Research Journal of Finance and Accounting www.iiste.org
ISSN 2222-1697 (Paper) ISSN 2222-2847 (Online)
Vol.9, No.12, 2018

Investigating the Effect of Enforcement & Corporate Governance on Internal Control Disclosure in Pakistan (Comparison of Non-financial vs. Financial Sector)

Khurram Ashfaq[1*] Dr. Naveed Razzaq[2] Zhang Rui[3]
1.PhD Scholar at School of Accountancy, Jiangxi University of Finance & Economics China
2.Lecturer at Xinyu University China
3.Professor at School of Accountancy, Jiangxi University of Finance & Economics China

Abstract
This study investigates internal control disclosure practices of financial and non-financial sector companies which are listed on Pakistan Stock Exchange (PSX) over three years period (2012-2014) and also to analyze how audit committee characteristics, board composition, industry type and enforcement influence internal control disclosure practices of these companies. We select 207 companies from non-financial sector and 65 from financial sector on sample basis. The internal control disclosure was measured using seven scale items whereas audit committee characteristics were represented through audit committee size, meetings, independence, audit committee shareholdings and financial experts on audit committee. Finally board composition was measured through variables such as board size and non executive director as chairman. The data related to all desired variables has been collected from annual reports. Results of descriptive statistics show that overall level of internal control disclosure has been very low in Pakistan consistently over three year's period. However financial companies tend to disclose much more information on internal control as compared to non-financial companies in terms of mean value of internal control disclosure index as well as individual items of internal control disclosure. Multiple regression analysis results show that board composition such as board size and non executive director as chairman have significant positive influence on overall internal control disclosure index as well as individual categories of internal control disclosure index. Among ownership structure variables, holdings by financial institutions have been found to have significantly positive influence only on disclosure of risks assessment & control assessment procedures. In case of industry type, it has been found that companies from financial sectors have been disclosing significantly more internal control information as compared to companies from non financial sector. However testing the enforcement effect, it has been found that companies from banking sector have been disclosing significantly less internal control information as compared to companies from other sectors. The implication for this study is that financial sector in Pakistan has been strictly regulated by State bank of Pakistan in terms of submission of internal control information on annual basis. In addition to this, audit committees in financial sector companies have much more independent members as compared to non-financial companies. *Finally majority companies from financial sector have appointed non executive director as chairman. The presence of regulatory authority like SBP coupled with strong internal governance mechanism is the reason for greater amount of internal control disclosure in financial sector.* The level of internal control disclosure can be improved in case of non-financial companies through hiring more independent members on audit committee and performing vigilant role by regulatory authorities i.e. Securities & Exchange Commission of Pakistan (SECP).
Keywords: Internal control disclosure, board composition, audit committee, enforcement, Pakistan etc.

1. Introduction:

The disclosure of information on internal control has gained much more importance since the late 1970 (McMullen et al., 1996). The reason for this increased importance is due to the biggest accounting scandals at the start of twenty-first century. Following these scandals, there has been need to improve the quality of internal control and put emphasis on its role in the governance of firm (Lin et al., 2014). The companies need to establish internal control system in order to protect the interest of shareholders through providing reliable financial reporting system and information on firm's risks which may restrict to achieve its objectives. The disclosure of information on internal control design and effectiveness in annual reports is important because investors may use it to evaluate managers (Hammersley et al., 2008, Hermanson, 2000). The previous studies on internal control in U.S show that disclosure of internal control information is considered by investors as value relevant because it affects the costs of capital. An early study conducted by Ogneva et al. (2007) supports the evidence that investors put emphasis on internal control information relating to risks. Likewise Campbell et al. (2014) have also found that investors frequently use risks information to determine market prices.

This is quite surprising that disclosure of information relating to internal control in annual report is only mandatory in U.S irrespective of its value relevance by investors. Following the accounting scandal of Enron, U.S has formed very famous act called Sarbanes Oxley Act (SOX) which has made it mandatory for every U.S listed company to report on internal control effectiveness over financial reporting in the annual report. However in other countries, codes of corporate governance are framed by authorities and emphasis is made on the disclosure of internal control information in annual reports but that emphasis is of voluntary nature. So outside U.S, managers have discretion over disclosure of internal control information in annual report. Hence there is need to understand manager's incentive to disclose voluntary information on internal control. The empirical evidence on the motivation for managers to disclose internal control information is very limited. Bronson et al. (2006) conducted study in U.S before the implementation of Sarbanes Oxley Act (SOX) through taking sample of 397 firms for 1998 and found that management reporting on internal control disclosure is very low. While another study conducted by Deumes and Knechel (2008) in Netherland in the late 1990s in order to investigate economic incentives for internal control reporting in annual reports and found that ownership variables such as management and block ownership have significant negative association with internal control disclosure information.

Based on these studies, it can be inferred that the main incentive for reporting on internal control disclosure lies in the tradeoff between benefits and costs of disclosing information. We extend our prior research on internal control disclosure through taking into account all audit committee characteristics such as audit committee size, audit committee shareholding, independence, frequency of audit committee meetings and financial experts on audit committee. Previous study by Bronson et al. (2006) has ignored audit committee size and audit committee shareholding. So we contribute towards the literature through taking comprehensive effect of audit committee characteristics on internal control disclosure. Secondly previous studies have ignored financial sector in their studies but we have incorporated both financial and non-financial sectors into our sample in order to better understand sector wise comparison of internal control disclosure information. Following the financial crisis of 2008, much focus was made on increasing the transparency of information in annual reports. So this study will also contribute towards the literature through analyzing whether the level of internal control disclosure was improved following the financial crisis in financial versus non-financial sectors of Pakistan. The comparison of internal control disclosure practices in financial versus non-financial sectors will add significantly towards the literature. The primary responsibility for establishing an effective internal control system lies on the management of company and thus en effective internal control system can be considered good news for investors. The disclosure on this information in annual reports can differentiate the company from other companies not disclosing such information. So considering this element, composition of board can have significant influence on the disclosure policy decisions of companies.

Considering the regulation on internal control reporting in Pakistan, there are no mandatory requirements from regulatory authorities. However Codes of Corporate Governance require companies to disclose a statement on the effectiveness of internal control system in annual reports. In addition to this, director's report should also contain discussion on major risks & concerns faced by company during the year. It is important to mention here that complying with both of these requirements is on complying or explain principle. In case of financial sector, State Bank of Pakistan (SBP) has made mandatory requirements for banking companies to prepare internal control report and submit this report on annual basis. So it may be hypothesized that companies operating in banking sector can be motivated to make increased disclosure of internal control information in annual reports as a result of these mandatory requirements from SBP as compared to companies from other sectors. Finally this is the first type of comprehensive study undertaken in developing country like Pakistan because previous studies have focused only on the developed countries. So this will add to the literature on internal control disclosure in developing countries as well.

In order to make this contribution, we have performed regression analysis through taking the sample of 207 companies from non-financial sector and 65 companies from financial sector. The data on desired variables has been collected from annual reports for the period from 2012-2014. The internal control disclosure index has been calculated using seven scale items which are adapted from the study conducted by Hooghiemstra et al. (2015). The structure of the remaining paper is as follows: The next section describes details on prior research and hypothesis development. The third and fourth section is related with research design & methodology and data analysis respectively. The final section summarizes with conclusion, implications and suggestions for future research.

2. Literature review & hypothesis development:

Sarbanes Oxley Act (SOX) is the most popular act which has been implemented in U.S following the Enron scandal. As per this Act, scope of internal control is very narrow as it is meant for only to consider internal control over financial reporting (Ashbaugh-Skaife et al., 2007). However outside U.S, internal control has wider scope and follows the most influential COSO framework (1992). This framework defines internal control as a process which has been implemented and affected by company's management and objective of this internal control process is to provide reasonable assurance that company will be able to achieve its strategic objectives through performance of its operations efficiently and effectively, financial reporting reliability and compliance with relevant laws & regulations. According to this framework, internal control process encompasses certain elements such as control environment, risks assessment, activities relating to control and monitoring. A sound internal control system can be considered as an indication of good corporate governance system in the organization (Bushman and Smith, 2001). The interest of shareholders can be protected through ensuring reliability over financial reporting and also informing about risks which may restrict the company to achieve its objectives. The disclosure of information relating to internal control system can be perceived by investors as value relevant because external audit only assures investors about the reliability of internal control over financial reporting (Hermanson, 2000). In many countries including Pakistan, external auditor does not report over effectiveness of internal control. The external audit report and firm report on internal control can convey different information i.e. it is quite possible that audit report contains an unqualified audit opinion in the presence of material weakness in internal control system (Schneider and Church, 2008). The external audit provides only reasonable assurance irrespective of the effectiveness of internal control.

The internal control disclosure made by firms in annual report relates with the information about risks which may not enable them to achieve its goals. This sort of risks information is not within the scope of external audit while doing audit of financial statements. The investors of company may give value to this internal control disclosure information in addition to the value they can extract from auditor's report. Internal control process is controlled by management so it cannot be directly observed by investors. So there is need to disclose that information in the annual reports to make it available to investors. In most public policy documents and corporate governance codes, there is emphasis on management to disclose internal control information to investors (Deumes and Knechel, 2008, Van de Poel and Vanstraelen, 2011). However in many countries, status of corporate governance codes is voluntary except in United States. So what will motivate management to disclose internal control information in annual report?

The answer to this question can be given through taking into account agency theory framework which implies that there is separation of ownership between those who owns the company called shareholders and those who manage called managers. Hence this situation may create clear conflict of interest between shareholders (principal) and management (agents). The managers of the company may take decisions which are in their own interest at the costs of shareholders interest. The shareholders of the company may be unable to detect this behavior of managers due to lack of information. Same is the case with internal control information i.e. because internal control disclosure is controlled by management. Healy and Palepu (2001) has stated that this information asymmetry can be reduced through voluntary disclosure of information in annual reports. Through this way, shareholders will be able to reduce this information risk and also if this information is considered to be reliable by them then it will benefit firms in terms of lower cost of capital (Ashbaugh ‐ Skaife et al., 2009, Dhaliwal et al., 2011, Verrecchia, 2001). So voluntary disclosure of internal control information will benefit both investors as well as shareholders i.e. shareholders will be able to closely monitor the actions of managers and thus through this there will be fewer agency problems (Dey, 2008).

The managers of company can consider the potential tradeoff between benefits and costs of disclosing internal control information (Healy and Palepu, 2001). From manager's point of view, the main benefit of disclosing internal control information is increase in manager's reputation. Graham et al. (2005) conducted survey and found that establishing reputation through reliable financial reporting is key motivating factor for managers to disclose voluntary information. The effectiveness of managers communication depends upon reliable financial reporting and it can also affect managerial position in labor market (Kothari et al., 2009). There is prerequisite for reliable financial reporting that information to be disclosed should be timely as well as complete (Mercer, 2004, Healy and Palepu, 2001). On the costs side, voluntary disclosure of internal control information may lead to potential legal consequences. For example if the disclosed information on internal control are incomplete or inaccurate then manager can be sued or face legal consequences (Campbell et al., 2014). This situation can have adverse impact on the manager's reputation. In addition company can face proprietary costs through disclosing information on internal control. For example providing the information on firm's key risks and strategies to manage those risks can put the company into competitive disadvantage (Deumes and Knechel, 2008). Voluntary disclosure of information can increase the risk of competition and existing companies can also copy firm's strategy to manage risks and this thing can adversely affect firm's profitability (Healy and Palepu, 2001). Thus proprietary costs will be borne by both shareholders as well as investors. For managers, decrease in firm's competitive strength will not enable them to successfully execute firm's strategy and thus affect their compensation and career as well. Shareholders will face this proprietary cost in terms of negative impact on share price of company (Kothari et al., 2009).

2.1. Audit committee characteristics:

Holland (2006) stated that disclosure process related to voluntary disclosure can be actively monitored by board of directors. Council (2010) state that it is the key responsibility of board to communicate about firm performance, financial position, its future prospects and details about strategies for attaining the objectives of company. However the board can perform its reporting responsibilities through audit committee (Mangena and Pike, 2005, Peasnell et al., 2005). So audit committee can be considered as a mechanism to reduce information asymmetries between shareholders and board management (Rainsbury et al., 2008). Through this way, audit committee will perform the role of monitor and help to align management interest with that of shareholders. Among the reporting responsibilities, audit committee also has to evaluate firm's internal control and risks management system. However if the audit committee has adequate size with sufficient number of independent members and financial experts, then it can perform its responsibilities more effectively(Mangena and Pike, 2005). So considering this, following hypothesis can be developed regarding how different audit committee characteristics (audit committee size, independence, meeting, shareholdings and financial expertise) can affect internal control disclosure practices:

2.1.1. Audit committee size:

Audit committee must have sufficient size of members and authority to perform its responsibilities more effectively and efficiently (DeFond and Francis, 2005, Mangena and Pike, 2005). There is mixed evidence regarding the size of audit committee on its effectiveness as one argument is that larger size will provide audit committee with diversity of views and expertise and committee can discharge its responsibilities through effective monitoring. (Klein, 2002). On the other side, larger audit committee size can lead towards the problems of process losses and diffusion of responsibility(Karamanou and Vafeas, 2005, Klein, 2002). Given this mixed evidence, following hypothesis can be developed regarding audit committee size:

H1: There is relationship between size of audit committee and internal control disclosure.

2.1.2. Frequency of audit committee meetings:

Karamanou and Vafeas (2005) stated that if audit committee wants to perform its monitoring role more efficiently then it must meet on frequent basis and also spend more time. Because of smaller number of audit committee members, there is a difficulty to discuss all major issues relating to corporate reporting in very short period of time (Agrawal and Chadha, 2005). Considering this limitation, there is need to devote more time to the audit committee meetings for discussing major issues (Raghunandan and Rama, 2007). Council (2012) proposed that the minimum number of audit committee meetings should be four. Therefore hypothesis should be:

H2: There is positive relationship between frequency of audit committee meetings and internal control disclosure.

2.1.3. Audit committee financial expertise:

There is need for audit committee to have sufficient number of members having financial expertise (Smith, 2003). Subsequent to this, Council (2010) recommended that there should be at least one member of audit committee having financial expertise. The reason for this that financial experience will help audit committee members to understand auditing issues and resolve any disagreement between management and auditors (Mangena and Pike, 2005). Knapp (1987) stated that if the audit committee will not compose of sufficient financial experts then its supervisory role can be compromised. So it can be argued that through sufficient financial experts, audit committee can be in a better position to consider capital market implications of providing internal control disclosure. Mangena and Pike (2005) found the positive relation between audit committee financial expertise and disclosure. So we hypothesize that:

H3: There is positive relationship between percentage of financial expert on audit committee and internal control disclosure.

2.1.4. Audit committee shareholdings:

The effect of audit committee shareholding on disclosure is mixed one. According to one point of view, audit committee shareholding will help to align the interest of shareholders and improve the effectiveness of audit committee monitoring (Karamanou and Vafeas, 2005). An opposite argument regarding the effect of audit committee shareholding is that higher shareholding may lead towards compromising independence and oversight role and motivate them to act in their own personal interest (Mangena and Pike, 2005). They conducted an empirical study and found that shareholdings by audit committee have negative effect on disclosure in interim reports. So considering this, our hypothesis is:

H4: There is negative relationship between percentage of audit committee shareholding and internal control disclosure.

2.1.5. Audit committee independence:

Fama and Jensen (1983a) argued that audit committee having independent members will more effectively monitor the actions of management. As independent members will not put themselves under the influence of management (Carcello and Neal, 2003). So the independent audit committee will ensure the availability of sufficient information to the shareholders and thus help to reduce information asymmetry. An empirical study conducted by Mangena and Tauringana (2007) found significant positive relationship between audit committee independence and financial reporting quality while Agrawal and Chadha (2005) and Yang and Krishnan (2005) failed to find significant relationship. Therefore we hypothesize that:

H5: There is positive relationship between audit committee independence and internal control disclosure.

2.2. Board composition:

2.2.1. Board size:

The primary responsibility of board of directors is to monitor and control the actions of management of company (Fama and Jensen, 1983b). This responsibility of monitoring and controlling can be performed more effectively if there are increasing numbers of members on the board. Thus members on board with diversity can also enhance the transparency as well as information disclosure in annual reports (Gandía, 2008). So considering this, it may be hypothesized that board size may have positive effect on the disclosure of internal control information in annual reports.

H6: There is positive relationship between board size and disclosure of internal control information in annual reports.

2.2.2. Non executive director as chairman:

The appointment of non executive director as chairman of board is the most important factor which can ensure that board of directors will act in the best interest of wide category of stakeholders of company. So it can be considered as an important control mechanism due to independent monitoring function. The empirical evidence also supports this relationship that presence of non executive director as chairman of board has positive effect on financial disclosure in annual reports.

H7: There is positive relationship between non executive director as chairman of board and internal control disclosure in annual reports.

2.3. Enforcement:

State Bank of Pakistan (SBP) has framed guidelines for banking companies/development financial institutions to submit report on internal control on annual basis. So taking into account these guidelines, every company from this sector is required to prepare internal control report and submit it to SBP on annual basis. So it may be hypothesized that as a result of these guidelines from SBP, companies from this sector may disclose more internal control information as compared to companies from other sectors. Thus hypothesis related to this enforcement variable is:

H8: There is positive relationship between enforcement and internal control disclosure in annual report.

Control variables:

In order to test the hypothesis, we have incorporated some control variables in the model such as firm size, profitability, leverage and audit firm size.

3. Research design & methodology:

3.1. Study sample:

Considering the research objectives, this study has taken into account companies which are listed on Pakistan stock exchange (PSE) in Pakistan. The sample companies are categorized into financial sector and non-financial sector. So a sample of 207 companies has been selected from non-financial sector which includes engineering, textile, oil & gas, sugar, technology & communication, food, pharmaceutical, chemical and cement sector. Likewise in financial sector, 65 financial companies have been selected which include commercial banks, leasing, insurance and investment banks. The annual reports for three years 2012-2014 have been selected for this purpose. All the data on desired variables has been collected manually from annual reports of sample companies. The main criteria for selecting these sample companies are the availability of annual reports for three years period (2012-2014) and also there are reasonable numbers of sample companies in each sector.

3.2. Internal control disclosure:

According to COSO (1992), there are different components of internal control system such as control environment of company, assessment of risks, control activities and internal control monitoring. The first element of internal control system i.e. control environment relates with the philosophy of management towards establishing internal control system in the firm in order to achieve strategic objectives. This element signals investors that whether management assumes the responsibility for establishing an effective internal control system. The assessment of risks relates with the process to identify risks and then analyzing those risks which may restrict management to achieve organization objectives. Reporting of those risks in annual report helps investors to assess company's risks and make decision about whether to invest or not. In order to address those risks, management needs to implement policies and procedures at each level and this process is called control activities. So there is need to report that what measures has been taken by management in order to address those risks, for example in the form of internal control framework. This reporting will help investors to assess whether measures taken by management to address risks are sufficient. Finally internal control monitoring is meant for assessing deficiencies in internal control process and thus reporting those deficiencies to management. In addition, these deficiencies should also be communicated to investors so they can evaluate the company's ability to achieve objectives regarding efficient performance of company's operations, accounting system reliability and compliance with relevant laws.

In this study, internal control disclosure index has been adapted from the study conducted by Hooghiemstra et al. (2015). As per this study, internal control disclosure index can be categorized into seven items namely strategic & operational risks, financial risks, financial reporting risks, responsibility for internal control system, internal control measures, internal control framework and effectiveness of internal control system. The annual report is to be considered as the main communication channel for internal control disclosure because many investors still consider this as the most important medium to get information. In addition, prior studies have also used annual report as the main source to measure internal control disclosure, so this will also help to compare study's results with prior studies. In addition, we have focused only on voluntary part of annual report in order to measure internal control disclosure and not considered mandatory part of annual report. So through this way, we can also prove the argument that managers make choices of costs and benefits while disclosing internal control information in annual reports.

Finally in order to record each item of internal control disclosure, we have assigned one point for each item if it is disclosed in annual report or otherwise zero. At the end, score to each items of internal control disclosure index has been added to get the final points for each firm. It is important to note that we have assigned equal weights to all items of internal control disclosure. The final score of these items measures the extent of internal control disclosure which ranges from 0 (no item disclosed) to 7 (all items disclosed). We have also used Cronbach's alpha to check the internal consistency of these seven items of internal control disclosure. The value of this Cronbach's alpha is 0.703 for all data which means that measures of internal control disclosure are internally consistent.

3.3. Independent variables:

In this study, independent variables used are board composition, audit committee characteristics, enforcement and industry type. In addition to this, there are some control variables which are also used in this study in order to make our results consistent with prior studies. The control variables used in this study are firm size, profitability, leverage and audit firm size. Table 1 gives detailed information about independent and dependent variables, measurement basis along with its sign. Before running the model, data was checked for multicolinearity using correlation coefficient as well as variance inflation factor test. The following research model is related to the effect of board composition, audit committee characteristics, enforcement and industry type on disclosure of internal control in annual reports.

$$\textbf{ICDINDEX}=\beta_0+\beta_1 AC\_SIZE+\beta_2 AC\_MTNG+\beta_3 AC\_IND+\beta_4 AC\_FE+\beta_5 AC\_SHR+\beta_6 BSIZE+\beta_7 NED\_CHAIR+\beta_8 INS\_OWN+\beta_9 MGR\_OWN+\beta_{10} GOVT\_OWN+\beta_{11} IND\_TYPE+\beta_{12} BIG\_4+\beta_{13} FIRM\_SIZE+\beta_{14} ROE+\beta_{15} LEV+\varepsilon i$$

4. Data analysis & results:

4.1. Descriptive statistics:

Table 2 presents descriptive statistics of the dependent variable internal control disclosure index for companies from non-financial & financial sector for three years period (2012-2014). With respect to the non-financial sector, mean value of internal control disclosure index is 1.73 in 2012 followed by 1.737 & 1.742 in 2013 & 2014 respectively. These mean values show the consistency of average number of items disclosed over three years period in annual report by non-financial sector companies. Considering the financial sector, mean value of internal control disclosure index is 4.37 in 2012 followed by 4.44 & 4.47 in 2013 and 2014 respectively. Same like non-financial sector, there is also consistency in the mean value of internal control disclosure index for financial sector, but this mean value is almost double than that of mean value of internal control disclosure index for non-financial sector. So from this comparison, it can be inferred that financial sector companies tend to disclose more items of internal control disclosure in annual reports as compared to non-financial sector companies in Pakistan.

Considering the table on frequency of companies disclosing internal control disclosure items for each sector, it can be inferred from **Table 3** that more than 60 percent companies from non-financial sector tend to disclose only one item of internal control disclosure over three years period. However percentages of companies which have disclosed all items of internal control disclosure index is quite low e.g. only three companies. Contrary to this, performance of financial sector companies in terms of internal control disclosure is quite good as around 40% companies have disclosed five items of internal control disclosure over three years period. These results show that financial sector companies have disclosed significantly more items of internal control disclosure index as compared to companies from non-financial sector.

Finally taking into account individual items of internal control disclosure index, **Table 4** shows that performance of companies from financial sector is quite good as compared to companies from non financial sector in terms of disclosure of strategic risks as well as financial risks. However in terms of disclosure of financial reporting risks, companies from both sectors have performed quite poor. Considering the results regarding disclosure of statement by management regarding their responsibility to establish an effective internal control system, results show that more than 65% companies from financial sector have made such statement in annual reports as compared to companies from non financial sector where disclosure percentage was quite low e.g. less than 25%. Similar results have been found in case of disclosure of risks assessment procedures e.g. internal control process & framework for internal control; where performance of companies from financial sector was again good as compared to companies from non financial sector. The final item of internal control disclosure index is related with disclosure of statement by management regarding effectiveness of internal control system. In case of disclosure of such effectiveness statement, companies from both sectors have performed quite well.

Taking into account descriptive statistics of independent variables, **Table 5** shows the comparative results of financial and non-financial companies regarding audit committee characteristics. Regarding size of audit committee, average numbers of members are found as less than 4 in case of both financial as well as non financial sector. Similar results are found in case of average number of meetings held by audit committee e.g. less than 5 in case of both financial and non financial sector. However for audit committee independence, financial sector companies have on average of 29% independent members of audit committee in 2012 with increasing trend in subsequent years. But for non financial sector companies, maximum percentage of independent members on audit committee was reported as only 22.3% in 2014. Finally in case of percentage of financial experts on audit committee and shares held by audit committee, no significant differences are observed among financial versus non financial sector companies.

Considering the comparative results of other governance variables, it has been found that average numbers of members on the board are around 8 over three years period for both financial sector and non financial sector companies. Similar results have been found in case of average percentage of shares held by government. However financial sector companies have higher average percentage of shares held by financial institutions as compared to non financial sector companies. But for shares held by managers, non financial sector companies have average percentage of around 27% as compared to financial sector companies where average percentage has been reported as 13%. Finally almost more than 90% companies from financial sector have appointed non executive director as chairman of board as compared to financial sector companies where only this percentage has been reported as around 46%.

4.2. Multiple regression analysis:

This section presents the results of regression analysis for overall internal control disclosure index as well as individual categories of internal control disclosure index. Using the results of **Table 7** for overall internal control disclosure index, model (1) of this table reports that size of board and non executive director as chairman have highly positive significant effect on disclosure of internal control information in annual reports. Further among audit committee variables, it has been found that presence of independent members on audit committee has highly positive significant effect on internal control disclosure. Finally appointment of one of big four audit firm as external auditor has also been found to have positively significant influence on the disclosure of internal control information in annual reports. Taking into account the results of model (2) of this table for year & industry effects, it has been found that time has insignificant effect on disclosure of internal control information in annual reports. However based on the results of industry effects, it has been found that companies from non financial sector have disclosed significantly less internal control information as compared to companies from financial sector. The final element of this model (2) is related with investigating the effect of requirement regarding submission of internal control information from State Bank of Pakistan (SBP) on disclosure of internal control information in annual report. These requirements to submit internal control information to SBP are only applicable for banking companies/development financial institutions in Pakistan. Result regarding this enforcement effect has reported that despite the requirements from SBP regarding submission of internal control information on annual basis, companies from banking sector have been disclosing significantly less internal control information as compared to companies from other sectors.

Table 8 reports the results of individual categories of internal control disclosure which includes risks assessments procedures and control assessment. Using the results of this table for risks assessment procedures & control assessment, it has been found that again board size and non executive director as chairman of board have positive significant effect on disclosure of risks assessment & control assessment information in annual reports. Further presence of independent members on audit committee and appointment of one of big four audit firm as external auditor also have positive significant effect on disclosure of risks assessment as well as control assessment procedures. In addition to this, it has been found that holdings by financial institutions positively influence disclosure of risks assessment & control assessment procedures. For year & industry effects model, it has been found that companies from non financial sector have been disclosing significantly less information on risks assessment & control assessment as compared to companies from financial sector. Finally results regarding the effect of enforcement on disclosure, it has been found that companies from banking sector have disclosed significantly less information about risks assessment as compared to companies from other sectors. However in case of disclosure of control assessment, banking companies have performed significantly better as compared to companies from other sectors.

Results regarding the disclosure of other two elements of internal control system as per COSO framework have been presented in Table 9. Based on the results of model (1) & (2) for responsibility statement on internal control system, it has been found that again variables of board composition such as board size & non executive director as chairman, audit committee variable such as meetings of audit committee and big four audit firm as external auditor have positive significant influence on management to disclose such responsibility statement in annual reports. In case of industry effect, again companies from non financial sector have been disclosing significantly less such statement as compared to companies from financial sector. Finally enforcement has been found to have insignificant effect on disclosure of such statement in annual report of banking companies as compared to companies from other sectors. The final part of this table relates with the disclosure of statement on effectiveness of internal control system in annual reports. Using the results of model (3) & (4) for such effectiveness statement on internal control system, only holdings by government has highly positive significant effect on disclosure of such effectiveness statement in annual reports. The effect of time & industry has been found to have insignificant effect on disclosure of effectiveness statement in annual reports. However in case of enforcement effect, it has been found that companies from banking sector have been disclosing significantly less effectiveness statement on internal control as compared to companies from other sectors.

5. Conclusions & Directions for future research:

This study aims to examine internal control disclosure practices of companies from financial and non-financial sectors which are listed on Pakistan Stock Exchange (PSX) over three years period (2012-2014) and also to analyze how audit committee characteristics, board composition, industry type and enforcement influence internal control disclosure practices of these companies. To achieve these objectives, 207 companies from non-financial sector and 65 from financial sector have been selected on sample basis. Internal control disclosure index was adapted from the study conducted by Hooghiemstra et al. (2015) which consists of seven items. The reliability of internal control disclosure index has been checked through cronbach's alpha. The results of internal control disclosure index show that there is consistency in disclosure of internal control information in annual reports over three years period (2012-2014) by both non-financial and financial sector companies. However mean value of internal control disclosure is 4.47 in case of financial sector compared with 1.74 in case of non-financial sector which shows that financial sector companies tend to disclose more information on internal control to investors in annual reports as compared to non-financial sector companies. The results of this mean disclosure match with the results of study conducted by Hooghiemstra et al. (2015).

In terms of frequency of companies disclosing internal control information, 40% financial sector companies tend to disclose five items of internal control disclosure over three years period as compared to non financial sector companies where only 2.5% companies are able to disclose five items of internal control disclosure. Considering the individual items of internal control disclosure in annual reports, there is poor level of disclosure of internal control responsibility statement, internal control process and framework, financial reporting risks and strategic risks in non-financial sector as more than 70% companies are involved in non-disclosure. Contrary to this, there is only poor disclosure of financial reporting risks in annual reports of financial sector companies.

Taking into account the results of regression analysis, it has been found that time has no effect on the disclosure of overall internal control disclosure index as well as individual categories of internal control disclosure index. However industry type emerged as one of the most important variables to influence internal control disclosure behavior in Pakistan. In terms of enforcement effect, it can be inferred that specific mandatory requirements from SBP regarding submission of internal control information on annual basis has negative effect on disclosure of internal control information in annual reports of banking companies as compared to companies from other sectors. Finally it has been found that composition of board can also significantly influence disclosure of internal control information in annual reports.

From above results, it can be summarized that overall level of internal control disclosure is low in Pakistan. However when comparing sectors, it has been observed that financial companies tend to disclose greater amount of information as compared to non-financial companies. The reason for greater amount of disclosure in financial sector is the nature of business. In addition when comparing descriptive statistics of audit committee characteristics, it has been found that audit committees of financial sector companies are more independent as compared to non-financial sector companies. In addition to this, more than 90% companies from the financial sector have appointed non executive director as chairman of board. The value of descriptive statistics shows that on average 33% of audit committee member are independent in case of financial sector compared with only 16% in case of non-financial sector. Finally financial sector in Pakistan has been regulated very strictly by State bank of Pakistan (SBP) and following the financial crisis of 2008, policy guidelines are framed by SBP to submit report on internal control system on annual basis. This control mechanism which is in place by SBP can be considered as solid reason for greater disclosure of internal control by financial sector companies. However individual impact of such guidelines on internal control disclosure of banking sector is negative as compared to companies from other sector (including investment banks, insurance & leasing). Thus it can be concluded that companies operating in sectors having not such strong supervisory body as SBP would have poor level of disclosure in annual reports. So as a policy implication, there is also need for such control mechanism imposed on non-financial sector companies by Securities & Exchange Commission of Pakistan (SECP) in order to improve internal control disclosure. Finally there is also need to increase the proportion of independent members on audit committee of non-financial sector companies.

The future research may take into account other corporate governance factors in order to better understand internal control disclosure pattern in Pakistan. Also there can be a cross-country study in order to better understand the difference in internal control disclosure practices at country level. In terms of construction of internal control disclosure index, current research has only considered presence of internal control disclosure items i.e. whether required item is disclosed or not which is consistent with prior research. However it failed to incorporate the quantity of internal control disclosure information, so future research can be undertaken through measuring internal control disclosure items using word count approach. Finally the effect of internal control disclosure on market values can be a good opportunity for extension of this research.

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Table 1: Variables & measurement basis:

	Variables	Measurement basis	Acronym
Dependent variable: Internal control disclosure index	IC disclosure based on seven items.	Based on COSO framework, IC disclosure index has been developed based on seven scale items. Each item is given equal weight.	ICDISC
Independent variables: Audit committee characteristics	Audit committee size	Measured using number of board of directors as member of audit committee at year end.	AC_size
	Audit committee meeting	Number of meeting held by audit committee during the year.	AC_meeting
	Audit committee independence	Proportion of independent directors to total number of directors as member of audit committee at the end of year.	AC_ind
	Financial experts on audit committee	Proportion of directors as financial experts to total number of directors as member of audit committee at the end of year.	AC_fe
	Audit committee shareholdings	Shares held by member of audit committee divided by total number of ordinary shares outstanding at the end of year.	AC_shareholding
Board composition:	Board size	Total number of members on the board.	Board_size
	Non executive director as chairman	A dummy variable which equals to 1 if non executive director is chairman of board.	NED_as_chairman
	Institutional ownership	Percentage of shares held by financial institutions.	Inst_own
	Managerial ownership	Percentage of shares held by directors.	Mgr_own
	Government ownership	Percentage of shares held by government institutions.	Govt_own
	Industry type	Measured using the scale of 1 if the firm is in non-financial sector or 0 otherwise.	Ind_type
	Enforcement	A dummy variable which equals to 1 if companies in the sample are from banking sector or otherwise 0.	Enf
Control variables:	Firm size	Measured using taking natural log of firm's total assets at the end of year.	Firm_size
	Profitability	Measured using ratio of return on equity.	ROE
	Audit firm size	Measured using scale of 1 or 0. If the firm is audited by one of the big four audit firm then assign value of 1 or otherwise 0.	Big_4
	Leverage	Measured using debt equity ratio.	Lev

Table 2: Descriptive statistics for internal control disclosure:

	Non-financial sector			Financial sector		
	2012	**2013**	**2014**	**2012**	**2013**	**2014**
Mean	1.732	1.737	1.742	4.369	4.446	4.476
Maximum	7.00	7.00	7.00	7.00	7.00	7.00
Minimum	0.00	0.00	0.00	2.00	2.00	2.00
Std. Dev.	1.467	1.472	1.477	1.18	1.132	1.119

Table 3: Frequency of companies disclosing internal control items:

No. of internal control disclosure	Non-financial sector						Financial sector					
	2012		2013		2014		2012		2013		2014	
	Freq	%age	Freq	%age	Freq	%age	Freq	%age	Freq	%age	Freq	%age
0	6	2.94	7	3.41	8	3.9	0	0	0	0	0	0
1	130	63.73	126	61.46	123	59.7	0	0	0	0	0	0
2	41	20.10	39	19.02	43	20.9	3	4.5	2	3.0	2	3.0
3	6	2.94	8	3.90	7	3.4	14	21.2	13	19.7	12	18.2
4	4	1.96	7	3.41	7	3.4	15	22.7	15	22.7	15	22.7
5	5	2.45	5	2.44	5	2.4	25	37.9	27	40.9	28	42.4
6	9	4.41	10	4.88	10	4.9	5	7.6	5	7.6	5	7.6
7	3	1.47	3	1.46	3	1.5	4	6	4	6	4	4.5

Table 4: Frequency of companies disclosing individual items of internal control disclosure:

No. of internal Control disclosure	Non-financial sector						Financial sector					
	2012		2013		2014		2012		2013		2014	
	Freq	%age	Freq	%age	Freq	%age	Freq	%age	Freq	%age	Freq	%age
Strategic Risk												
0	161	78.5	159	77.6	160	77.7	32	48.5	32	48.5	32	48.5
1	44	21.5	46	22.4	46	22.3	34	51.5	34	51.5	34	51.5
Financial Risk												
0	186	90.7	185	90.2	186	90.3	1	1.5	1	1.5	1	1.5
1	19	9.3	20	9.8	20	9.7	65	98.5	65	98.5	65	98.5
Financial Reporting Risk												
0	182	88.8	182	88.8	182	88.3	62	93.9	62	93.9	62	93.9
1	23	11.2	23	11.2	24	11.7	4	6.0	4	6.0	4	6.0
Internal Control Responsibility												
0	158	77.1	157	76.6	156	75.7	22	33.3	21	31.8	20	30.3
1	47	22.9	48	23.4	50	24.3	44	66.7	45	68.2	46	69.7
Internal Control Process												
0	186	90.7	184	89.8	186	90.3	3	4.5	3	4.5	3	4.5
1	19	9.3	21	10.2	20	9.7	63	95.4	63	95.4	63	95.4
Internal Control Framework												
0	192	93.7	191	93.2	192	93.2	46	69.7	45	68.2	44	66.7
1	13	6.3	14	6.8	14	6.8	20	30.3	21	31.8	22	33.3
Internal Control Effectiveness												
0	17	8.3	15	7.3	16	7.8	6	9.1	3	4.5	3	4.5
1	188	91.7	190	92.7	190	92.2	60	90.9	63	95.4	63	95.4

Table 5: Descriptive statistics for audit committee variables:

	Non-financial sector			Financial sector		
	2012	2013	2014	2012	2013	2014
Panel A: Audit committee size:						
Mean	3.435	3.446	3.50	3.307	3.23	3.307
Maximum	6.00	7.00	7.00	5.00	5.00	5.00
Minimum	3.00	3.00	3.00	3.00	2.00	3.00
Std. Dev.	0.719	0.740	0.79	0.556	0.523	0.497
Panel B: Audit committee meetings:						
Mean	4.26	4.30	4.26	4.615	4.53	4.569
Maximum	10.00	7.00	8.00	13.00	11.00	11.00
Minimum	2.00	2.00	3.00	2.00	3.00	2.00
Std. Dev.	0.785	0.692	0.688	1.578	1.225	1.322
Panel C: Audit committee independence:						
Mean	0.121	0.171	0.223	0.291	0.309	0.359
Maximum	1.00	1.00	1.00	1.00	1.00	1.00
Minimum	0.00	0.00	0.00	0.00	0.00	0.00
Std. Dev.	0.198	0.20	0.19	0.274	0.267	0.237
Panel D: Financial experts on audit committee:						
Mean	0.306	0.304	0.299	0.346	0.335	0.344
Maximum	1.00	1.00	0.66	1.00	0.66	0.66
Minimum	0.00	0.00	0.00	0.00	0.00	0.00
Std. Dev.	0.098	0.098	0.080	0.166	0.135	0.140
Panel E: Audit committee shareholdings						
Mean	0.073	0.068	0.053	0.029	0.033	0.027
Maximum	0.588	0.731	0.731	0.438	0.441	0.399
Minimum	0.00	0.00	0.00	0.00	0.00	0.00
Std. Dev.	0.115	0.118	0.093	0.074	0.087	0.067

Table 6: Descriptive statistics for other independent variables:

	Non-financial sector			Financial sector		
	2012	2013	2014	2012	2013	2014
Panel A: Board size:						
Mean	7.90	7.91	7.95	7.94	7.92	7.95
Maximum	16	14	15	13	12	13
Minimum	6	6	6	6	6	6
Std. Dev.	1.528	1.349	1.431	1.21	1.216	1.304
Panel B: NED as chairman:						
Yes	95	95	140	60	59	63
No	109	109	66	5	6	2
Panel C: Government ownership						
Mean	0.06	0.06	0.05	0.09	0.09	0.08
Maximum	0.754	0.754	0.754	0.79	0.79	0.79
Minimum	0	0	0	0	0	0
Std. Dev.	0.107	0.108	0.106	0.188	0.188	0.187
Panel D: Institutional ownership						
Mean	0.12	0.10	0.09	0.28	0.27	0.26
Maximum	0.9881	0.988	0.988	0.99	0.99	0.99
Minimum	0	0	0	0	0	0
Std. Dev.	0.383	0.127	0.112	0.315	0.317	0.311
Panel E: managerial ownership						
Mean	0.26	0.27	0.27	0.13	0.13	0.13
Maximum	0.984	0.984	0.984	0.978	0.978	0.978
Minimum	0	0	0	0	0	0
Std. Dev.	0.268	0.274	0.281	0.223	2.96	0.226

Table 7: Results of regression analysis for overall internal control disclosure index:

	Model (1)		Model (2)	
	Without year & industry effect		With year & industry effect	
	Beta	T-stat	Beta	T-stat
ROE	0.000	(1.48)	0.000	(1.06)
Firm_size	0.10	(7.93)**	0.131	(10.25)**
Big_4	0.059	(2.84)**	0.041	(2.32)*
Board_size	0.026	(3.63)**	0.031	(5.06)**
AC_size	0.015	(1.04)	0.032	(2.49)*
AC_meeting	0.018	(1.80)	0.013	(1.55)
AC_fe	0.120	(1.44)	0.033	(0.45)
AC_ind	0.129	(3.11)**	0.083	(2.27)*
AC_shareholding	-0.106	(1.20)	-0.057	(0.75)
NED_as_chairman	0.074	(3.54)**	0.003	(0.17)
Govt_own	0.032	(0.67)	0.014	(0.35)
Inst_own	0.040	(1.18)	-0.046	(1.57)
Mgr_own	0.004	(0.59)	-0.001	(0.15)
Lev	-0.000	(0.24)	-0.000	(0.04)
Ind_type	-	-	-0.379	(17.03)**
Year12	-	-	0.009	(0.49)
Year13	-	-	0.014	(0.76)
Enf	-	-	-0.263	(6.25)**
Observations	800		800	
R-squared	0.30		0.49	
*significant at 5%, **significant at 1%				

Table 8: Results of regression analysis for individual categories of internal control disclosure index:

	Model (1)		Model (2)		Model (3)		Model (4)	
	Risk assessment		Risk assessment		Control assessment		Control assessment	
	Without year & industry effect		With year & industry effect		Without year & industry effect		With year & industry effect	
	Beta	T-stat	Beta	T-stat	Beta	T-stat	Beta	T-stat
ROE	0.000	(1.33)	0.000	(1.02)	0.000	(1.46)	0.000	(0.54)
Firm_size	0.058	(4.13)**	0.122	(9.05)**	0.125	(8.47)**	0.091	(6.99)**
Big_4	0.048	(2.05)*	0.026	(1.41)	0.075	(3.10)**	0.049	(2.72)**
Board_size	0.017	(2.13)*	0.022	(3.38)**	0.021	(2.53)*	0.032	(5.13)**
AC_size	0.027	(1.65)	0.040	(2.91)**	-0.024	(1.38)	0.023	(1.73)
AC_meeting	0.014	(1.24)	0.014	(1.52)	0.034	(2.93)**	0.011	(1.28)
AC_fe	0.120	(1.28)	0.014	(0.19)	0.163	(1.67)	0.035	(0.48)
AC_ind	0.110	(2.35)*	0.071	(1.83)	0.188	(3.86)**	0.065	(1.74)
AC_shareholding	-0.065	(0.66)	0.010	(0.13)	-0.108	(1.05)	-0.081	(1.05)
NED_as_chairman	0.078	(3.34)**	-0.006	(0.30)	0.097	(4.01)**	-0.011	(0.60)
Govt_own	0.039	(0.74)	0.019	(0.44)	0.006	(0.10)	-0.022	(0.53)
Inst_own	0.077	(2.03)*	-0.020	(0.64)	0.083	(2.10)*	-0.062	(2.06)*
Mgr_own	0.007	(1.02)	0.001	(0.19)	0.000	(0.02)	-0.004	(0.80)
Lev	-0.000	(0.21)	-0.000	(0.05)	-0.000	(0.37)	-0.000	(0.04)
Ind_type	-	-	-0.483	(20.53)**	-	-	-0.480	(21.10)**
Year12	-	-	0.008	(0.38)	-	-	0.010	(0.53)
Year13	-	-	0.011	(0.56)	-	-	0.014	(0.73)
Enf	-	-	-0.481	(10.84)**	-	-	0.099	(2.31)*
Observations	800		800		800		800	
R-square	0.17		0.46		0.32		0.62	
* significant at 5%; ** significant at 1%								

ISSN 2222-1697 (Paper) ISSN 2222-2847 (Online)
Vol.9, No.12, 2018

Table 9: Results of regression analysis for individual categories of internal control disclosure index:

	Model (1)		Model (2)		Model (3)		Model (4)	
	Internal control responsibility		Internal control responsibility		Internal control effectiveness		Internal control effectiveness	
	Without year & industry effect		With year & industry effect		Without year & industry effect		With year & industry effect	
	Beta	T-stat	Beta	T-stat	Beta	T-stat	Beta	T-stat
ROE	0.002	(0.27)	0.002	(0.15)	-0.137	(1.43)	-0.137	(1.42)
Firm_size	0.921	(6.77)**	0.960	(5.65)**	0.562	(2.59)**	0.795	(3.25) **
Big_4	0.427	(2.12)*	0.337	(1.55)	-0.017	(0.05)	-0.033	(0.09)
Board_size	0.176	(2.41)*	0.230	(3.00)**	-0.249	(2.22)*	-0.238	(2.10) *
AC_size	-0.019	(0.14)	0.160	(1.10)	-0.587	(2.66)**	-0.636	(2.81) **
AC_meeting	0.263	(2.12)*	0.230	(1.63)	-0.093	(0.51)	-0.077	(0.43)
AC_fe	1.167	(1.45)	0.743	(0.84)	-3.043	(2.45)*	-3.207	(2.47) *
AC_ind	0.738	(1.83)	0.236	(0.55)	0.304	(0.43)	0.365	(0.50)
AC_shareholding	-2.726	(2.23)*	-2.671	(2.15)*	1.317	(0.81)	1.534	(0.85)
NED_as_chairman	0.724	(3.34)**	0.316	(1.35)	0.432	(1.32)	0.346	(0.99)
Govt_own	-0.185	(0.36)	-0.370	(0.62)	10.342	(2.82)**	10.979	(2.90) **
Inst_own	0.016	(0.05)	-1.309	(2.34)*	0.124	(0.19)	0.058	(0.09)
Mgr_own	0.045	(0.67)	0.027	(0.34)	0.100	(0.23)	0.136	(0.21)
Lev	-0.001	(0.22)	-0.000	(0.01)	0.000	(0.08)	0.000	(0.07)
Ind_type	-	-	-2.076	(7.79)**	-	-	-0.666	(1.40)
Year12	-	-	-0.008	(0.03)	-	-	-0.021	(0.06)
Year13	-	-	0.041	(0.18)	-	-	-0.023	(0.07)
Enf	-	-	1.494	(1.38)	-	-	-1.742	(2.07) *
Observations	800		800		800		800	
Pseudo R-Square	22.86%		31.41%		9.38%		10.47%	
* significant at 5%; ** significant at 1%								