Accounting Conservatism and Firm Investment Decisions: A Case of Pakistan

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Abstract

This study explores the relationship between accounting conservatism and investment efficiency in the context of a developing country Pakistan. The study used a sample of seventy six non financial firms listed on KSE 100 index of Pakistan Stock Exchange for six years i.e. from 2012 to 2017. The results reveal that both the conditional accounting conservatism and non conditional accounting conservatism have significant positive impact on investment decisions and firms practicing accounting conservatism are least under or over invested. Using conservative accounting identifies risky projects and projects with negative Net Present Value (NPV) well ahead of time. Therefore it helps shareholders to protect and enhance value of their investment. In the same manner, agency problems can also be avoided if a firm practices accounting conservatism.

Keywords: Conditional Conservatism, Unconditional Conservatism, Investment Efficiency

Introduction

The board of director needs, accurate and authentic financial and accounting information, to further evaluate and monitor management performance, their strategies and decisions effectively. As the board of directors endorse and approve the entire decisions taken by management and also make monitoring of investment projects of firm. For this purpose timely and accurate loss recognition for current stream of earnings help shareholders, investors and board of directors to monitor the performance of management and to abstain them from taking inefficient investment decisions. Timely disclosure of economic losses in financial statements make directors able to comprehend financial position of the firms and also prevent their management to take opportunistic over investment decisions which result in financial

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inefficiency of firm in future. Recognizing losses in earnings send negative signals to the market thereby demotivating managers to invest in least productive investments. As a result loss recognition in current earning as a tool of accounting conservatism enhances governance mechanism in firm and also controls management opportunistic decisions in investment projects.

Using conservative accounting practices losses which are expected to occur in future are recognized in current stream of earnings. Conservative accounting recognizes quickly all losses as a result of inefficient investment projects. In this case managers do not take opportunistic investment decisions for their personal interest. Conservative accounting also prevents management to defer their obligations to next generation of managers. Therefore, overinvestment is reduced because of reputation damages and fear of job losses. Conservative accounting practices therefore lead to efficient decision making by managers. Accounting conservatism has got importance after a long headed discussion between standard setters, researchers and regulators with respect to financial reporting. Further financial accounting standard Board (FASB) and International Accounting Standards Board (IASB) chose to pay importance to devotion and lack of bias in money related articulations as opposed to conservatism. Standard setters raise the significance of conservatism and argued its association with higher quality of financial reporting. Despite criticism from many years conservatism appears not only to have survived in accounting since long, but also to have increase in the last many years. Brockman et al. (2008) asserted that timely loss recognition serve as a good corporate governance tool by preventing managers from investment in projects having negative net present value (NPV). Under this agreement, accounting conservatism can reduce incentives to over invest. The objective of this research paper is therefore to assess the impact of accounting conservatism on investment decisions in Pakistan

Accounting Conservatism

In last few years accounting conservatism has got importance in accounting standards and research. Accounting conservatism is usually divided in conditional and unconditional conservatism.

Conditional Conservatism

According to Watts (2003a) conditional conservatism includes practices of various verifiability standards for revenue, expense, profit and losses with respect to happening of related economic news. In this regard strict standards of verifiability are applied while recognizing good news regarding profits and revenues as compared to bad news regarding losses and expenses. Basu (1997) also comprehended that under the conditional

accounting conservatism bad news are emphasized more as compared to good news with respect accounting earnings. Basu also concluded that bad news are comprehended and recognized in more timely manner as compared to good news. Basu termed this phenomenon as conditional conservatism. Beaver and Ryan (2005) termed conditional conservatism as news dependent. As an example, application of lower of cost or market value recognition in inventory valuation and impairment of tangible assets.

Unconditional Conservatism

Beaver and Ryan (2005) stated that unconditional accounting conservatism doesn't depend on news. Contrary to conditional conservatism, unconditional conservatism anticipates and recognize accounting losses and expenses before happening of economic news. Unconditional conservatism includes amortization and depreciation greater than economic amortization of goodwill and economic depreciation of tangible assets. Accounting procedures that delay recognition of good news, immediate expense processing of intangible assets in the form of research and development investments are other examples of unconditional conservatism.

Literature Review

Accounting Conservatism and Investment Decisions

Lafond and Watts (2008) suggested that conservatism in financial reporting leads to efficient investment decisions as it constrains management opportunistic behavior. This also put limits on managers ability while exaggerating earnings and current net assets. Managers usually have incentives in continuing inefficient and loss making projects as discontinuation of such loss making projects can harm private benefits of managers and also can disturb current stream of earnings. Conversely, conservatism terminates loss making projects in order to ensure efficient investment. Ball and Shivakumar (2005) supported the argument that conservatism in financial reporting induces managers not to invest in projects with negative net present value. Francis and Martin (2010) also argued that incorporating economic losses in firm earnings make acquisitions more profitable. Therefore, conservatism enhances investment efficiency by denying overinvestment.

Biddle and Hilary (2006) studied the impact of accounting quality on firm investment decisions. They argued that higher accounting quality improves investment efficiency by decreasing information gap between capital suppliers and firm management. Change et al. (2009) also asserted that choice of financing is also affected by auditor's quality.

According to them, firms have higher proportion of equity financing as compared to debt financing if they are audited by large audit

firms as compared to small audit firms. McNichols (2009) studied the behavior of investment patterns of firms with manipulated earnings, firm which issued financial restatements and also those firms who are subject to accounting enforcement actions by regulatory authorities. They concluded that firms with higher earnings manipulations are subject to overinvestment which leads to firm inefficiency and decline in profitability. Choi and Kwak (2010) studied the relationship between overinvestment and earnings management in Korean firms. They examined that firm with higher external financing are subject to overinvestment during periods of earnings manipulation. They also concluded a positive relationship between overinvestment and earnings management. Razzaq et al. (2016) examined the relationship between investment efficiency and timely recognition of losses in financial reporting in 142 manufacturing Pakistani firms listed in Pakistan Stock Exchange (PSX) during 2006 to 2011. They used the quantitative model of Basu (1997) to measure conservatism. They concluded that investment efficiency is improved if over investment or under investment is avoided if a firm remains conservative in recognizing future losses in current earnings. In the context of Pakistan they further argued that conservatism improves investment efficiency in Pakistan manufacturing sector. Yasir (2018) studied the impact of accounting conservatism on investment efficiency for non financial firms listed in Pakistan Stock Exchange. The study concluded that conservatism has significant impact on firm investment efficiency in the context of Pakistan. It was further stated that under investment firms are encouraged for more investment to make them efficient but not overinvestment. According to this study in the presence of information asymmetry conservatism prefers debt financing relative to equity financing. Based on the arguments mentioned above this study will test the following hypothesis.

Garch Lara et al (2010) argued that with respect to aggregate level of investment in an industry, firms observing conservatism makes less investment if over investments are made in industry and makes more investment in the otherwise case. They further argued that the problem of underinvestment is mitigated by firms practicing conservative accounting thereby ensuring a lower external financing cost. Conservatism also refrains managers to invest in under preparing projects as managers disclose the earnings impact of their subprime investments in a timely manner. According to Bushman et al (2011) conservatism is related with investment outflows in case of declining investment opportunities. Francis and Martin (2010) investigated the issue of profitable acquisitions and conservative financial reporting. They argued that post acquisition financial returns are positively related with conservatism.

According to them managers usually abandon those projects which entail negative returns. Ahmed and Duellman (2011) contended that firms with more conservative reporting practices have relatively higher gross profit margins and operating cash flows than firms not practicing conservatism. Healy et.al. (1999) provided evidence that one of the prominent cost of conservatism is that conservative firms forego those investments which are riskier but their NPV. Kravert (2014) found that conservative accounting practices put limits on the behavior of managers while making investment in risky projects and it also mitigates shareholders and debt holders conflict regarding substitution of assets. Ahmed et. al.(2002) concluded that lower cost of debts and better credit ratings are enjoyed by firms practicing conservative accounting. Zhang (2008) found that firms with conservative accounting are charged with lower interest rates while borrowing from banks.

H_1: There is a relationship between accounting conservatism and investment efficiency

Research Methodology

Sample and Data Sources

This study is based on the impact of accounting conservatism on investment decisions of firms listed in Pakistan Stock Exchange (PSX). So population of this study is all the firms listed in Pakistan Stock Exchange. The sample of the study is based on the firms listed in KSE 100 index of Pakistan Stock Exchange excluding the financial firms included in this index. The total number of financial firms included in KSE 100 index is twenty four. So the total number of firms included in sample of this study is seventy six and data have been collected from their annual reports from 2012 to 2017.

Accounting Conservatism (AC)

Various studies carried out early have developed different models to measure conservatism in financial reporting. These previous models developed for conservatism has their own strengths and weaknesses. This study has adopted accrual based measure of conservatism. The accrual based measure of conservatism was also suggested by Givaly and Hayn (2000) and Wang (2009). This method is based on reversal of accounting accruals in next period. Conservatism in financial reporting leads to negative accruals and higher the negative accruals the more will be conservatism in firm financial reporting. Most of the studies on accounting conservatism has used Basu model to measure the conservatism index. The Basu model have widespread of errors as he assumes that if stock returns are negative it is due to accounting conservatism but in most of the capital markets negative returns may be due to non accounting related information as well (Gregoriou and

Skerratt, 2007). This accrual approach for measuring conservatism is given below.

Conditional and unconditional conservatism can be measured as:

Conditional Conservatism

MCON = Non Operating Accruals/ Total Assets × (-1)

Unconditional Conservatism

NCON = Total Accruals/ Total Assets × (-1)

Non Operating Accruals and Total Accruals can be calculated as:

$ACC_{it} = NI_{it} + DEP_{it} – CFO_{it}$

$OACC = \Delta AR_{it} + \Delta Ia + \Delta PE_{it} - \Delta AP_{it} - \Delta TP_{it}$

$NoACC_{it} = ACC_{it} - OACC$

Where

ACC = Accumulated Accruals
ΔI = Change in Inventory
NI = Net Income
ΔPE = Change in Prepayments
DEP = Depreciation Expense
CFO = Operating Cash Flow
OACC = Operating Accruals
ΔAR = Change in Account Receivables
ΔAP = Change in Accounts Payables
ΔTP = Change in Taxes
NoACC = Non Operating Accruals
Investment decisions can be measured as:

Investment Decisions (Netinvt)

$Netinvt = COF/TA_{t-1}$

Netinvt = Investment

TA_{t-1} = Total Assets at the beginning of year

COF = Cash paid to acquire fixed assets

Control Variables

The following control variables are used in this study

Size (SZ)

Company size is calculated by the natural logarithm of total assets of firm.

Profitability (PF)

Profitability is measured by the return on assets.

Firm Leverage (FL)

Firm leverage is measured by the ratio of total liabilities to total assets of firm

Firm Growth (FG)

Firm growth is measured by the ratio of total assets of current year to total assets of previous year.

Statistical Model

$$Netinvt = \beta_0 + \beta_1 MCON + \beta_2 NCON + \beta_3 SZ + \beta_4 PF + \beta_5 FL + \beta_6 FG + e$$

Data Analysis

Descriptive Statistics

Table1: Descriptive Statistics

	Min	Max	Mean	Std. Dev.
Netinvt	-0.3041	0.314	0.0512	0.0331
MCON	-1.9124	1.7713	0.1119	0.2134
NCON	-2.233	1.731	0.0071	0.4911
SZ	8.1653	14.891	10.213	1.4521
PF	0.0214	0.6131	0.2101	0.1112
FL	0.0014	0.8142	0.1913	0.1431
FG	-0.1971	0.3214	0.0013	0.0513

Table 1 shows descriptive statistics of variables. It shows minimum, maximum, mean and standard deviation of variables examined in this study. It shows that mean of investment decision is 0.0512 and its standard deviation is 0.0331. It shows that variations in investment decisions are due to accounting conservatism and other institutional factors like firm size, profitability, financial leverage and firm growth rate. This table further shows that mean value of accounting conservatism is 0.1119 and its standard deviation is 0.2134. The mean value of firm size is 10.213 and its standard deviation is 1.4521. The mean value of firm profitability is 0.2101 and its standard deviation is 0.1112. The mean value of financial leverage is 0.1913 and its standard deviation is 0.1431. The mean value of firm growth rate is 0.0013 and its standard deviation is 0.0513.

Correlation Analysis

Table 2: Correlation Analysis

	Netinvt	MCON	NCON	SZ	PF	FL	FG
Netinvt	1						
MCON	0.213	1					
NCON	0.131	-0.291	1				
SZ	-0.191	0.531	0.199	1			
PF	0.613	0.231	0.217	0.121	1		
FL	-0.131	0.013	0.271	0.251	0.119	1	
FG	0.312	0.161	0.341	0.431	0.242	0.312	1

Table 2 shows correlation analysis of dependent and independent variables used in the study. It shows that there is a positive relationship between investment decisions and conditional and unconditional conservatism. The relationship between firm size and investment decisions is negative. The relationship between firm profitability, firm growth rate and investment decisions is positive. While financial leverage and investment decision of firm have negative relationship.

Test result for Autocorrelation

Table 3: Test result for Autocorrelation

Wooldridge test for autocorrelation
H_0 : No first order Autocorrelation
F(9) = 63.132
Prob> F = 0.0412

This study used Wooldridge test for autocorrelation in panel data. The null hypothesis was that there is no autocorrelation in the data. The test reported F statistic value of 63.132 with probability value of 0.0432. The results therefore indicate that there is no problem of autocorrelation in the data.

Heteroscedasticity Statistics

Table 4: Heteroscedasticity Statistics

Breush- pagan/ Cook- Weisberg test for heteroscedasticity
Ho: Constant variance
Chi2(1) = 32.22
Prob> chi2= 0.0752

The study used Breush-Pagan test to check panel level heteroscedasticity in the data. The hypothesis for this test was that the error variance was homoscedastic. The test reported chi-square value of 32.22 and probability value of 0.0752. The null hypothesis is accepted as the chi-square value is insignificant at 5% significance level. It is therefore concluded that there is no problem of heteroscedasticity in the data.

Regression Analysis

Fixed Effect Model

Table5: Fixed Effect Model

Variables	**Coefficients**	**t-statistics**	**Probability**
MCON	0.023	5.131	0.000
NCON	0.005	2.912	0.003
SZ	- 0.007	- 0.512	0.531
PF	0.113	1.061	0.289
FL	- 0.041	- 4.135	0.001

FG	0.312	0.412	0.631
R-Square	29.471		
F-Statistics	5.731 (0.001)		

Random Effect Model

Table 6: Random Effect Model

Variables	Coefficients	t-statistics	Probability
MCON	0.141	3.471	0.000
NCON	0.091	4.931	0.001
SZ	- 0.121	- 3.531	0.002
PF	5.831	0.271	0.671
FL	- 7.321	- 1.312	0.231
FG	1.423	0.139	0.758
R-Square	39.742		
Wald Chi	33.772 (0.000)		

Hausman Test

Table 7: Test Result of Hausman Test

Test Summary	Chi-Sq Statistic	Prob.
Cross-section random	51.65	0.000

In order to choose between fixed and random effects model, the Hausman test was used. The null hypothesis of the Hausman test was that the random effects model was preferred to the fixed effects model. The Hausman test reported a chi-square of 51.6 with a p-value of 0.000 implying that the chi-square value obtained was statistically significant. The researcher therefore rejected the null hypothesis that random effects model was preferred to fixed effect model.

A set of dependent and independent variables were used to test the hypothesis between accounting conservatism and investment efficiency using firm growth rate, firm profitability, financial leverage and firm size as control variables. Fixed effect model was used for this purpose which shows R^2 of 29.47 %. It shows that independent variables of conditional accounting conservatism, unconditional accounting conservatism, firm size, firm profitability, financial leverage and firm growth rate show 29.47 explanatory power to determine investment decisions of firms listed in Pakistan Stock Exchange. The result further shows that conditional accounting conservatism and non conditional accounting conservatism have significant positive impact on investment decisions. It shows that practicing accounting conservatism in either case enhances investment efficiency. This argument supports hypothesis of the study

that conservatism improves investment decisions. It also supports the arguments of Lara et al. (2015) conservative firms are least under or over invested. This study also shows that conservatism has significant impact on firm investment efficiency in the context of Pakistan. It is further stated that under investment firms are encouraged for more investment to make them efficient but not overinvestment. Firm size has insignificant negative impact on investment efficiency. Firm profitability and firm growth have insignificant positive impact on firm investment efficiency. While financial leverage has significant negative impact on investment efficiency.

Conclusion

This study explores the relationship between accounting conservatism and investment efficiency in Pakistan. The sample firms include seventy six non financial firms in KSE 100 index of Pakistan Stock Exchange while data from their annual reports was collected from 2012 to 2017. The result shows that conditional accounting conservatism and non conditional accounting conservatism have significant positive impact on investment decisions and firms practicing accounting conservatism are least under or over invested. Using conservative accounting identifies risky projects and projects with negative NPV well ahead of time. Therefore it helps shareholders to protect and enhance value of their investment. In the same manner, agency problems can also be avoided if a firm practices accounting conservatism.

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