Conditional Conservatism and its Effect on Earnings Quality and Stock Prices in Indian Capital Market

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Abstract
This study examines conditional conservatism in Indian capital markets and extent to which conditional conservatism affect earnings quality and stock prices. Conservatism principle has been traditionally used in financial reporting for long time it has been dominant accounting principles (Watts 2003). In recent years, the focus of standard setters such is IASB have been less conservative accounting standard. We used secondary data for companies listed in Bombay stock exchange from 2006 to 2012. We employed pooled panel data regression with standard error robust. We find enough evidence to support presence of conditional conservatism during 2006 to 2012 in Indian capital market. We also find that conservatism do not affect the quality of reported earnings, however it influence stock prices.

Keywords: Conservatism, earnings quality, returns.

1.0 Introduction
In recent years, the quality of reported earnings has become key concern for analyst and investors as it influence resources allocation in capital markets. However, the quality of reported earnings is influenced by standards used to measure and managers discretion in the process of measuring. This has lead to the need to understand the process of measurement of earnings and factors that induce bias in the process of measuring the reported earnings in order to avoid poor allocation of investment in financial markets. It is becoming important for analysts and investors to understand factors that influence the quality of reported earnings so as to avoid losses in trading and maximize their portfolio.

Traditionally financial reporting is based on conservatism principle which requires anticipating all possible losses and writes them off in unfavorable period and underestimate gains in favorable period (Penman& Zhang 2002). This principle has been practiced in the past, and it has been influential one over time (Watts 2003). However in recent years, standard setters for example IASB have developed standard which are less conservative in nature in an attempt to reduce conservatism in financial reporting.

Studies have documented mixed findings relating to the effect of conservatism on earnings quality and stock prices. On the one hand, Chen et al. (2007) findings suggest that advantage of conservatism is to decrease the level of earnings management. Likewise, Fan & Zhang (2007) suggests that conservatism enhance information quality.

On the other hand, prior studies have documented negative impact of conservatism on earnings and return. Chen et al. 2013 findings reveal that firms that are more conservative are associated with poor earnings quality. Specifically their findings suggest that conservatism reduces the persistence of earnings thus making earnings of poor quality. Likewise, Hui et al. (2009) find that more conservative firms release less earnings forecast.

Moreover, studies also have associated level of conservatism in financial reporting and legal origin. For example Ball et al. (2000) affirms that companies in common law countries recognize timely bad news than good news as compared to code law countries. Likewise, Ball et al. 2003 find that East Asian countries Hong Kong, Thailand, Singapore and Malaysia which are common law countries use conditional conservatism in reporting.

Furthermore, the level of conditional conservatism has been associated ownership of companies. For example, Ball and Shivakumar (2005) find that conditional conservatism is more in public companies than in private companies. Also, Risberg (2005) reveals that independent firms recognize bad news timelier as compared to firms with pyramid group.

So far, the debate on the conservatism is far from been resolved, one side opposing conservatism and other side supporting conservatism. Also studies have shown that legal origin also influences the level of conservatism accounting. Therefore, this study is motivated to examine conditional conservatism in India and the effect of conditional conservatism on earnings quality and stock price.

This study is important due to three reasons. Fist, India economy is growing faster and is now shifting from industrialized to high-tech services oriented. The concern now is the the ability of financial report to reflect the economy changes as this change results to the increased research and development expenses as well as restructuring charges. The immediately written them off by some companies has increased conservatism. Therefore, conducting this study in India will fill gap in literature.

Second, most of studies investigating the effect of conservatism on earnings quality and stock price have done in
developed economies and assume market efficiency (Ball et al. 2000, Penman & Zhang 2002, Ball et al. 2010, and Kim & Pevzner 2010). Therefore conducting this study in emerging market where the level of efficiency of capital market is less than developed economies will provide new insights from emerging market perspective. Third, Ball et al. (2000, 2003) affirms that companies in common law countries recognizes timely bad news than good news as compared to code law countries. India is a common law country, which offers unique setting on legal origin to study the trend of conditional conservatism in India over time.

The rest of the paper is organized as follows. Section two discusses the literature review. Section three cover data and methodology. Section four present empirical findings and finally, section five draw the conclusion.

2.0 Literature Review

Many studies have investigated the relationship between conditional conservatism and earnings quality. For example, Kim & Pevsner (2010) investigate the relationship between conditional conservatism and future negative surprise in USA from 1973 to 2005. Their findings suggest that conditional conservatism is positively associated with future lower likelihood of bad earnings. Their findings also suggest that conservatism have information benefit to users as it influences stock prices. However, Abedini et al. (2014) examine the level of conservatism and investors reaction to cash stock in Tehran stock exchange. Their finding shows that more conservative firms have negative effect on reaction of investor on cash stock.

Moreover, Kazemi et al. (2011) examine the relationship between conservatism and earnings and find that firms that are more conservative are associated with poor earnings quality. Their findings suggest that bias induce in earnings by conservatism accounting makes earnings less persistence earnings. Consequently, Gigler and Hemmer (2001) examine the relationship between conservatism and voluntary disclosure. Their findings show that more conservative firms are associated with less voluntary disclosure. Also, Hui et al. (2009) conducted study to examine the relationship between conservatism and management earnings forecast. Their finding show that firm that practice conservative accounting principle releases less earnings forecast

Studies have investigated conditional conservatism and earnings quality measured by auditor tenure. For example, Li (2010) study shows that there is negative relationship between conservatism and auditor’s tenure for small firms, however the study reveal positive association between conservatism and auditors tenure for large firms. Likewise Soliman (2014) findings show that there positive relationship between conservatism and auditor tenure.

Using a sample of 126,376 firm year observation from 1975 to 2004, Balachandran & Mohanram (2011) investigate the relationship between increased accounting conservatism and value relevance of earnings. Their findings reveal that there is no relationship between increased conservatism and decline in value relevance of earnings. Likewise, Nahandi, & Khanlari, (2012) examine the association between conservatism and information content of earnings. Their finding show non linear relationship between conservatism and information content of earnings.

Chen et al. (2007) examine relationship between earnings quality measured by earnings management and conservatism. Their findings show that conservative accounting improves earnings quality by reducing earnings management. Likewise Fan & Zhang (2012) examines the relationship between conservatism and information efficiency. Their finding suggests that conservative firms are associated with improved information quality. Using conservatism score (CS) as measure of conservatism, Penman & Zhang (2002) findings reveal that poor earnings are associated with more conservatism accounting. Also their finding reveals that stock prices do not react to earnings quality of firm that practice more conservative accounting. Likewise Lagor (2008) investigate the relationship between conservatism and restatement announcement. The findings show that conditional conservatism increases following restatement announcement. Also the findings reveal that conditional increased more for firm with debt and compensation contracting which are significant.

The evidence presented so far show mixed findings; some opposing conservatism and other supporting conservative as it enhance better earnings quality and influence stock prices. This mixed finding is what makes this study unique to investigate conservatism trend in India and its effect on earnings quality and stock price in India stock market.

3.0 Hypothesis, Methodology and Data

3.1Hypothesis

We proposed two research hypothesis stated in alternative in investigating conservatism accounting in India and its effect to earnings quality and stock prices. Since Ball et al. (2000) affirms that companies in common law countries recognize timely bad news than good news as compared to code law countries. We state our first
hypothesis in alternative form as given below.

\( H_1: \) Firms in India use conservatism accounting in financial reporting.

Prior studies have documented that conservatism accounting is negatively related both earnings quality and stock prices (Penman & Zhang 2002, Paek et al. 2007 and Abedini, et al. 2014). We form our second hypothesis stated in alternative as shown below.

\( H_2: \) Conservatism has negative impact on earnings quality and stock price.

3.2 Methodology

We employed quantitative research methods to study conditional conservatism trend in India and its effect on both earnings quality and stock prices. Our study follow model proposed by Basu 1997 to investigate conditional conservatism in India and its effect on stock price as given in equation one.

\[
EPS_{i,t} / P_{i,t} = \alpha_0 + \alpha_1 DR_{i,t} + \alpha_2 RET_{i,t} + \alpha_3 DR_{i,t} \times RET_{i,t} + \psi_i
\]

Where;

\( EPS_{i,t} = \) Earnings per share before extraordinary for firm \( i \) for year \( t \)

\( P_{i,t} = \) Price at the end of year for firm \( i \) for year \( t \)

\( RET_{i,t} = (P_t - P_{t-1}) / P_{t-1} \)

\( DR_{i,t} = \) Dummy variable equal to 1 if \( RET_{i,t} \) is negative and zero otherwise

\( \psi_i = \) Error term

Similar with prior studies the extent of conservatism is measured by the asymmetric timeline coefficient (\( \alpha_3 \)) (Basu 1997, Ismail & Elbolok 2011). When \( \alpha_3 > 0 \) and it is statistically significance indicates that bad news are recognized more quickly that good news thus firms uses conservatism accounting. We also follow extended Basu (1997) model proposed by Ismail & Elbolok (2011) to examine the effect of conservatism on earnings quality as indicated on equation two.

\[
EPS_{i,t} / P_{i,t} = \alpha_0 + \alpha_1 DR_{i,t} + \alpha_2 RET_{i,t} + \alpha_3 DR_{i,t} \times RET_{i,t} + \alpha_4 CFO_{i,t} / NP_{i,t} + \psi_i
\]

Where

\( CFO_{i,t} = \) Cash flow from operation for firm \( i \) in year \( t \)

\( NP_{i,t} = \) Net profit before extraordinary activities for firm \( i \) for year \( t \)

3.3 Sample section

The study used secondary data extracted from Prowess database that is maintained by the Center for Monitoring Indian Economy. Our sample size initial was comprised of 500 companies listed in BSE 500. However, we reduced companies with missing information for computing key variables thus reduced our sample to 337 companies with 2,359 firm year observations. Our sample period is seven spinning from 2006 to 2012.

4.0 Empirical results

4.1 Descriptive statistics

Table 1 present the results of descriptive statistics for our variables. The mean (median) value of earning per scaled by beginnings stock price is 0.069 (0.0596). The mean (median) value of return is 0.173 (0.0501) while the mean (median) value of earnings quality measured by cash flow from operation scaled by net profit is 1.454 (1.0085).

4.2 Pairwise Correlation

Table 2 reports pairwise correlation among our variables. Returns (\( RET_{i,t} \)) is significance negatively related to negative return (\( DR_{i,t} \)) at 5% level of significance. We also find there positive significance correlation between return (\( RET_{i,t} \)) and \( DR_{i,t} \times RET_{i,t} \) at 5% level of significance. Moreover, there is significance negative relationship between \( DR_{i,t} \) and \( DR_{i,t} \times RET_{i,t} \) at 5% level of significance.

4.3 Results of Heteroskedasticity test, Multi-co linearity test, and Outliers

We report our results of tests and regression estimation in this section. Table 3 report the results of multi-collinearity test. We employed variance inflation factors to determine whether there is problem of multi-collinearity among our independent variables. We obtained variance inflation factor values of 2.13, 2.09 and

100
1.22 which are far away from the cut-off value of 10 (Hair, et al 1995, Gujarat 2003). Therefore our independent variables are free from problem of multi-collinearity.

Table 4 presents the results of heteroskedasticity test. We employed Breusch-Pagan test and obtained chi-square value of 71.34 which is far beyond the chi-square value of 3.84. We therefore, rejected the null hypotheses of constant variance. To alleviate the problem of heteroskedasticity we employed pooled OLS with standard error robust using STATA statistical package (Thompson 2011).

We also winsorized all our variables at 99% and 1%, to alleviate the problem of extreme observations that might have influence on our study similar with prior studies (Francis et al 2004). Out of 2,359 firm year observations 24 observations in this paper are winsorized.

4.3.1 Pooled Regression Results and Discussion

This part reports the results of regression for whole sample and year basis regression results on asymmetric timelines and also we report the effect of conditional conservatism on earnings quality and stock prices.

Table 5 reports the results of estimation of conditional conservatism. We employed Basu 1997 model and find that asymmetric timelines coefficient (\( \alpha = 0.0539, p<0.05 \)). This evidence supports our first hypothesis that firms in India uses conservatism accounting. We also find that earnings are sensitive to bad news at 1.97 times (\( \alpha_3 >0 \)) as compared to sensitivity to good news.

Table 6 report conditional conservatism values of our full sample from 2006 to 2012 in year basis. We find that in each year the asymmetric timeliness coefficient is greater than zero (\( \alpha_3 >0 \)) that indicates the presence of conservatism yearly in India. In year 2006 the asymmetric timeliness is 0.0789, \( p <0.05 \), likewise in 2007 the asymmetric timeliness coefficient is 0.0175, \( p <0.05 \). We also find that the coefficient of asymmetric timeliness is 0.00002, \( p <0.01 \) in 2009. Moreover in 2012 we find the asymmetric timeliness coefficient of 0.2410, \( p<0.05 \). However, we find insignificant asymmetric timeliness coefficient in 2008, 2010, 2011. Therefore, on average our year basis results from 2006 to 2012 suggest presence of conditional conservatism in India. Also our results suggest that there is a negative relationship between stock price and conditional conservatism. As conditional conservatism increases stock price tends to fall.

Table 7 presents the result of effect of conditional conservatism on earnings quality. We employed model developed by Ismail & Elbolok 2011 to examine the effect of conservatism on earnings. We find that there is no significant relationship between conservatism and earnings quality (\( \alpha_4 =0.000215, p>0.1 \)). Therefore, presence of conservatism does not influence earnings quality in India.

The overall findings show prevalence of conservatism in India. The findings also reveal that the level of sensitivity of earnings to bad news in India is 1.97 times as compared to positive return. However, this level of sensitivity to bad news is low as compared to sensitivity of 5.69 reported in Egypt capital markets by Ismail & Elbolok (2011). We also collectively find that conditional conservatism do not influence earnings quality, however it influence stock prices in Indian stock market.

5.0 Conclusion

We examine conditional conservatism in context of Indian stock market and extent to which conditional conservatism affect both stock prices and earnings quality. Conservatism principle has been traditionally been used in financial reporting and it has been influential principle over time (Watts 2003).

We specifically investigated whether financial markets in India reflect more bad news timely than good news and extent to this affect the quality of earnings. Our evidence suggests that financial markets reflect more bad news than good news (\( \alpha_3 =0.0539, p<0.05 \)). We find that earnings are sensitive to bad news at 1.97 (\( \alpha_3 \)) as compared to sensitivity to good news. Our evidence support Ball et al. 2000 findings that firms in common law countries recognize timely bad news than good news as compared to code law countries. We also find that conditional conservatism do not affect the quality of reported earnings, however it influence stock prices.

Our findings have implication to regulators to develop or adopt accounting standard that reduces or eliminate conservatism hence improve stock prices.

This paper suggests that future research should focus on studying the effect of conditional conservatism on earnings quality. Specifically future studies should examine effects of conditional conservatism on earning quality proxies such as accrual quality, smoothness, persistence and predictability.

Reference


Table 1: Descriptive statistics

<table>
<thead>
<tr>
<th>Name</th>
<th>μ</th>
<th>δ</th>
<th>ρ50</th>
<th>Kurtosis</th>
<th>Skewness</th>
<th>Min</th>
<th>Max</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>( EPS_{i,t} / P_{i,t} )</td>
<td>0.069</td>
<td>0.124</td>
<td>0.0596</td>
<td>228.083</td>
<td>-10.151</td>
<td>-3.175</td>
<td>0.661</td>
<td>2359</td>
</tr>
<tr>
<td>( RET_{i,t} )</td>
<td>0.173</td>
<td>0.789</td>
<td>0.0501</td>
<td>142.975</td>
<td>7.874</td>
<td>-0.969</td>
<td>18.585</td>
<td>2359</td>
</tr>
<tr>
<td>( DR_{i,t} )</td>
<td>0.451</td>
<td>0.498</td>
<td>0</td>
<td>-1.964</td>
<td>0.195</td>
<td>0</td>
<td>1</td>
<td>2359</td>
</tr>
<tr>
<td>( DR_{i,t} * RET_{i,t} )</td>
<td>-0.136</td>
<td>0.216</td>
<td>0</td>
<td>2.414</td>
<td>-1.747</td>
<td>-0.969</td>
<td>0</td>
<td>2359</td>
</tr>
<tr>
<td>( CF / NP_{i,t} )</td>
<td>1.454</td>
<td>7.717</td>
<td>1.0085</td>
<td>225.756</td>
<td>11.177</td>
<td>-56.192</td>
<td>182.512</td>
<td>2359</td>
</tr>
</tbody>
</table>

Notes: Descriptive statistics of the variables included in this study. N=number of observation, ρ50=median, μ=mean, δ=standard deviation. \( EPS \) = Earnings per share before extraordinary, \( DR_{i,t} \) = dummy variable equal to 1 if \( RET_{i,t} \) is negative and zero otherwise. \( RET_{i,t} = (P_t - P_{t-1}) / P_{t-1} \). NP stand for net profit before extra ordinary activities, CF stand for cash flow from operation.

Table 2: Pairwise correlation

<table>
<thead>
<tr>
<th>( EPS_{i,t} / P_{i,t} )</th>
<th>( DR_{i,t} )</th>
<th>( RET_{i,t} )</th>
<th>( DR_{i,t} * RET_{i,t} )</th>
</tr>
</thead>
<tbody>
<tr>
<td>( EPS_{i,t} / P_{i,t} )</td>
<td>1</td>
<td>0.082</td>
<td>-0.099</td>
</tr>
<tr>
<td>( DR_{i,t} )</td>
<td></td>
<td>-0.403 *</td>
<td>1</td>
</tr>
<tr>
<td>( RET_{i,t} )</td>
<td></td>
<td>-0.7143 *</td>
<td>0.3801 *</td>
</tr>
<tr>
<td>( DR_{i,t} * RET_{i,t} )</td>
<td></td>
<td></td>
<td>1</td>
</tr>
</tbody>
</table>

Notes: Pair wise correlation coefficient of the variables. ** depicts up to 5% level of significance.

Table 3: Multi-collinearity test results using Variance inflation factor

<table>
<thead>
<tr>
<th>Variable</th>
<th>VIF</th>
<th>1/VIF</th>
</tr>
</thead>
<tbody>
<tr>
<td>( DR_{i,t} )</td>
<td>2.13</td>
<td>0.469866</td>
</tr>
<tr>
<td>( DR_{i,t} * RET_{i,t} )</td>
<td>2.09</td>
<td>0.479428</td>
</tr>
<tr>
<td>( RET_{i,t} )</td>
<td>1.22</td>
<td>0.820195</td>
</tr>
<tr>
<td>Mean VIF</td>
<td>1.81</td>
<td></td>
</tr>
</tbody>
</table>

Notes: Multi-collinearity test using Variance inflation factor

Table 4: Heteroskedasticity test results

Breush-Pagan / Cook-Weisberg test for heteroskedasticity

<table>
<thead>
<tr>
<th>Ho: Constant variance</th>
<th>Variables: dr06 ret drrto6</th>
<th>chi2(3)</th>
<th>Prob &gt; chi2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>71.34</td>
<td>0.0000</td>
</tr>
</tbody>
</table>

Notes: This table presents results of heteroskedasticity test using Breusch-Pagan test.
Table 5: Estimation conditional conservatism

\[ \text{EPS}_t / \text{P}_t = \alpha_0 + \alpha_1 \text{DR}_{t,i} + \alpha_2 \text{RET}_{t,i} + \alpha_3 \text{DR}_{t,i} \times \text{RET}_{t,i} + \psi_i \]

<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>Coefficient and probability values attached to independent variables:</th>
<th>No of observation</th>
<th>Overall R-square</th>
</tr>
</thead>
<tbody>
<tr>
<td>( \text{EPS}_t / \text{P}_t )</td>
<td>( \alpha_0 )</td>
<td>( \alpha_1 \text{DR}_{t,i} )</td>
<td>( \alpha_2 \text{RET}_{t,i} )</td>
</tr>
<tr>
<td>( \text{EPS}_t / \text{P}_t )</td>
<td>0.0813***</td>
<td>-0.007</td>
<td>-0.0068**</td>
</tr>
</tbody>
</table>

Notes: This represents results of pooled OLS regression using standard error (clustered by firm and year). The values presented in parentheses represent the probability values attached to the coefficient. ***, ** and * represent levels of significance at 1%, 5% and 10% respectively according to two tailed hypotheses.

Table 6: Year wise regression for measuring conditional conservatism

\[ \text{EPS}_t / \text{P}_t = \alpha_0 + \alpha_1 \text{DR}_{t,i} + \alpha_2 \text{RET}_{t,i} + \alpha_3 \text{DR}_{t,i} \times \text{RET}_{t,i} + \psi_i \]

<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>Coefficient and probability values attached to independent variables:</th>
<th>No of observation</th>
<th>R-square</th>
</tr>
</thead>
<tbody>
<tr>
<td>( \text{EPS}_t / \text{P}_t )</td>
<td>( \alpha_0 )</td>
<td>( \alpha_1 \text{DR}_{t,i} )</td>
<td>( \alpha_2 \text{RET}_{t,i} )</td>
</tr>
<tr>
<td>2006</td>
<td>0.074***</td>
<td>0.033**</td>
<td>-0.00626*</td>
</tr>
<tr>
<td>2007</td>
<td>0.088***</td>
<td>-0.035**</td>
<td>-0.0072</td>
</tr>
<tr>
<td>2008</td>
<td>0.0973***</td>
<td>-0.02647</td>
<td>-0.023</td>
</tr>
<tr>
<td>2009</td>
<td>0.1017 (7.84)</td>
<td>-0.00033**</td>
<td>0.0308</td>
</tr>
<tr>
<td>2010</td>
<td>0.0657***</td>
<td>-0.0351*</td>
<td>-7.4E-05</td>
</tr>
<tr>
<td>2011</td>
<td>0.0717 (6.7)</td>
<td>-0.0359</td>
<td>-0.0142</td>
</tr>
<tr>
<td>2012</td>
<td>0.0643**</td>
<td>0.0409</td>
<td>-3.4E-05</td>
</tr>
</tbody>
</table>

Notes: This represents results of pooled OLS regression using standard error (clustered by firm and year). The values presented in parentheses represent the probability values attached to the coefficient. ***, ** and * represent levels of significance at 1%, 5% and 10% respectively according to two tailed hypotheses.

Table 7: Impact of conservatism on Earnings quality

\[ \text{EPS}_t / \text{P}_t = \alpha_0 + \alpha_1 \text{DR}_{t,i} + \alpha_2 \text{RET}_{t,i} + \alpha_3 \text{DR}_{t,i} \times \text{RET}_{t,i} + \alpha_4 \text{CFO}_{t,i} / \text{NP}_{t,i} + \psi_i \]

<table>
<thead>
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</tr>
</thead>
<tbody>
<tr>
<td>( \text{EPS}_t / \text{P}_t )</td>
<td>( \alpha_0 )</td>
<td>( \alpha_1 \text{DR}_{t,i} )</td>
<td>( \alpha_2 \text{RET}_{t,i} )</td>
</tr>
<tr>
<td>( \text{EPS}_t / \text{P}_t )</td>
<td>0.0812***</td>
<td>-0.007</td>
<td>-0.0069*</td>
</tr>
</tbody>
</table>

Notes: This represents results of pooled OLS regression using standard error (clustered by firm and year). The values presented in parentheses represent the probability values attached to the coefficient. ***, ** and * represent levels of significance at 1%, 5% and 10% respectively according to two tailed hypotheses.