

CHAPTER 3: RESEARCH METHODOLOGY

3.1 INTRODUCTION

The objectives of this study are:

- i. To examine the compliance of MASB 22 by Main Board companies in Bursa Malaysia particularly with respect to two provisions of the MASB:
 - If total revenue from external customers for all reportable segments combined is less than 75% of total enterprise revenue, whether additional reportable segments are identified until the 75% level is reached (**'the 75% ruling'**);
 - Whether the following items i.e. sales or other operating revenue, segment result, segment assets employed, the basis of inter-segment pricing, segment liabilities, additions of property, plant and equipment and intangible assets, depreciation and amortization expense, other non-cash expenses and share of net profit or loss of associate or joint venture are disclosed for the primary segment (**'primary segment disclosure'**)
- ii. To examine whether there is any significant relationship between compliance of MASB 22 and three firm characteristics i.e. firm size, financial leverage and industry membership.

3.2 SAMPLING DESIGN AND DATA COLLECTION PROCEDURE

The dependent variables will be compliance with:

- i. The 75% ruling; and
- ii. Primary segment disclosure

Annual reports from the financial year ending 31 December 2002 to 30 November 2003 of companies in the Main Board of the Bursa Malaysia were sourced from the website of the Bursa Malaysia. This period has been chosen because MASB 22 became operative for financial statements covering periods beginning on or after 1 January 2002. Therefore the earliest mandatory

application is the year ending 31 December 2002. The annual reports for the year ended 31 December 2003 have been omitted because quite a number of the annual reports for this period are still being audited and are therefore not available. The following companies have been excluded from the sample:

- Non-diversified companies;
- Companies suspended from trading;
- Newly listed companies whose first annual report in the Bursa Malaysia website was after the period covered above

This resulted in a final sample size of 391 companies for which MASB 22 was deemed to be applicable. The MASB was deemed to be applicable to companies for which the chairman's report or directors' report indicated there is more than one business or geographical segment.

The annual reports of these 391 companies were examined to ascertain whether they have complied with the 75% ruling and whether they have disclosed all 9 items required for primary segment disclosure. Partial compliance of the primary segment disclosure requirements was regarded as non-compliance of the MASB.

3.3 HYPOTHESES AND SELECTION OF MEASURES

The independent variables used in this study will be financial leverage, firm size and industry membership.

The 6 relevant hypotheses will be as follows:

3.3.1 The firm size hypotheses

There appears to be some conflict between the findings of Tan and Ngan (1991) and that of Chow (2001) in that the former did not find support for firm size whereas the latter did find significant support that firm size influences segment disclosure. Generally most overseas research findings support the opinion that firms that are large in size are more likely to disclose segment information (Chow

and Wong-Boren, 1987; Bradbury, 1992; McKinnon and Dalimunthe, 1993; Mitchell et al., 1995). Therefore, the firm size hypotheses are as follows:

H1: compliance with the 75% ruling is associated with firm size

H2: compliance with primary segment disclosure is associated with firm size

Measurement of firm size has been quite varied in previous studies. Mitchell et al. (1997) had used the natural logarithm of the sum of the market value of equity and the book value of debt whereas McKinnon and Dalimunthe (1993) had used the natural logarithm of the number of shareholders and the number of subsidiaries. Tan and Ngan (1991) and Chow (2001) on the other hand, used market capitalization as a basis to differentiate between large and small firms. In their studies, firms designated as large had market capitalization exceeding RM100 million and small firms had a market capitalization less than that amount. The current study adopts the same basis of measurement as the Malaysian researchers. Market capitalization is calculated by taking the total number of equity shares at balance sheet date and multiplying that figure with the market price of the share at balance sheet date. In this study, a firm is classified as large if its market capitalization exceeds RM100 million and small otherwise.

3.3.2 The financial leverage hypotheses

Generally the support for financial leverage being a significant determinant for the disclosure of segment information is rather mixed. The findings of Bradbury (1992), Mitchell et al. (1995) and Chow (2001) provided support for leverage but Chow and Wong-Boren (1987), McKinnon and Dalimunthe (1993) and Aitken et al. (1997) found no such support. In order to test whether financial leverage is a significant determinant for segment disclosure under MASB 22, the hypotheses are stated as follows:

H3: compliance with the 75% ruling is associated with financial leverage

H4: compliance with primary segment disclosure is associated with financial leverage

Different measurements were used in different studies. Bradbury (1992) had used book value of debt divided by the market value of total assets whereas McKinnon and Dalimunthe (1993) had used the sum of book value of debt and contingent liabilities divided by total tangible assets (McKinnon and Dalimunthe, 1993). Chow (2001) used the measure book value of total debt including provision for liabilities and charges divided by total shareholders' funds. In her study, she classifies a firm as 'high leverage' if the ratio exceeds 66.7%. Therefore, for the sake of comparability with a Malaysian researcher, the measurement adopted in this study is based on that used by Chow (2001). This study classifies firms as having high financial leverage if the ratio exceeds 66.7% and classifies as low leverage otherwise.

3.3.3 The industry membership hypotheses

There appears to be significantly varying findings for this hypothesis. McKinnon and Dalimunthe (1992) found strong support that firms with activities in a politically sensitive industry are more likely to volunteer to disclose segment information than firms that are not involved in such industry activities. On the hand Belkaoui and Karpik (1989) have found in their studies that firms (including those from a politically sensitive industry) use a variety of ways and means to avoid getting the attention of external parties like government regulators, unions, suppliers, etc (Birt et al., 2003). Therefore they imply that industry membership is not a significant factor influencing segment disclosure. In order to test whether industry membership is significant determinant in segment disclosure, the hypotheses can be worded as follows:

H5: compliance with the 75% ruling is associated with industry membership

H6: compliance with primary segment disclosure is associated with industry membership

In their studies of American companies, Watts and Zimmerman (1978, 1986) have identified the oil and gas industries as politically sensitive industries (McKinnon and Dalimunthe, 1993). McKinnon and Dalimunthe (1993, p43) studied Australian companies and suggested that the mining, oil and gas industries as politically sensitive industries "stemming from its role as a major employer, a big investor, a major export earner, an important supplier of energy and raw materials to other industries and the subject of intense scrutiny by environmental lobby groups." However, they also admitted that by categorizing only mining and oil and gas industries as politically sensitive and other industries as a separate category, they are taking a rather limited and simplistic approach to examine this hypothesis.

Because of that, the categorization of industry membership for this study will instead be based on the classification used by Bursa Malaysia. However because of the small number of companies in certain sectors, some of the sectors that are more closely related have been combined. As a result, the number of sectors has been reduced to 7 sectors i.e. consumer products, industrial products, construction/infrastructure, trading and services/technology, finance, properties/hotels and plantation/mining.

3.4 DATA ANALYSIS TECHNIQUES

Univariate tests were used to examine the hypotheses.

The univariate tests used were the Chi-square test, the Kruskal-Wallis test and the Spearman's rank correlation to test whether the independent variables selected had a significant influence on the compliance of MASB 22 with regard to primary segment disclosure and the 75% ruling. On top of that, a cross tabulation was conducted between the independent variables and the dependent variables.

The statistical software, Statistical Package for Social Sciences or SPSS for short was used to conduct the above tests and facilitate the analysis process.