymp. Sig. | .985     | .000*    | .552     | .957     | .484     | .830     |

Notes: \* Statistically significant at 5%. \*\* Statistically significant at 10%.

**Table 3b.** Mann-Whitney *U* test with KCL grouping

|                          |             | PE       | MB       | ROE      | D/A     | ATO      | AGCOST   |
|--------------------------|-------------|----------|----------|----------|---------|----------|----------|
| Sector 1:<br>Banking     | Mann-W. U   | 339.00   | 196.00   | 330.00   | 321.00  | 110.00   | 337.00   |
|                          | Wilcoxon    | 1515.00  | 332.00   | 466.00   | 1497.00 | 230.00   | 473.00   |
|                          | Z           | -.69     | -2.92    | -.84     | -.98    | -4.03    | -.729    |
|                          | Asymp. Sig. | .485     | .004*    | .40      | .329    | .000*    | .46      |
| Sector 2:<br>Investment  | Mann-W. U   | 5356.00  | 3879.00  | 5189.00  | 5584.00 | 5678.00  | 5548.00  |
|                          | Wilcoxon    | 25057.00 | 6090.00  | 24890.00 | 7795.00 | 25379.00 | 25249.0  |
|                          | Z           | -2.19    | -4.94    | -2.50    | -1.77   | -1.59    | -1.83    |
|                          | Asymp. Sig. | .028*    | .000*    | .012*    | .077**  | .110     | .060**   |
| Sector 3:<br>Insurance   | Mann-W. U   | 282.00   | 214.00   | 278.00   | 248.00  | 274.00   | 248.00   |
|                          | Wilcoxon    | 387.00   | 319.00   | 383.00   | 1151.00 | 1177.00  | 353.00   |
|                          | Z           | -.23     | -1.51    | -.30     | -.87    | -.38     | -.87     |
|                          | Asymp. Sig. | .820     | .130     | .762     | .380    | .710     | .380     |
| Sector 4:<br>Real estate | Mann-W. U   | 4448.00  | 5342.00  | 4078.00  | 5024.00 | 4689.00  | 5057.00  |
|                          | Wilcoxon    | 20738.00 | 21632.00 | 20368.00 | 6854.00 | 20979.00 | 21347.00 |
|                          | Z           | -2.04    | -.13     | -2.84    | -.81    | -1.53    | -.73     |
|                          | Asymp. Sig. | .041*    | .90      | .005*    | .420    | .130     | .460     |
| Sector 5:<br>Industrial  | Mann-W. U   | 3265.00  | 2615.00  | 3283.00  | 3450.00 | 3299.00  | 3434.00  |
|                          | Wilcoxon    | 13705.00 | 3791.00  | 13723.00 | 4626.00 | 13739.00 | 4610.00  |
|                          | Z           | -.57     | -2.52    | -.52     | -.02    | -.47     | -.06     |
|                          | Asymp. Sig. | .567     | .012*    | .604     | .99     | .63      | .94      |

Notes: \* Statistically significant at 5%. \*\* Statistically significant at 10%.

**Table 4.** Summary of hypotheses testing results based on KCL

| Hyp. No | Null hypothesis (H0)                                                    | Sector      | Result at 5%  |
|---------|-------------------------------------------------------------------------|-------------|---------------|
| 1       | ATO before and after the enforcement of KCL's CG rules are same         | Banking     | Reject        |
|         |                                                                         | Investment  |               |
|         |                                                                         | Insurance   |               |
|         |                                                                         | Real estate |               |
|         |                                                                         | Industrial  |               |
| 2       | Debt ratio before and after the enforcement of KCL's CG rules are same  | Banking     |               |
|         |                                                                         | Investment  | Reject at 10% |
|         |                                                                         | Insurance   |               |
|         |                                                                         | Real estate |               |
|         |                                                                         | Industrial  |               |
| 3       | ROE before and after the enforcement of KCL's CG rules are same         | Banking     |               |
|         |                                                                         | Investment  | Reject        |
|         |                                                                         | Insurance   |               |
|         |                                                                         | Real estate | Reject        |
|         |                                                                         | Industrial  |               |
| 4       | PE ratio before and after the enforcement of KCL's CG rules are same    | Banking     |               |
|         |                                                                         | Investment  | Reject        |
|         |                                                                         | Insurance   |               |
|         |                                                                         | Real estate | Reject        |
|         |                                                                         | Industrial  |               |
| 5       | MB ratio before and after the enforcement of KCL's CG rules are same    | Banking     | Reject        |
|         |                                                                         | Investment  | Reject        |
|         |                                                                         | Insurance   |               |
|         |                                                                         | Real estate |               |
|         |                                                                         | Industrial  | Reject        |
| 6       | Agency cost before and after the enforcement of KCL's CG rules are same | Banking     |               |
|         |                                                                         | Investment  | Reject at 10% |
|         |                                                                         | Insurance   |               |
|         |                                                                         | Real estate |               |
|         |                                                                         | Industrial  |               |

real estate sector only *PE* and *ROE* are statistically different at the 5% significant level indicating differences in valuation and profitability before and after the introduction of the law. For the industrial sector, only *MB* is significant at the 5% level which indicates differences in valuation of this sector before and after the introduction of the law.

Tables 4 and 5 above summarize the results of hypotheses testing based on the introduction of KCL and CMAL.

#### 4.1. Estimating the GLS panel data regressions

Autocorrelation, heteroskedasticity, stationarity and independent variables' multi co linearity are all common problems with linear regres-

**Table 5.** Summary of hypotheses testing results based on CMAL

| Hyp. No | Null hypothesis (H0)                                                     | Sector      | Result at 5%  |
|---------|--------------------------------------------------------------------------|-------------|---------------|
| 1       | ATO before and after the enforcement of CMAL's CG rules are same         | Banking     | Reject at 10% |
|         |                                                                          | Investment  |               |
|         |                                                                          | Insurance   |               |
|         |                                                                          | Real estate |               |
|         |                                                                          | Industrial  |               |
| 2       | Debt ratio before and after the enforcement of CMAL's CG rules are same  | Banking     |               |
|         |                                                                          | Investment  |               |
|         |                                                                          | Insurance   |               |
|         |                                                                          | Real estate |               |
|         |                                                                          | Industrial  |               |
| 3       | ROE before and after the enforcement of CMAL's CG rules are same         | Banking     | Reject at 10% |
|         |                                                                          | Investment  |               |
|         |                                                                          | Insurance   |               |
|         |                                                                          | Real estate |               |
|         |                                                                          | Industrial  |               |
| 4       | PE ratio before and after the enforcement of CMAL's CG rules are same    | Banking     | Reject        |
|         |                                                                          | Investment  |               |
|         |                                                                          | Insurance   |               |
|         |                                                                          | Real estate |               |
|         |                                                                          | Industrial  |               |
| 5       | MB ratio before and after the enforcement of CMAL's CG rules are same    | Banking     | Reject        |
|         |                                                                          | Investment  | Reject        |
|         |                                                                          | Insurance   | Reject        |
|         |                                                                          | Real estate | Reject        |
|         |                                                                          | Industrial  | Reject        |
| 6       | Agency cost before and after the enforcement of CMAL's CG rules are same | Banking     |               |
|         |                                                                          | Investment  |               |
|         |                                                                          | Insurance   |               |
|         |                                                                          | Real estate |               |
|         |                                                                          | Industrial  |               |

sions. Given the nature of our panel data, autocorrelation and heteroskedasticity are not a concern, since we consider only a total of eight years for all the companies. This number is further split when grouping to compare performance indicators. We also use the option of robust standard error to eliminate these two problems. The problem of multi co linearity of explanatory variables is not a concern either, since we use binary variable representing different time groupings.

To test for stationarity in the series property of the dependent variable, we use the Levin-Lin-Chu unit root. The null hypothesis of this test is that panels contain unit roots against the alternate hypothesis that panels are stationary. The results of this test are presented in Table 6 below.

**Table 6.** Results of unit root test of stationarity

| Performance Indicator | Statistic | p-value | Status     |
|-----------------------|-----------|---------|------------|
| PE                    | -84.4800  | 0.0000  | stationary |
| MB                    | -43.8726  | 0.0000  | stationary |
| ROE                   | -1.3e+04  | 0.0000  | stationary |
| D/A                   | -13.8402  | 0.0000  | stationary |
| AGCOST                | -23.6522  | 0.0000  | stationary |
| ATO                   | -37.5514  | 0.0000  | stationary |

Table 6 indicates that all variables do not contain unit root and are stationary. Therefore, we can conclude that a linear model can be estimated safely.

Our GLS equation with panel data was estimated thirty times to cover the six performance indicators (dependent variables) for each of the five sectors. Table 7 illustrates the results of the model estimation.

As indicated in Table 7, four performance indicators are found to be statistically significant either at the 5% level or at the 10% level of significance. These indicators are market to book value representing the value of the firm, debt to asset ratio representing financial leverage, *AGCOST* representing additional expenses as a result of agency problems and total assets turnover representing the efficiency of asset management.

Market to book value indicator is affected negatively by the introduction of both laws indicating a decrease in valuation of banks. This result can be interpreted by the fact that inappropriate laws or heavy legal burden and sometimes unneeded, governance may lead to damaging outcomes. This argument is particularly true in the case of Kuwait. Major controversial and prolonged discussions and amendments to both laws took place before and after approval. One of the authors of this paper was a minister of trade at that time and was deeply involved in preparing the original draft of the laws. She witnessed an immense resistance and pressure by external powers to affect government and parliament to amend the laws to serve their interests. Many market participants believe that corporate governance objectives of the two laws cannot be achieved.

Financial leverage factor was found to be affected positively by the introduction of KCL only. The positive effect on leverage could mean that banks feel safe to increase their financial leverage/risk with the introduction of corporate governance rules included in the new Companies Law. The agency cost variable represented by the ratio of equity to total assets is also found to be positively affected by the KCL indicating lower agency cost. This is in line with resulting effect on financial leverage.

**Table 7.** GLS panel data regression for the banking sector

|                      |        |      | Robust<br>coef. | Std. err. | z     | P>z     |
|----------------------|--------|------|-----------------|-----------|-------|---------|
| Sector 1:<br>Banking | PE     | KCL  | -99.73687       | 90.60872  | -1.10 | 0.271   |
|                      |        | CMAL | 93.31562        | 93.62209  | 1.00  | 0.319   |
|                      | MB     | KCL  | -.505625        | .229312   | -2.20 | 0.027*  |
|                      |        | CMAL | -1.354375       | .7661719  | -1.77 | 0.077** |
|                      | ROE    | KCL  | .006875         | .0121062  | 0.57  | 0.570   |
|                      |        | CMAL | .2775           | .3054182  | 0.91  | 0.364   |
|                      | Dto/A  | KCL  | .01125          | .0066356  | 1.70  | 0.090** |
|                      |        | CMAL | -.0053125       | .0128605  | -0.41 | 0.680   |
|                      | AGCOST | KCL  | -.0110331       | .0058373  | -1.89 | 0.059** |
|                      |        | CMAL | .0101931        | .0088869  | 1.15  | 0.251   |
|                      | ATO    | KCL  | -.0057344       | .0019104  | -3.00 | 0.003*  |
|                      |        | CMAL | -.0141621       | .0015892  | -8.91 | 0.000*  |

Notes: \* Statistically significant at 5%. \*\* Statistically significant at 10%.

**Table 8.** GLS panel data regression for the investment sector

|                         |        |      | <b>Robust<br/>coef.</b> | <b>Std. err.</b> | <b>Z</b> | <b>P&gt;z</b> |
|-------------------------|--------|------|-------------------------|------------------|----------|---------------|
| Sector 2:<br>Investment | PE     | KCL  | 9.910303                | 4.843474         | 2.05     | 0.041*        |
|                         |        | CMAL | -3.891439               | 4.712117         | -0.83    | 0.409         |
|                         | MB     | KCL  | .0337879                | .114125          | 0.30     | 0.767         |
|                         |        | CMAL | -.6419697               | .0966353         | -6.64    | 0.000*        |
|                         | ROE    | KCL  | .119697                 | .0621403         | 1.93     | 0.054**       |
|                         |        | CMAL | -.0285606               | .0549637         | -0.52    | 0.603         |
|                         | D/A    | KCL  | -.0654545               | .0226634         | -2.89    | 0.004*        |
|                         |        | CMAL | -.0099242               | .0252863         | -0.39    | 0.695         |
|                         | AGCOST | KCL  | .0661216                | .0246716         | 2.68     | 0.007*        |
|                         |        | CMAL | .0114057                | .0257037         | 0.44     | 0.657         |
|                         | ATO    | KCL  | .0278666                | .0168081         | 1.66     | 0.097**       |
|                         |        | CMAL | .0079253                | .0131243         | 0.60     | 0.546         |

Notes: \* Statistically significant at 5%. \*\* Statistically significant at 10%.

KCL is also found to affect the assetturn over variable negatively. This means that the performance of the banking sector may be worse with the introduction of both laws in terms of asset management. The result confirms the argument we made with regard to the negative outcome of the value performance indicator.

The results of estimating the GLS regressions for the investment sector is presented below in Table 8. It shows that all performance indicators were affected.

Table 8 indicates that *PE* is affected positively by KCL. The *PE* ratio reflects, particularly, the trader's market valuation of the firm stock. Our interpretation of this result is that stock traders may have believed that the implementation of the KCL will positively affect the performance of the investment sector following the 2008 crisis influencing their optimistic decisions.

Contrary to the resulting positive effect on *PE* ratio, market to book value ratio is found to be negatively influenced by CMAL. This is another valuation indicator reflecting value based on the firm's actual equity. This result tells us that the value of the firm, based on its equity, deteriorate as a direct result of implementing the capital market authority law. *MB* ratio is also driven by traders' perception of the future of the firm. The negative effect may be interpreted by the fact that traders believe

CMAL is unable to improve firm valuation especially as the investment sector was hit badly with huge provisions following the 2008 global financial crisis.

Return on equity indicator is positively affected by KCL. An increase of *ROE* may be due to a decrease in equity of the investment sector relative to profit improvement. The result tells us that the investment sector receive the implementation of KCL as a driver of profitability.

Furthermore, the leverage performance indicator is negatively influenced by KCL. This means decision makers in the investment sector may not feel safe with implementation of KCL to raise external funding, which is associated with financial risk. Again, the aftermath of the global financial crisis may add more weight to this feeling.

Also, KCL has a positive influence on the *AGCOST* variable indicating lowered agency cost. Contrary to the same variable for the banking sector, this result means that the implementation of KCL does lead to an improvement in the agency cost of the investment sector. This is understandable since it is the sector that suffered the most from the financial crisis.

Assets turnover representing the asset-management performance indicator of the sector is also found positively inspired by the implementation of KCL.

**Table 9.** GLS panel data regression for the insurance sector

|                        |        |      | Robust<br>coef. | Std. err. | z     | P>z    |
|------------------------|--------|------|-----------------|-----------|-------|--------|
| Sector 3:<br>Insurance | PE     | KCL  | −2.984286       | 4.61477   | −0.65 | 0.518  |
|                        |        | CMAL | −14.47821       | 20.52137  | −0.71 | 0.480  |
|                        | MB     | KCL  | .3921429        | .455595   | 0.86  | 0.389  |
|                        |        | CMAL | −.5346429       | .2661795  | −2.01 | 0.045* |
|                        | ROE    | KCL  | −.4342857       | .4466767  | −0.97 | 0.331  |
|                        |        | CMAL | .0128571        | .0289223  | 0.44  | 0.657  |
|                        | D/A    | KCL  | −.0014286       | .030148   | −0.05 | 0.962  |
|                        |        | CMAL | .0753571        | .0381258  | 1.98  | 0.048* |
|                        | AGCOST | KCL  | −2.984286       | 4.61477   | −0.65 | 0.518  |
|                        |        | CMAL | −14.47821       | 20.52137  | −0.71 | 0.480  |
|                        | ATO    | KCL  | .3921429        | .455595   | 0.86  | 0.389  |
|                        |        | CMAL | −.5346429       | .2661795  | −2.01 | 0.045* |

Notes: \* Statistically significant at 5%.

Table 9 depicts the resulting outcome of estimating our GLS model for the insurance sector. It shows a significant effect of CMAL on market to book value financial leverage and assets turnover. KCL has no significant effect on any of the financial indicators.

The effect on market to book value ratio is negative, indicating a pessimistic market perception with regard to the effectiveness of the CMAL to improve firm value within the insurance sector. The same applies to the asset management variable.

On the other hand, financial leverage is positively affected demonstrating an optimistic reception of the implementation of the CMAL with regard to raising new external funds.

The results of the regression model for the real estate sector is illustrated in Table 10 below. It shows that except for the *PE* ratio, all the variables are significantly influenced.

CMAL has a negative effect on *MB* of the real estate sector indicating a lower valuation following

**Table 10.** GLS panel data regression for the real estate sector

|                          |        |      | Robust coef. | Std. err. | z     | P>z     |
|--------------------------|--------|------|--------------|-----------|-------|---------|
| Sector 4:<br>Real estate | PE     | KCL  | .5716667     | 3.044622  | 0.19  | 0.851   |
|                          |        | CMAL | 1.2335       | 4.429524  | 0.28  | 0.781   |
|                          | MB     | KCL  | .0695        | .0802247  | 0.87  | 0.386   |
|                          |        | CMAL | −.1725833    | .0830032  | −2.08 | 0.038*  |
|                          | ROE    | KCL  | .0678333     | .0206655  | 3.28  | 0.001*  |
|                          |        | CMAL | −.0056667    | .0294819  | −0.19 | 0.848   |
|                          | D/A    | KCL  | −.0386667    | .022559   | −1.71 | 0.087** |
|                          |        | CMAL | .0316667     | .020544   | 1.54  | 0.123   |
|                          | AGCOST | KCL  | .0376576     | .0226317  | 1.66  | 0.096** |
|                          |        | CMAL | −.0326681    | .0205294  | −1.59 | 0.112   |
|                          | ATO    | KCL  | .0310313     | .0088609  | 3.50  | 0.000*  |
|                          |        | CMAL | −.0162455    | .0085975  | −1.89 | 0.059** |

Notes: \* Statistically significant at 5%. \*\* Statistically significant at 10%.

**Table 11.** GLS panel data regression for the industrial sector

|                         |        |      | Robust<br>coef. | Std. err. | z     | P>z     |
|-------------------------|--------|------|-----------------|-----------|-------|---------|
| Sector 5:<br>Industrial | PE     | KCL  | 7.546042        | 4.340131  | 1.74  | 0.082** |
|                         |        | CMAL | -3.308646       | 4.207602  | -0.79 | 0.432   |
|                         | MB     | KCL  | -.0208333       | .0857809  | -0.24 | 0.808   |
|                         |        | CMAL | -.4373958       | .0990324  | -4.42 | 0.000*  |
|                         | ROE    | KCL  | .0291667        | .0149837  | 1.95  | 0.052** |
|                         |        | CMAL | .0014583        | .0220163  | 0.07  | 0.947   |
|                         | D/A    | KCL  | -.00625         | .0173942  | -0.36 | 0.719   |
|                         |        | CMAL | -.0027083       | .0124018  | -0.22 | 0.827   |
|                         | AGCOST | KCL  | .0061996        | .0172693  | 0.36  | 0.720   |
|                         |        | CMAL | -.0018171       | .0139378  | -0.13 | 0.896   |
|                         | ATO    | KCL  | .0154464        | .0079266  | 1.95  | 0.051** |
|                         |        | CMAL | -.0218075       | .011798   | -1.85 | 0.065** |

Notes: \* Statistically significant at 5%. \*\* Statistically significant at 10%.

the implementation of the capital markets authority law. As mentioned earlier, this kind of valuation is based on market perception of the effectiveness of the new law as a driver of firm value.

Return on equity indicator, on the other hand, is positively affected by KCL. This is in line with the objectives of the law. Another objective is lowering agency costs. This is confirmed by the positive effect of KCL on the *AGCOST* variable which is positively significant. The leverage ratio, however, is indicating a negative influence. Again, for deci-

sion makers in this sector, the implementation of the new KCL does not encourage external funding.

Also, the assets turnover variable is positively affected by KCL and negatively affected by CMAL. This implies that KCL implementation leads to better assets management in the real estate sector and the implementation of the CMAL leads to worse assets management. The contradicting sign of the statistic may be explained by the different natures of the laws. The KCL is concerned mainly with factors related to the internal operation of the compa-

**Table 12.** A summary of the resulting signs of all significant effects

|                           |        |      | Banking | Investment | Insurance | R. estate | Industrial |
|---------------------------|--------|------|---------|------------|-----------|-----------|------------|
| Performance<br>Indicators | PE     | KCL  |         | +          |           |           | +          |
|                           |        | CMAL |         |            |           |           |            |
|                           | MB     | KCL  | -       |            |           |           |            |
|                           |        | CMAL | -       | -          | -         | -         | -          |
|                           | ROE    | KCL  |         |            |           | +         | +          |
|                           |        | CMAL |         |            |           |           |            |
|                           | D/A    | KCL  | +       | +          |           | -         |            |
|                           |        | CMAL |         |            | +         |           |            |
|                           | AGCOST | KCL  | +       | +          |           | +         |            |
|                           |        | CMAL |         |            |           |           |            |
|                           | ATO    | KCL  | -       | +          |           | +         | +          |
|                           |        | CMAL | -       |            | -         | -         | -          |

ny. The CAML is concerned with companies listed in the stock market. The main objective of the later is the fair dealing of the company stocks.

The results of estimating the GLS model for the industrial sector is illustrated in table 11. *PE*, *MB*, *ROE* and *ATO* are the variables exhibiting significant effect.

The effect of KCL on *PE* is positive. The effect on this valuation indicator means that the market gives more value to the industrial sector in response to the new corporate governance rules included in the law. Another valuation indicator represented by the market to book value was found to be affected negatively the CAML. It indicates the market is encouraged by the introduction of the new governance rules included in the CMAL law. KCL, on the other hand, was found to have a positive effect on the profitability performance of this sector. This shows that corporate governance rules included in the KCL

leads to an improvement of profitability for industrial companies. Although the effect of KCL is positive on *ATO* variable, the negative effect of the CMAL is evident again on the assets turnover indicator.

An important finding of this research is that, except for *D/A* ratio, all performance indicators were negatively affected by CMAL. This is evident in table 12 which presents a summary of the resulting signs of all significant effect. The other major finding is that most of the performance indicators that were significantly affected by KCL had positive coefficients. The only explanation of these two contradicting results is that, unlike KCL, CMAL has included corporate governance rules that are inappropriate or ineffective in improving the performance of the Kuwaiti companies. Intolerable strict and heavy CG regulations are common pitfalls of incompetent regulators. This is in line with conclusions made by Carney (2006) and Bruno and Claessens (2010).

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## CONCLUSION

Following the 2008 global financial crisis, many countries all over the world have enforced new market reforms and more strict corporate governance regulations. Kuwait was not an exception. It enforced two major laws targeting market reforms and improvement of corporate governance of the companies listed in Kuwait Stock Exchange. The Capital Market Authority Law (CMAL) was implemented in 2010 and the Kuwait Companies Law (KCL) was implemented in 2012. Feasibility of the two laws was controversial as it was extensively debated among economic and political rivals. Eventually, the two laws were enforced.

In this research, we sought answers to two question (1) has the performance of the listed companies changed in response to the enforcement of the two laws? And (2) if it has, was there a direct influence of the laws on that change?

To answer the questions, we reviewed the relevant literature with the objective of identifying the proper factors to measure and develop our research hypotheses. Six factors were identified representing valuation, profitability, assets management, debt and agency costs. For each factor we developed two hypotheses for a total of twelve hypotheses. Each hypothesis is tested using Mann-Whitney U test of two-independent-sample to compare two groups of cases. For the CMAL, except for the agency cost indicator, all indicators for the banking, before and after the implementation of the law were found to be significantly different. For the other sectors, only the valuation factor represented by the market to book value was found to be significantly different. For the KCL, market to book value and assets management factor were found to be significantly different for the banking sector. For the investment sector, except for assets management factor, all other factor were found to be significantly different. Performance indicators for the insurance sector exhibited no significant differences. Profitability indicator and valuation indicator, represented by the price earnings ratio for the real estate sector, before and after the implementation of KCL, were significantly different. Valuation indicator represented by the market to book value ratio was the only factor to exhibit a significant difference. These results are definitely inconclusive.

The outcomes of GLS panel data regressions for each of the law were also inconclusive. Some of the indicators were found to be influenced by the implementation of the two laws and some were not. However, two important results were interesting and require further investigation. The first is that KCL is more feasible in enhancing performance indicators than CMAL. In fact, all the performance indicators that were found to be influenced by CMAL had negative coefficients indicating lower performance. This might be an evidence of how harmful stringent reforms to firm performance.

Based on these findings, we recommend that regulators in Kuwait should review the current version of CMAL and amend it according to the best standards. Our results, definitely, suggest that the capital market authority law was not received positively by the Kuwaiti market.

This study should be revisited by including more companies, time series and sectors in the future. Our results were based on fundamental data of the listed companies. Soliciting opinions of all stakeholders of the CMAL, in particular, may be crucial for a more general conclusion. This is what the authors intend to do in a separate survey study.

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