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Value Relevance of Firms' Reportable Segment Profit or Loss Reconciliation

Nunung Nuryani [1]*, Tan Thing Heng[2] and Phan Ferah[3]

[1]Master of Accounting Program, Institut Bisnis dan Informatika Kwik Kian Gie, Jakarta, Indonesia
[2]Faculty of ICT, Universitas Multimedia Nusantara, Tangerang, Indonesia
[3]Institut Bisnis dan Informatika Kwik Kian Gie, Jakarta, Indonesia

ABSTRACT

Objective – The International Financial Reporting Standards (IFRS) No.8 adopted in Indonesian GAAP (Statement No. 5, 2012) requires a company to provide a reconciliation of the total of the reportable segments' profit or loss of the firm's profit or loss. The objective of this standard is to improve the value relevance of information in the financial statement. This study aims to investigate the value relevance of the segment reconciliation and the determinants of segment income dissimilarity, i.e. agency cost, proprietary cost, and audit quality.
Methodology/Technique – Data used in this study was a secondary data obtained from 142 manufacturing companies listed in Indonesia Stock Exchange (IDX) for the period 2009 to 2013. Purposive sampling method yielded 59 firms. Two research models were used to test proposed hypotheses.
Findings – The results show reconciliation of total of segments' profit or loss of the firms' profit or loss positively affects the market value of equity; this means segments' reconciliation disclosure has value relevance for the investment decisions. In addition, this paper provides evidence that audit quality negatively affects the segment income dissimilarity, while agency cost and proprietary cost have no effect. This is consistent with hypothesis that firms audited by the Big Four tend to avoid disclosure of dissimilarity between firms profit or loss and segment profit or loss.
Novelty – Our findings show that audit quality (Big 4 accounting firms) plays an important role in reducing dissimilarity between the sum of segment profit and firm profit (segment profit dissimilarity)
Type of Paper: Empirical

Keywords: Segment Reconciliation; Value Relevance; Agency Cost; Proprietary Cost; Audit Quality.
JEL Classification: M41, M42.

1. Introduction

Recognizing the important role of segmental information in helping investors in economic decision making, the International Accounting Standards Board (IASB, 2008) published International Accounting Standard (IAS) 14 and International Financial Reporting Standards (IFRS) 8 on segment reporting. The purpose of the standards is to establish principles of financial information reporting based on business lines and geographical area to better assist users in understanding financial statements about firms' financial performance. This a

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* Corresponding author:
E-mail: nungnuryani@gmail.com
Affiliation: Master of Accounting Program, Institut Bisnis dan Informatika Kwik Kian Gie, Indonesia.

enables better assessment on overall return and risk of firms (IASB, 2008). IFRS 8 has been adopted in Indonesian GAAP (Statement No 5, 2009, revised 2012) and came into effect on 1 January 2011.

Measures of earnings reported at the segment level may or may not be consistent with the measures of earnings or net income provided at the firm level. Firms may report a different measure of profit or loss for its segments from the measures of earnings in the consolidated annual report. As a result, the whole may not equal the sum of its parts, thereby managers are required to provide segment reconciliations. Consequently, the segment reconciliations should provide vital information that assists users of financial statement to understand any differences between management defined earnings compared to GAAP defined earnings.

Previous studies (Venkataraman, 2001; Chen & Zhang, 2003; Graham, Morrill, & Morrill, 2005; Hope, Kang, Thomas, & Vasvari, 2009) generally found that segment reporting gave the additional benefit of predicting profit and value of firms but they did not focus on segment reconciliation. Studies related to segment reconciliation (Hollie & Yu, 2010; Alfonso, Hollie, & Yu, 2012) found that segment profit reconciliation positively correlated to the market value of firms. The market does not only value segment reconciliation information, but in certain cases, market can also misprice persistence of profit reconciliation. Therefore, this study aims to re-examine value relevance of segment profit reconciliation reported by firms in Indonesia by using the same method as Alfonso et al. (2012).

The second aim of this study is to examine factors that determine the difference between total operating segment profit and firms' profit and loss (segment profit dissimilarity). Previous studies on segment profit dissimilarity show mixed results. Several studies (Berger & Hann, 2007; Alfonso et al., 2012) found that agency cost plays an important role in choosing segment disclosure by a manager to hide unprofitable segment or perform subsidy from profitable segment to unprofitable one. On the other hand, other studies (Bestari, 2012; Alfonso et al., 2012) show that proprietary cost influences the decision to disclose segment information. Other determinant factors in disclosure of segment reporting are audit quality, segment quantity, firm size, and firm financial performance (Wang, Ettredge, Huang Y, & Sun, 2011; Alfaraih & Alanezi, 2011; Bestari, 2012; Alfonso et al., 2012; Ibrahim & Jaafar, 2013). Our study focuses on agency cost, proprietary cost, and audit quality as important determinants that reduce segment profit dissimilarity.

2. Literature Review

Accounting standards in the operating segment (SFAS 131, IFRS 14, PSAK 5) state that segment information reported by firms must be consistent with management or organizational approach of firms. In determining a segment profit and loss, "the standards require that the amount of each segment item reported shall be the measure reported to chief operating decision makers for the purpose of making a decision about allocating resources to the segment and assessing its performance." Firms might report the different measurement of profit and loss on their segments from profit measurement on consolidated statements. As a result profit measurement reported at the segment level may be consistent or inconsistent to measurement at the firm level. Consequently, overall firm profit is different from the sum of segment profit, this requires managers to provide segment reconciliation.

When reported profit and loss of segment is different from consolidated profit and loss at the firm level, a valuation is needed both at the firm and segment levels to provide information on the differences among segments. Studies on the value relevance of segment reconciliation information found that the value relevance of segmental information, in general, was insignificant. However, value relevance increased when operating segments had different profitability and increasing growth opportunity (Chen & Zhang, 2003). Reconciliation of segment profit positively correlated to the market value of the firm but the market value decreased when segment reconciliation interacted with unexpected earnings (Alfonso et al., 2012). The market did not only value segment reconciliation information, but also in some cases, mispriced persistence of profit reconciliation, particularly when reported segment earnings were different from earnings of the firm as a whole (Hollie & Yu, 2010).

H_{1a}: Segment profit reconciliation affects positively to value of the firm.

H_{1b}: Interaction between segment profit reconciliation and unexpected earnings affects negatively to value of the firm.

The agency cost hypothesis predicts that managers have incentives to make self-serving decisions which may not be the best for shareholders (Jensen & Meckling, 1976). Investors and board of director use accounting information to monitor managers and to reduce agency cost (Healy & Palepu, 2001). This urges managers to involve in "strategic" reporting to limit the use of accounting information monitoring. When agency cost motive dominated, managers tended to hide low profitability abnormally in disclosing segment information with the aim of avoiding strict external monitoring (Berger & Hann, 2007). Agency cost was negatively associated with disclosure of different growth among segments because managers tended to hide the information related to self-gain from stakeholders (Wang et al., 2011). This was supported by Alfonso et al. (2012) that agency cost is negatively correlated to the difference between the total of segment profits and firm profit.

H_{2a}: Agency cost negatively affects segment profit dissimilarity.

Proprietary cost hypothesis related to adherence to segment disclosure states that firms with higher proprietary cost tend to be associated with noncompliance of segment disclosure. Firms with higher abnormal profit coupled with an intense decrease of abnormally high profit tended to aggregate their segment reports (Berger & Hann, 2007). Firms operating in highly competitive industries are more likely to aggregate segment reporting and disclose less variability (Ettredge et al., 2006). Firms that reported relatively lower abnormal profit than their peers in a highly competitive industry were less likely to protect information (Wang et al., 2011). As competition in certain industries increases, managers are more likely to limit segment reporting to reduce additional information released to market participants (Alfonso et al., 2012). Thus to avoid segment disclosure, firms must use their discretion to make an aggregate segment profit the same as firm profit.

H_{2b}: Proprietary cost negatively affects segment profit dissimilarity

Audit quality is defined as the probability an auditor finds material misreporting (auditor competency) in client's financial reports and reports those misreporting to authorities (auditor independency) (DeAngelo, 1981). Auditors in big public accounting firms are believed to have higher audit quality because big public accounting firms have higher reputation and more resources to attract staff with higher competence and acquire more sophisticated technology in detecting fraud or material misreporting. Large public accounting firms face greater reputational risk than small public accounting firms if they fail to report infringement or err in their audit reports (DeAngelo, 1981). Small PAF (Public Accounting Firms) is more sensitive to clients' demands due to economic consequence of losing clients (in Alfaraih & Alanezi, 2011). The lack of attachment to clients (independency) enables larger PAF to demand greater disclosure of their clients' annual reports. Previous studies (Wallace & Naser, 1995; Prather-Kinsey & Meek, 2004) showed that firms audited by internationally affiliated PAF, particularly the Big Four, were more likely to provide more detailed information than those audited by local. Based on their competence and independence, large PAF is more likely to focus on the cause of the difference in reported segment profit and firm profit so that they can suggest or demand clients to use profit measurement at segment level that is consistent with the measurement of firm level and disclose it in firm financial statements.

H_{2c}: Audit quality negatively affects segment profit dissimilarity.

3. Methodology

Data used in this study was a secondary data obtained from 142 manufacturing companies listed in Indonesia Stock Exchange (IDX) for the period 2009 to 2013. Purposive sampling method yielded 59 firms. Two research models were used to test proposed hypotheses. Model 1 is a panel regression model to examine the effect of segment profit reconciliation (SR) to market value of firm equity (MVE). If a significant effect of SR to MVE is present, then information on segment profit reconciliation has value relevance in investment decision making. The model used is consistent to Alfonso et al.'s (2012) is as follows:

$$MVE \; = \beta_0 + \beta_1 |SR|_{it} + \beta_2 UE_{it} + \beta_3 |SR| * UE_{it} \; + \varepsilon \qquad (1)$$

where MVE is the market value of equity defined as common shares outstanding times end of fiscal year price. |SR| = segment reconciliation is the absolute value of the difference between the sum of segment operating profits and firm operating income. UE = unexpected earnings are measured as operating income in year *t* minus operating income in year *t-1*. |SR|*UE is the interaction between segment reconciliation and unexpected earnings. All variables are scaled by total assets.

Model 2 is a logistic regression analysis used to test the impact of agency cost, proprietary cost, and audit quality to the dissimilarity between segment profit and firm profit, with the following formula:

$$Ln\left(\frac{p_i}{1-p_i}\right) = \beta_0 + \beta_1 AC + \beta_2 PC + \beta_3 BIG4 + \varepsilon \qquad (2)$$

where p = probability of segment income dissimilarity (SID), 1 if the dissimilarity is present (SID ≠ 0), and 0 otherwise (SID ≠ 0). The AC = agency cost is measured by two proxies: 1) free cash flows are defined as operating net cash flow minus cash dividend minus capital expenditures, and 2) discretionary accruals is detected by using the Modified Jones Model (Dechow, Sloan, & Sweeny, 1995). PC is a proprietary cost measured by using the Herfindahl Index (Berger & Hann, 2007; Wang et al., 2011). *BIG4* is audit quality, 1 for firms audited by Big Four and 0 for firms audited by non-Big Four.

4. Results and Discussion

The results of Model 1 show that the model is significant and also provide evidence that segment reconciliation (SR) has a significant positive association with the market value of firm equity (MVE). This is consistent with our hypothesis, suggests that segment reconciliations increase as the market value increases and indicates that segment reconciliation has value relevance in investment decision making. However, the interaction between SR and UE has a significant negative association with MVE, which suggests that the market value of firm equity decreases when unexpected earnings are accompanied by segment reconciliation. These results are consistent with Hollie & Yu (2010) and Alfonso et al. (2012), that market not only prices, but also, in some cases, misprices the persistence of segment reconciliation information, especially when firm profit is different from reporting segment profit (segment profit dissimilarity). These findings support the necessity to determine factors that may affect segment profit dissimilarity.

The results of Model 2 provide evidence that agency cost (free cash flows and discretionary accruals), proprietary cost (Herfindahl Index) and audit quality (BIG4) can explain the tendency of dissimilarity between the sum of segment profit and firm profit (segment profit dissimilarity). The coefficients on FCF, DAC and HI are statistically insignificant, suggesting that agency cost (free cash flow and discretionary accruals) and proprietary cost (Herfindahl Index) do not significantly affect dissimilarity of reported segment profit. The result is not consistent with Alfonso et al. (2012) and Wang et al. (2011). On the other hand, the result is in line with study by Bestari (2012) that free cash flow and discretionary accruals are not significant explanatory variables. Only audit quality (BIG4) has significantly negative impact on segment profit dissimilarity. This is consistent with our expectation that firms audited by the Big Four tend to avoid disclosure of dissimilarity between firms profit and segment profit. Large public accounting firms probably will avoid disclosure of segment profit dissimilarity by advising or demand their clients to use consistent measurements of profit at segment level and at firm level in order to increase consistency and comparability of financial reports across time.

5. Conclusion

Our study finds that segment profit reconciliation has a significant positive association with market value of equity, while its interaction with unexpected earnings has a significant negative association with market value of equity. The results support Alfonso et al. (2012) and Hollie and Yu (2010) studies and conclude that information on segment profit reconciliation have relevant value in investment decision, but the market value of equity will decrease in the presence of unexpected earnings accompanied by segment profit reporting especially when firm profit is different from reported segments' profit.

In addition, our findings show that audit quality (Big 4 accounting firms) plays an important role in reducing dissimilarity between the sum of segment profit and firm profit (segment profit dissimilarity). Large public accounting firms are more likely to focus on the cause of the difference in reported segment profit and firm profit so that they can suggest or demand clients to use consistent profit measurement at segment and firm levels and disclose it in firm financial statements.

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