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Financial Crises and Accounting Reforms: Evidence from Pakistan

MUHAMMAD UMAR DRAZ*

UCSI University, Kuala Lumpur, Malaysia

ABSTRACT

This study aims at searching whether changes in Accounting disclosures and adoption of Accounting Standards (hereafter referred to as Accounting Reforms) should comply fully to the International Accounting Standards Board (IASB) or according to the necessity for Pakistan. In answering this question, first we have studied the relationship of Pakistan's Accounting Reforms with Global and International Financial Crises. To evaluate their linkages, the Binary Choice Model has been used for six decades data. In our analysis through EViews, Financial Crises and Gross Domestic Product (GDP) growth are taken as independent variables and Accounting Reforms as dependent variable. Our results demonstrate that Accounting Reforms have significant relationship with Financial Crises in the case of Pakistan and we are suggesting that the Accounting Reforms in Pakistan should be made according to its own needs.

Key Words: Accounting Reforms, Accounting Standards, Binary Choice Model, Financial Crisis, Pakistan

JEL Classification: G01, M48

INTRODUCTION

History repeats itself is a famous proverbs. Besides other evidences of the correctness of this proverb, financial collapse is one of the best examples at present. From Fourteenth (14th) Century, when England defaulted in 1340 to the lenders of Italy, to the recent global crash of 2008, history of financial crises has repeated itself times and again. Different regions of the world have experienced several types of financial crises like currency crises, banking crises, and stock market crashes etc. (Reinhart and Rogoff, 2008).

* Corresponding Author: E-mail: umardraz2626@yahoo.com

Any remaining errors or omissions rest solely with the author(s) of this paper.

When financial markets cannot support the sound capital allocation and financial intermediary function, which brings the investment to a standstill, such disorder is called financial crisis (Portes, 1998). Reinhart and Rogoff (2008) describe that the early financial crises were not identical to the current situation rather those were simply defaults by one party to pay back the loans of other and almost no country could escape from it but current emerging markets are not the pioneers of defaulting practices. Generally, both of the terms, global and international, are used in the same manner while describing the financial crises, but not actually mean the same thing in reality. Merriam-Webster dictionary (2011) defines global as 'relating to, or involving the entire world' and international as 'relating to, or affecting two or more nations'.

Apart from the other reasons of financial havoc of 2008, accounting issues also contributed to the catastrophe. For example, prior to and during the financial crises of 2008, many executives were unable to comprehend the nature of novel financial products their firms were dealing in (McCreevy, 2008). Due to their improper disclosures and the ambiguities caused in the financial reporting, these newly introduced instruments made the balance sheets' situation obscure. In addition, with the eruption of defaults, it became hard to recognize the financial stability of various institutions (Claessens *et al.*, 2010). According to de Soto (2009), the accounting principle of prudence was abandoned and replaced with the fair value accounting through a steady corruption. It was one of the primary causes of financial crisis in 2008; the conclusion of de Soto (2009) is as follows:

> ".....accounting is too vital for the economy and everyone's finances to have been left to the experts, whether they are visionary professors, auditors eager to strengthen their position, analysts, (ex-) investment bankers, or any of the manifold international committees. All have been as arrogant in the defense of their false science as they have been ignorant of their role as mere sorcerer's apprentices playing with a fire that has been on the verge of provoking the most severe financial crisis to ravage the world since 1929....."

The above given conclusion can be verified through a profound observation of the IASB's disclosure requirements. From the last decade of Twentieth (20^{th}) Century until now, particularly during financial crisis of 2008, IASB took many U-turns regarding accounting standards and their amendments. The accounting standard of timely recognition of losses was brought into account after the Enron scandal; previously, the assets were held until recovery of losses. This change in accounting standards is based on the prudence concept which is one of the fundamental principles of accounting. However, American banks and their officials, as reported by France-Presse (2008), were highly aggrieved by these standards. According to Edward Yingling, the president of American Bankers Association, these (i.e. prudence based) accounting standards were unrealistic and an important factor leading to the financial crisis. In fact, these standards were showing the true financial position of various institutions. Regardless of this fact, as per amendment of IASB, U.S. stopped the application of IAS 39 during October, 2008 which was adopted by the European Union (EU) as well (Europa, 2008).

This amendment was condemned by the accountants due to its contradiction with the true and fair view of the financial disclosures, but the authorities paid no heed to them (Jones, 2008). The result of this contentious amendment, as described by Fiechter (2010) from the sample of European banks, was in the form of avoiding fair value losses that resulted into the overstatement of return of assets, return on equity and book value of equity. Another issue that was debated during and after financial crisis of 2008 was fair value accounting as a cause of this financial crisis. Even though a little, but the contribution of fair value accounting towards this financial crisis cannot be denied; it has been studied by the numerous researchers including Laux and Leuz (2009), Barth and Landsman (2010) and Badertscher, Burks, and Easton (2010). All these facts evidently portray that there is an association between financial crisis and accounting reforms.

According to Rahman (1998), non-compliance to the IAS was one of the important factors that caused Asian financial crisis of 1997; later on, IAS were adopted by various nations in the crisis affected region. Rosser (1999) has noted that …"many developing countries are adopting Western accounting regulations, particularly IASs, in order to access global financial markets. And it is likely that as long as developing countries need capital from these markets, they will at least try to look like they are doing something to improve the quality of financial accounting within their borders"…

The first part of this paper is laying the foundation of global crises that affected the entire globe. There are seven occurrences in total according to our findings, but some others are deemed as intensive crises on the international level. After exploring both types of crises, emphasis would be focused on Pakistan's accounting disclosures since its independence in 1947 to 2009. The main accounting reforms are traced and the post crises period is also noted. The last part of the paper presents the statistical analyses of this study regarding the following research questions:

1. Do global financial crises significantly affect Pakistan's accounting reforms?
2. Does Pakistan need to introduce accounting reforms as per own needs or in compliance to the IASB's requirements?

Contribution of the Paper

This paper is intended to contribute the relationship of financial crises with Pakistan's accounting reforms and criteria for making accounting reforms i.e. according to own needs or as per IASB's requisites. For this purpose, we have analyzed the data of financial crises which occurred in the history of Pakistan, GDP growth from 1951 to 2009, various reforms in accounting disclosures and need of these reforms from 1951 till 2009.

LITERATURE REVIEW

In response to a query about frequency and severity of financial crises, Eichengreen and Bordo (2002) have found that financial crises are becoming more frequent with the passage of time; however there is a weak evidence for increase in output losses and time to recovery. They have analyzed the data of 1890 to 1997 while results are compared for pre and post-1914 time periods. The study of Hanson (2005) reveals that Latin American countries, after facing a financial catastrophe from mid-1990s until the start of this Century, were in danger of another crisis; moreover, their ability of extending private credits also reduced due to high government debts. Starting from 1619, Kindleberger and Aliber (2005) have traced the history of financial crises and concluded that crises cannot be stopped by an official caution. They argue that connectivity of markets, money, foreign exchange and interest rate widens a crisis to international level; furthermore, abrupt close down of foreign lending can also initiate a financial crisis.

Another comprehensive work on the history of financial crises has been done by Reinhart and Rogoff (2008). They analyzed financial collapses occurring over eight (8) centuries and concluded that serial default has occurred worldwide. They further proved that crises start from financial centers and subsequently hit the globe in shape of fluctuation in commodity prices and interest rates variations. Partnoy (2010) has also compared the historical perspective of financial crises that occured in late 1920s and 1930s with the global financial crisis of 2008. He asserted that financial innovation and over reliance on credit rating agencies were origin of disaster during both eras.

The latest global financial crisis of 2008 has been extensively studied by experts in terms of its causes, effects and implications for future policies etc. Faiola et al. (2008) describe government policies as its major reason, because officials of Federal Reserve and U.S. Treasury were well-informed about vulnerability of derivatives since 1998 and they intentionally neglected it for maintaining the popularity of Bush administration. Taylor (2008) also asserts that 'financial crisis was caused, prolonged and worsened due to government interference.' He further highlighted that government provided assistance to some institutions only and framework adopted for this purpose was not made clear to everyone. Kling (2009) also supports the viewpoint that U.S. policies adopted to overcome any previous crisis but ignorant of future consequences were the main cause of this disaster.

According to Colander et al. (2009), this crisis also revealed that economic models cannot predict and explain the real-world situations entirely; moreover, hazardous aspects of economic models were not properly communicated to general public that demands some boundaries for economics' researchers. This crisis was so severe that economy was facing 'free fall' even after more than one (1) year of its inception (Krugman, 2009). Moreover, harshness of this worldwide disaster can be viewed from the fact that it can generate global poverty crisis (Ruiz Estrada, 2009).

Accounting played an important role in Asian financial crisis. According to Rahman (1998), the issue of harmonization of accounting standards and non-compliance to IAS was among the prominent reasons to cause this financial crisis in 1997. To prove his point, the author has used data of banks and corporations from Republic of Korea, Japan, Thailand, Philippines, Malaysia and Indonesia; the comparison of local and internationally adopted accounting practices showed the mutual discrepancies. On the other hand, as described by Rosser (1999) using Indonesia as the subject country, accounting reforms alone are not sufficient for developing countries to achieve proper financial statements' disclosures; economic, political and judicial reforms are also necessary in this regard.

Lin (2000) has asserted that accounting reforms of China after Asian financial crisis (in form of practical accounting standards having consistency with IAS), helped economy to hold back the impact of this financial catastrophe. It also reveals that accounting was one of the important reasons for this financial epidemic and financial crisis led towards accounting reforms. Another prominent work is contributed by Choi (2002) concerning framework for accounting reforms in Republic of Korea after Asian financial crisis. The author has suggested an attractive mechanism for introducing accounting reforms i.e. accounting reforms must be followed by system changes and cultural acceptability.

The U.S. Congress passed Sarbanes-Oxley Act in 2002 and it was a major accounting reform in response to Enron scandal (Jickling, 2003), but it faced severe criticism during financial meltdown of 2008. As reported by France-Presse (2008), numerous banks and bankers criticized these reforms and held them responsible for the crisis; in fact, the severe circumstances faced by their financial institutions were the main reason of their protest. Regrettably, their demands were accepted by authorities and IAS 39 was relaxed by the U.S. in 2008.

McCreevy (2008) states that various financial products being traded on prior to the outbreak of global financial crisis in 2008 were highly complex in nature. De Soto (2009) is of the view that abandoning prudence concept of accounting and alternating it with fair-value accounting was among the main causes of this financial epidemic. Other researchers e.g. Laux and Leuz (2009), Barth and Landsman (2010) and Badertscher, Burks, and Easton (2010) acknowledged the contribution of fair value accounting to present current value of items; however, they have further added that it was not substantial. Claessens et al. (2010) also portrayed the situation of ambiguous financial disclosures and their contribution towards financial crisis of 2008. The work of Fiechter (2010) also confirms that various complexities were found in financial reporting after amendment in IAS 39 and banks used it negatively.

As far as accounting reforms in Pakistan are concerned, Narayan and Godden (2000) have enumerated the accounting and auditing system of Pakistan, current disclosure requirements, system's deficiencies and remedial measures. The work of Ashraf and Ghani (2005) also covers various phases of accounting development in Pakistan from Indian sub-continent time period until early years of this Century. The most recent literature contribution regarding accounting reforms in Pakistan has been made by Hossain and Nurunnabi (2011) suggesting to establish a private sector organization as Accounting Standards Board of Pakistan; after a broader participation of various user groups nationwide, this board should issue and enforce country's own accounting standards.

HISTORY OF FINANCIAL CRISES

As per Åkerman's view, the first international financial crises started in 1720; the entire globe was hit by the financial crisis in 1857 for the first time (Kindleberger and Aliber, 2005) and seven (7) times in total (i.e. in 1857, 1873, 1929, 1958 to late 60s, 1974-75, 1979-82 and 2008). For tracing these crises, we start from late 1850s and onwards because it was early period of globalization resulting from data transfer via telegraph cable (Eichengreen and Bordo, 2002).[1]

First Global Financial Crisis

The first global financial crisis dates back to 1857 and was caused by a number of factors. Firstly, gold was discovered in the United States and Australia during 1849 and 1851 respectively (i.e. before this crisis) that increased the flow of exports

[1] The historical details of Global and International Financial Crises are mainly based on Eichengreen and Bordo (2002), Kindleberger and Aliber (2005, Hanson (2005), Reinhart and Rogoff (2008), Cassis (2009) and Partnoy (2010).

towards these nations (Kindleberger and Aliber, 2005). Secondly, banking and railroad booms were also going on in United States and Europe. Last but not least, decrease in Russian grain exports caused a worldwide grain price-hike. However all of these issues were settled down as follows: Russia restored their grain supply after the end of Crimean war; railroad boom reached its peak and Britain withdrew funds from United States. Consequently, Europe, United States, South America, Great Britain, South Africa and Far East of the globe (i.e. almost whole world) was hit by this crisis.

Global Financial Crisis of 1873

The financial crisis of 1873 was the second (2nd) global financial catastrophe of Nineteenth (19th) Century. Kindleberger and Aliber (2005) stated that it was international in nature because it struck Germany and Austria; due to a sudden variation in investments from Germany, United States also became its victim after few months. The authors have also cited that Belgium, Holland, Italy, Russia, Great Britain and France were also hit by this financial crisis gradually. Reinhart and Rogoff (2008) have identified this event as a global financial crisis. According to their study, the list of affected nations, other than aforementioned countries, includes eight (8) countries of Latin America, Egypt, Ottoman Empire and Greece. Since it was not limited to few nations or just a continent that is why we also agree that it was a global financial crisis rather than international.

The Great Depression of 1929

The next famous financial crisis that is 'The Great Depression' took place in 1929. The disaster started in the United States because after a decrease in interest rates in summer of 1927, they were later increased in spring of 1928; as a result, American banks and their dependant financial institutions from other nations started to make strict policies. Germany deflated its economy for managing capital shortage while Australia, Argentina, Brazil and Uruguay faced severe depreciation in their currencies.[2] Partnoy (2010) is of the view that innovation of financial instruments, i.e. B shares and participating debentures, was the core reason of financial crash in 1929. These securities were highly complex in nature and many auditors were also unable to understand their nature and disclosures.

[2] For more details, see Kindleberger and Aliber (2005) page 139; Reinhart and Rogoff (2008) page 34 and Cassis (2009) page 05.

Three (3) Global Financial Crises

After almost three (3) decades of 'The Great Depression', three (3) global financial crises occurred in a short span of twenty one (21) years (i.e. from 1958 to 1979). From 1958 until late 1960s, worldwide financial crisis occurred in the form of currency speculation; it struck France in 1958 and 1968, Canada in 1962, Italy in 1963 and Great Britain in 1964. The world faced another global financial crisis in 1974 which originated from collapse of Bretton Woods in 1971, increase in prices by the Organization of the Petroleum Exporting Countries (OPEC) in 1973 and the introduction of open monetary policy by United States, Europe and Japan. Just after 5 years of previous dilemma, another financial blow took place at global level in 1979 and it lasted until 1982. U.S. Dollar, farmland and real estate, bank loans to the third world nations and OPEC price rise in 1979 were the main causes this time.[3]

Global Financial Crisis of 2008

After 1933, U.S. banking system remained relatively stable against big financial crises during Twentieth (20th) century; this stability did not prolong in the Twenty-first (21st) Century and came to a drastic end in the form of global financial crisis in 2008 (Tallman and Wicker, 2009). Just like global financial crises of 1857 and 1929, the trouble started in U.S. as well (Bordo, 2008). Experts have difference of opinion regarding starting point of this crisis in 2007; e.g. Taylor (2008) and Cassis (2009) narrated that it started in August, Hulbert (2010) argues in December whereas Bordo (2008) affirms that it started at the beginning of 2007. Among all the global financial crises, this catastrophe is the most famous for its linkage with accounting issues.

International Financial Crises

The foremost international financial crisis, as mentioned earlier, occurred in 1720; it originated in Great Britain and France but Hamburg, Italy and Netherlands were also hit later on (Kindleberger and Aliber, 2005). The next international financial crisis occurred in 1763 as a result of bills of exchange non-payments. Primarily vulnerable for Holland and Hamburg, this crisis later on smacked London, Prussia and Scandinavia as well. The crisis of 1772 also affected Holland and London where it began in Scotland.

[3] See appendix and page 86 of Kindleberger and Aliber (2005).

In Nineteenth (19th) Century, five (5) international financial crises (the crises of 1816, 1819, 1825, 1836-39, 1847-48) originated from the Great Britain. In 1866, crisis hit England and Italy, with effects on Russia, Prussia and Austria. France was initially safe but could not avoid the shocks later on. The next prominent international financial crisis is the Baring Crisis of 1890; it also fueled the financial crisis of 1893 i.e. the last financial blow of Nineteenth (19th) Century that mainly stuck the United States and Australia.

Twentieth (20th) Century was also started by international financial crisis of 1907 that hit Italy, Germany and France on large extent. The panic of 1914 that ended into World War-I, financial crisis of 1920 in the United States and Great Britain and crisis of 1931-33 in Europe were the next international financial crises of Twentieth (20th) Century. From the second (2nd) half of 1980s until late 1990s, there were four (4) bubbles in a row due to asset prices increase and all of them were related as well. The first (1st) one occurred in Japan; the second (2nd) in Sweden, Finland and Norway; the third (3rd) started from Bangkok and ended in the form of Asian financial crisis of 1997; and the recent episode appeared in United States.

ACCOUNTING REFORMS IN PAKISTAN

As far as Pakistan's accounting disclosures are concerned, its accounting system is entirely based on International Accounting Standards (IAS) and International Financial Reporting Standards (IFRS). Pakistan has no separate accounting standards of its own except two (2) Islamic Financial Accounting Standards (IFAS) that are available from the website of State Bank of Pakistan (SBP). These standards are related to the Islamic modes of financing and provide guidelines for preparing the financial statements of relevant institutions. IFAS 1 deals with transactions of Murabaha i.e. Installment sale under Islamic principles; moreover, it provides guidelines for preparation of financial statements under historical cost convention for the institutions using Murabaha. IFAS 2 is related to Ijarah i.e. Lease under Islamic rules, and it contains rules for financial statements of companies and Mudharba having Ijarah transactions.

IAS / IFRS adoption by Pakistan

There are three (3) accounting bodies in Pakistan namely Institute of Chartered Accountants of Pakistan (ICAP), Institute of Cost and Management Accountants of Pakistan (ICMA) and Pakistan Institute of Public Finance Accountants (PIPFA). All of these bodies have membership of International Federation of Accountants

(IFAC) and South Asian Federation of Accountants (SAFA) (Narayan and Godden, 2000). Pakistan started to adopt IAS in 1986 when IAS 1 and 2, IAS 7 – 14 and IAS 16 – 21 were assumed (Ashraf and Ghani, 2005). As per adoption status issued by ICAP on September 30, 2010, almost all of IAS and IFRS have been adopted by Pakistan excluding IFRS 9 that is under consideration to be implemented from 2013. Moreover, IFRS 1 is currently not applicable to all the companies but being contemplated for this purpose; and IAS 39 and 40 are made temporarily inactive by SBP for banks and Development Financial Institutions (DFIs). Table 1 shows various IAS / IFRS adopted by Pakistan or under consideration by ICAP from 1986 until 2008 along with their year of adoption:

Accounting Reforms after the Financial Crisis of 1958

From independence in 1947 to 1971, Pakistan had no change in its accounting disclosures and Companies Act 1913, though with insufficient disclosure requirements, was followed for accounting disclosures during this whole time period (Ashraf and Ghani, 2005). It signifies that there were no accounting reforms in Pakistan after global financial crisis of 1958.

Accounting Reforms after the Financial Crisis of 1974

Before the financial crisis of 1974, there was an important progress in accounting disclosures of Pakistan. Ashraf and Ghani (2005) describe that listed companies were required, from 1972, to publish semi-annual accounts and to reveal their sales, purchase and balance of transfer transactions with their allied companies. However, no significant change of disclosures was observed after the said crisis even though Pakistan became an associate member of IASB in 1974.

Accounting Reforms after the Financial Crisis of 1979

The next move towards reforms in accounting disclosures was Companies Ordinance 1984 of Pakistan that brought about new disclosure requirements. Moreover, IAS adoption was also started in 1986 (*See Table 1 for details*). These reforms took place after the global financial crisis of 1979 and have manifested the change in accounting disclosures of Pakistan since this financial crisis.

Accounting Reforms after the Asian Financial Crisis of 1997

Pakistan's accounting disclosures had many developments subsequent to Asian financial crisis of 1997. Plenty of IAS, detailed out in Table 1, were adopted during the years of financial crisis and afterwards. Furthermore, Code of Corporate Governance of 2002 was another vital improvement in accounting disclosures. Summing-up, this crisis was also followed by changes in disclosure requirements.

Table 1 IAS / IFRS adoption

Year	IAS adopted / considered
1986	IAS 1, 2, 7 – 14 and 16 – 21 were adopted
1996	IAS 23 – 25 were adopted
1997	IAS 31, 32 were adopted
1998	IAS 26 – 28 and 33 were adopted
2000	IAS 30, 34, 35, 37, 38 were adopted
2001	IAS 22, 36, 39 were adopted
2002	IAS 40 was adopted
2003	IAS 41 considered to be adopted in due course
2004	IFRS 1, 2 and 5 under consideration by ICAP
2005	Various IAS revised in 2003 were adopted and IFRS 6 was under consideration
2006	IFRS 7 was under consideration
2007	IAS 41, IFRS 2, 3, 5 and 6 were adopted while IFRS 8 was under consideration
2008	IAS 29, IFRS 7 and 8 were adopted

Source: Ashraf and Ghani (2005) and ICAP website.

Accounting Reforms after the Financial Crisis of 2008

Prior to the financial crisis of 2008, Pakistan's IFAS 1 and IFAS 2 were issued in August 2005 and May 2007; but an important step regarding this crisis and accounting disclosures was the adoption of IAS 29 and IFRS 7 by SECP on April 28, 2008 that deal with *"Financial Reporting in Hyperinflationary Economies" and "Financial Instruments: Disclosures"* respectively. Earlier, as reported by Ashraf and Ghani (2005), IAS 29 was not adopted by Pakistan until 2005 due to its irrelevance at that time; however, inflation rate in Pakistan escalated too high after this crisis. It indicates that these accounting reforms are purely logical and accounting standards should not be imposed. Last but not least, out of one (1) international and four (4) global financial crises, the first two (2) crises were not followed by changes in accounting disclosure requirements; however, accounting disclosure laws were changed after the remaining financial crises. The summary of prior and post-crises accounting reforms in the history of Pakistan is summarized in Table 2.

Table 2 Summary of accounting reforms

Year of crisis	Post-crisis accounting reforms	Nature of the reforms
1958	No	No Reforms
1974-75	No	No Reforms
1979-82	Yes	Companies Ordinance 1984 and start of IAS adoption
1997	Yes	IAS adoption and Code of Corporate Governance
2008	Yes	IAS and IFRS adoption

Source: Author's analysis of Crises and Reforms' data

RESEARCH METHODOLOGY

As mentioned earlier, five (5) financial crises took place during the lifespan of Pakistan. We have collected the data of accounting disclosures' reforms mostly from the updates issued by the ICAP and determined that the last three (3) financial crises (i.e. Crises of 1979, 1997 and 2008) were followed by accounting reforms. Data of the GDP growth from fiscal year 1951 to 2009 is taken from the website of Federal Bureau of Statistics (FBS), Government of Pakistan. The growth of Pakistan's corporate sector (in terms of number of listed companies) could also be the influencing factor for accounting reforms, that is why GDP growth is taken as an explanatory variable, that obviously contains performance and growth of all sectors of a nation's economy. For a country like China, where IAS / IFRS convergence issues are still going on, foreign investment can also be used as an independent variable; because accounting reforms, for conformity of financial disclosures with international standards, enhance the investors' confidence and they can understand the information reported in the financial statements of various organizations across different countries consistently. The research framework of this study is elaborated in Figure 1.

Binary Choice Model

Since the data of financial crises and accounting reforms is not Time Series data, therefore we cannot use Least Square Method for statistical analysis. We have applied Binary Choice Model to test the relationship of financial crises and Pakistan's accounting reforms. The employability of binary data responses (i.e. 0 and 1) is the leading strength of this model. Secondly, as mentioned by Söderbom (2011), modelling the probability is managable with the help of binary choice model but it gives rise to many issues if modelled in the linear probability model. Moreover, Greene (2003) narrated the usefulness of binary choice model as follows:

> ".....Binary choice modeling provides a convenient point to study endogeneity in a nonlinear model, issues of nonresponse in panel data sets, and general problems of estimation and inference with longitudinal data. The binary probit model in particular has provided the laboratory case for theoretical econometricians such as those who have developed methods of bias reduction....."

Nevertheless, this model has some shortcomings as well. Dong and Lewbel (2011) described that methods of binary choice models dealing with hetroskedasticity and endogenous regressors have certain downsides. Likewise, Dougherty (2006) found some problems with the disturbance term in binary choice model; the author further stated that it may predict the probability of less than zero and more than one.

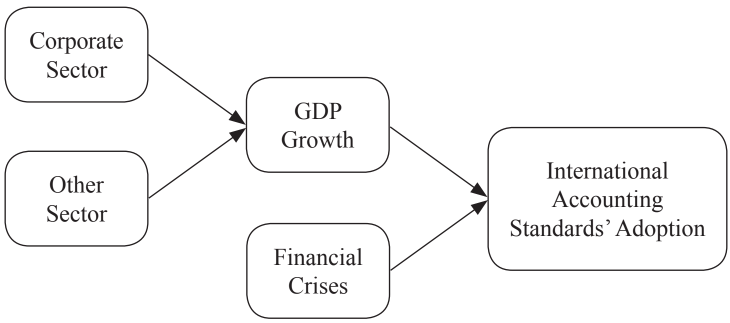

Figure 1 Research framework

The main reason of using financial crises as an independent variable is the initiation of accounting reforms after Asian financial crisis of 1997 and global financial crisis of 2008 *(refer to the introduction part for more details)*. GDP growth is used as an explanatory variable because it shows any country's economic situation that can also result into accounting reforms. Following are the details of variables used in our analysis:

ACTRF	=	Accounting Reforms	(Dependent variable)
FINCR	=	Financial Crises	(Independent variable # 1)
GDPGR	=	Gross Domestic Product Growth Rate	(Independent variable # 2)

Moreover:

$$ACTRF = \begin{cases} 1, \text{Reforms} \\ \\ 0, \text{otherwise} \end{cases} \qquad \text{and} \qquad FINCR = \begin{cases} 1, \text{Crisis} \\ \\ 0, \text{otherwise} \end{cases}$$

Where ACTRF and FINCR are Dummy Variables used to identify the presence or absence of accounting reforms and financial crises respectively

H_{01} : *There is no significant relationship between financial crises and Pakistan's accounting reforms*

H_{11} : *There is significant relationship between financial crises and Pakistan's accounting reforms*

H_{02} : *There is no significant relationship between Pakistan's GDP growth and accounting reforms*

H_{12} : *Pakistan's GDP growth and accounting reforms are significantly related to each other*

FINDINGS AND DISCUSSION

With 5 per cent level of significance (i.e. $\alpha = 0.05$), we can observe from Table 3 that all three (3) methods of Binary Choice Model are having the probability of z-Statistic less than α in case of FINCR, so we reject the null hypothesis (H_{01}) i.e. There is no significant relationship between financial crises and Pakistan's accounting reforms. Our findings lead towards accepting the alternative hypothesis (H_{11}) that accounting reforms of Pakistan have significant relationship with financial crises. Moreover, the probability of z-Statistic is also less than α for the second (2^{nd}) explanatory variable i.e. GDPGR also so we reject the H_{02} and accept H_{12} i.e. Pakistan's accounting reforms are significantly related to its GDP growth.

Table 3 Output of binary choice model

Method	Variables	Coefficient	Standard Error	z-Statistic	Probability
Binary (Probit)	GDPGR	-0.557836	0.152117	-3.667159	0.0002
	FINCR	2.898467	0.998449	2.902970	0.0037
Binary (Logit)	GDPGR	-0.985751	0.289939	-3.399854	0.0007
	FINCR	4.897697	1.813397	2.700841	0.0069
Binary (Extreme Value)	GDPGR	-0.484297	0.176271	-2.747459	0.0060
	FINCR	3.250186	1.317706	2.466550	0.0136

Source: Author's analysis by using EViews

Apart from running these statistical tools, we can observe it from the details of Pakistan's accounting reforms that they are associated with the financial crises. For example, the Companies Ordinance of 1984 came into force after global financial crisis of 1979 and it was one of the major steps towards establishment of Pakistan's accounting system. The Asian financial crisis of 1997 that resulted into accounting reforms in many Asian countries was also followed by accounting reforms in Pakistan, and those reforms were in form of adoption of IAS. Finally, the recent global financial crisis of 2008 also brought about accounting reforms in Pakistan; IAS 29 and IFRS 7 were assumed by the accounting system due to inflationary situation of the country and disclosure of financial instruments. The accounting reforms after three (3) out of five (5) financial crises denote that 60 per cent financial crises were followed by accounting reforms; for declaring the association of these two variables, this proportion is already enough.

On the other hand, the relationship of accounting reforms and GDP growth also makes sense because corporate sector contributes towards economic growth of a country. In other words, when any nation's corporate sector is growing, it obviously adds to economic growth as well. Moreover, when there is growth in corporate sector, each industry needs certain accounting procedures unique from others e.g. accounting disclosures for banks; interest-free financial institutions, manufacturing concerns and service industry are different from each other. Therefore, if we apply the simple logic (i.e. if A = B and B = C, then A = C), the linkage of accounting reforms with GDP growth is also understandable without statistical tools; but running this methodology makes it further clear that accounting reforms and GDP are significantly related to each other.

CONCLUSION

Financial crises are becoming more frequent with the passage of time and, due to rapid globalization, geographical limits are not the hindrance anymore. If we look at the origin of crises, most of financial crises either started from or were contributed to a large extent by the United States. Referring to the main research questions of this paper, we have found that financial crises and accounting reforms in Pakistan are significantly related to each other. Moreover, Pakistan should make accounting reforms, either in the form of IAS / IFRS adoption or devising national accounting standards, according to its own needs. Our recommendation should not be considered contradictory with IAS / IFRS adoption status of Pakistan. A closer look into the matter will reveal that these standards were already adopted for the own needs; and reason of their adoption was absence of national standards or their desirability at specific time and incidents. Following are the main reasons of our connotation:

The foul play of amendment in IAS 39 during financial crisis of 2008, for benefitting certain financial institutions, leaves the position of IAS / IFRS unreliable. Despite knowing that it is a clear violation of prudence concept and will lead towards dodgy financial reporting, IASB amended the standard. It further signifies that IAS / IFRS are on the brink of abandonment or modification for personal benefits anytime.

The results of our model depict that Pakistan's accounting reforms are related to internal and external variables, i.e. GDP growth and financial crises respectively, and it leaves no reason for adopting all the upcoming IAS / IFRS blindly.

Accounting reforms immensely depend on domestic needs, because the presence of specific firms and transactions makes it necessary for accounting bodies of a country to devise its own accounting standards; e.g. China's state owned enterprises and disclosure requirements for their mutual transactions is one of the prominent reasons behind IAS / IFRS non-convergence by the Chinese accounting system. Moreover, Islamic (interest-fee) financial institutions are growing in Pakistan and two (2) separate accounting standards are also available for them, it necessitates the development of further accounting standards and reforms for such institutions.

Last but not least, the adoption of IAS 29 (Financial Reporting in Hyperinflationary Economies) and IFRS 7 (Financial Instruments: Disclosures) were not assumed before 2008, their adoption after financial crisis of 2008 also insists on making accounting reforms according to own needs. It must be noted that Pakistan was not categorized as hyperinflationary economy prior to this crisis; and the issue of financial instruments was also developed during recent financial turmoil, both factors made it necessary to adopt these two (2) standards.

Implications of the Study

There are some important implications of our study both at management and academic levels. First of all, accounting authorities of Pakistan must formulate further IFAS for interest-free financial institutions of the country. Secondly, IAS / IFRS should be assumed after observing their ultimate need for financial disclosure requirements. Thirdly, even in case of critical need, the adoption of IAS / IFRS in terms of their vulnerability must be observed keenly.

The academicians, along with conveying the positive aspects, must also play their role in terms of creating awareness about those IAS and the amendments which contributed towards financial crisis of 2008 and damaged the interest of various user groups of financial statements. Moreover, fair-value accounting should also be noticed and thought from all possible angles, because somehow it has been a topic of interest as a cause of financial crisis in 2008.

Directions for Future Research

This work can be extended to continental or global levels i.e. study of accounting reforms in Asia or global study for the relationship of financial crises and accounting reforms can be conducted. Moreover, other variables affecting the Accounting disclosures and adoption of IAS / IFRS e.g. foreign investment and growth of corporate sector etc. can also be included in the future work.

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