Earnings management in response to the oil price shock of 2014: Evidence from Oslo Stock Exchange

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Overview

The purpose of this paper is to supplement the earnings management literature by examining accounting choices in Oslo Stock Exchange listed oil companies in response to the oil price shock of 2014. From June 2014 to January 2015, the price of Brent crude oil per barrel dropped from around $115 to $46. This downfall is mainly attributed to USA's increased shale oil production and OPEC's decision of keeping their production stable, deciding that low oil prices offer more long-term benefits than giving up market share (McCain, 2015).

In turbulent times, the reliability of financial statements is particularly essential to the stakeholders. Information asymmetry between preparers and users of financial information makes opportunistic altering possible, which reduces the quality of financial reporting (Arthur, Tang and Lin, 2015). Basu *et al*. (2013) state that financial reports are the most important source of information to investors, analysts and debtors. Knowledge of an industry's inclination to engage in earnings management activities in times of crisis[1] is therefore of critical value to users of financial information. Due to the historical proximity of the oil price crisis of 2014, no earnings management research is conducted on this event.

Following prior research, well-established discretionary accruals models are used to estimate earnings management behaviour. By using a bootstrapping procedure, we test whether there is a significant difference in earnings management between the pre-crisis and the crisis period. The results show a significant increase in earnings management following the oil price drop. Moreover, we investigate which direction companies adjust earnings and find abnormal income-decreasing accruals during the third and fourth quarter of 2014. We attribute this finding to the big bath strategy, where managers manipulate earnings downward to make poor results worse, artificially enhancing subsequent earnings as the accruals reverse.

This study contributes to the literature in 1) to the understanding of the effect of macroeconomic shocks on earnings management behaviour and 2), we supplement the earnings management literature on oil and oil-related companies by looking at how a negative oil price shock affects oil companies.

Methods

Following prior research, earnings management is measured with discretionary accruals models well-established in the literature. We apply both Modified Jones, Kothari, Leone and Wasley (2005) and the Larcker model modified by Cimini.

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[1] We define the oil price shock of 2014 as a crisis for the oil industry.

Results

By estimating the models using a sample of 782 quarterly observations, our results indicate that the Oslo Stock Exchange listed oil companies managed earnings to a larger degree during the oil price crisis, compared to the preceding period. Extended analysis provides evidence of significant income-decreasing earnings management in the third and fourth quarter of 2014, pointing to big bath accounting choices. This implies that the trustworthiness and value of the financial reports in the oil industry in times of crisis are reduced.

Conclusions

We find more earnings management in the crisis period compared to the preceding period. More specifically, by taking advantage of the uncertain macroeconomic environment, companies booked large income-decreasing accruals during the third and fourth quarter of 2014. We attribute these findings to the big bath strategy.

While earlier research study the oil industry after positive oil price shocks, we fill a gap by studying the effect of a negative oil price drop on earnings management. Both events lead to income-decreasing accounting choices, but Han and Wang (1998) and Byard, Hossain and Mitra (2007) attribute their findings to another theory, the political cost hypothesis.

Our findings have valuable implications for stakeholders in the oil industry. Investors need to be alert both in good and bad times. In addition, big bath accounting choices influence future accounting periods. Undervalued assets give lower accruals and overstated earnings in the subsequent periods. If investors and other stakeholders are unaware of this practice, stock prices may become overvalued.

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