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DO ACCOUNTING DISCLOSURES OF FEE INCOME AFFECT COMMERCIAL BANK

SHARE PRICES?

by

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ABSTRACT

Whether or not information relating to (i) non-interest incomes in any form and information relating to (ii) total income of commercial banks are relevant for share price changes is a topic worthy of another study. The enormous importance of such a finding is not disputable in the context of how share prices responded much faster and with larger magnitudes when bank-relevant accounting information is released. This study is done with data from one developed economy, Australia and one developing economy, Malaysia. The impact of news of unexpected changes in total incomes of commercial banks is found to be positive and significant for bank share prices at the time of such information disclosures. Also, news of non-interest income changes - we study both fee income and Islamic finance based non-interest income - there appears to be no significant price changes. The results are consistent with the accounting theory that the market only impounds information on unexpected changes in total incomes not changes in sub-categories of incomes in financial statements. These findings are new for commercial banks.

JEL Classifications: G12, G14, G21

Key words: Fees income, non-interest income, Islamic income, earnings response coefficients, panel regression

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1.0. INTRODUCTION

The changes in earnings disclosed in financial statements of *non-financial* firms have been shown as significantly affecting stock prices as reported in several articles in accounting and finance literature: see Fairfield *et al.* (1996) for a US study. But the same earnings-to-price-change relationship of *commercial banks* has rarely been documented as no research has been done on this topic apart from that of DeYoung and Rice (2004), a US study using a large sample selected from among some 9,000 such banks. In particular, there are no further studies of bank stock price reactions to changes in earnings of commercial banks, for example, in the Asia Pacific Region, or in the two countries that the authors are familiar, Australia or Malaysia. This is also the case of Asian countries. Bank earnings are different, and commercial bank earnings fall neatly into (i) interest incomes and (ii) fee-incomes (non-interest incomes), thus one could also easily extend a study of earnings as to whether the disclosure of such neat *sub-categories* of earnings provide useful information to investors to change prices of bank shares.

This study intends to make a modest contribution on this by examining the earning-to-price relationship of commercial banks in one developed country namely Australia and a middle income developing economy, Malaysia, chosen from Asia Pacific Region. Both countries have very developed accounting standards, and have promoted the professional training of accounting professionals very aggressively during the last thirty-five years. This research is done by estimating the association between the stock price changes measured as cumulative abnormal returns, at the time of market disclosures in financial statements as earnings changes reported for commercial banks listed on the respective stock exchanges. Since it is customary to disclose information in financial reports to investors about changes in total earnings as well as interest and non-interest incomes as *sub-categories of earnings*, our study is extended to investigate these

subcategories of earnings as well.

We investigate the effect of changes in *sub-categories of earnings*, by investigating (i) fee incomes vs interest income in Australia and (ii) interest income vs fee income vs non-interest income from Islamic-finance¹ based lending in Malaysia. To our knowledge it is the first time a study is being undertaken on these markets and also on Islamic finance based non-interest income accruing to commercial banks with both interest income and non-interest Islamic finance based incomes. Non-interest income is received in their accounts as incomes from profit-share-based lending under Islamic finance lending/deposits of these banks. Commercial banks of Malaysia operate Islamic banking alongside conventional banking. Thus, the dual banking system is peculiar to this industry, and brings to the banks another fast-growing source of earnings.

After just over nine years of implementation of new Islamic product lines, the Malaysian commercial banks receive 7 percent of earnings from this new source as of 2007. The total assets of Islamic banking in commercial banks of Malaysia amount to RM 54 billions (or US\$ 15 billion) with the gross incomes of RM 1.8 billion in a recent year. Hence, in this research it is thought useful to examine if this growing source of a *special* non-interest income has an effect on the share prices at the disclosure time. A number of banks in major Islamic countries and major financial centers (in London, Switzerland, Chicago, Hong Kong and Singapore) have also adopted Islamic banking principles and a market has grown for Islamic Finance based lending worldwide in some 76 countries resulting in total assets valued of three trillion US dollars as of 2007.

We hope to have new findings to add to a growing Asia Pacific accounting and finance literature. The choice of the Australia and Malaysia as two countries for this study is based on regional affiliation as well as other considerations. The banking systems of both countries operate almost under similar institutional arrangements with reputed central bank oversights in both countries, a policy of preserving too-big-to-fail large banks and businesses generally conducted within a deregulated interest rate regime with key competition rules promoting multi-banking

licensing arrangements. The major difference between the two countries is that one is a developed economy and the other a middle-income developing economy. Another difference is the building of a new niche by commercial banks in the Islamic finance lending in Malaysia. Although three major banks in Australia have Islamic lending, these banks made very recent thrust into this business without any significant income streams at the time of writing this paper.

An upward trend in non-interest fee incomes has been observed since 1999 for the commercial banks in the Asia Pacific Region. Table 1 shows the banking fee income accounts for over 27 percent, 22 percent, 10 percent, 23 percent, 20 percent and 13 percent of total incomes of commercial banks in Australia, Malaysia, Korea, Thailand, the Philippines and Indonesia respectively. The US commercial banks have 40 percent of their operating incomes from fee income, and the rest is made of interest-income. As for the Malaysian commercial banks, non-interest incomes of conventional banks operating divisions of Islamic banking rely on non-interest or profit-share incomes in lending activities.

Table 1: Total Income, Interest Income, and Fees Incomes of selected commercial banks in the Asia-Pacific Region in year 2004 (USD million).

Country	Sample size	Interest income	Non-interest income	Total income	% Non-interest
Korea	12	31,202.13	3,482.83	34,654.96	10.04
Thailand	9	4,690.63	1,405.46	6,096.09	23.06
Philippines	22	2,579.82	645.50	3,225.30	20.01
Indonesia	16	5,181.10	834.56	6,075.65	13.87
Malaysia	10	8,778.03	2,498.34	1,1276.37	22.16
Australia	10	44,269.56	16,867.67	61,137.22	27.60

The rest of the paper is divided into four sections. Section 2 contains a brief review of theory and evidence on the earnings-to-returns relation. The reasons for proposing a price effect from investors using earnings disclosures are examined in this section. Section 3 explains the research design, hypotheses, data and variables: methodological issues including that relating to panel regression are also discussed to ensure that the results are robust to a degree. The findings

are presented in Section 4 while the paper ends with conclusions and limitations presented in Section 5.

2. THEORY AND EVIDENCE

We review few selected studies of earnings-to-price relationship of non-financial firms first. Studies on the earnings research can be traced to Ball and Brown (1969), which is a seminal work that has influenced accounting disclosure studies considerably and also introduced the term earnings response coefficient, ERC. Studies in the US by Horwitz and Young (1974), Gonedes (1975), Eskew and Wright (1975), Bell (1978), and Pastena (1979) all found evidence that the announcement of *unexpected extraordinary* items in earnings statements affected equity prices: Gonedes (1978) could not find supporting evidence. Strong and Walker (1993) show that a considerable improvement in statistical performance can be achieved by working with a more general specification of returns-to-earnings relation. They suggested by allowing for time series and cross-sectional variation in the regression parameter by including an *earnings yield variable*, and by partitioning all-inclusive earnings into pre-exceptional, exceptional and extraordinary components. Their results show that pre-exceptional earnings exhibit both permanent and transitory features.

Castagna and Matolcsy (1989) provide Australian evidence. Given the information content of accounting incomes numbers, the marginal information content to investors from supplementary accounting numbers such as sales, extraordinary items, tax reconciliation and other income items is shown to be zero for non-financial firms. Easton (1990) uses cross-sectional regression analysis, and finds no evidence of an association between announcements of unexpected extraordinary items and share price changes in replicating study using also Australian data for a later period.

Fairfield, Sweeney and Yohn (1996) show that the classification scheme prescribed by the accounting profession does increase the predictive content of reported earnings in the US. They find forecasting improvements from earnings desegregation or sub-categories. These

improvements go beyond separating extraordinary items and discontinued operations from the other components of earnings. Ariff, Loh and Chew (1997) assess the impact of unexpected extraordinary earnings from information in the accounting statements disclosed in Singapore. The results show that given the operating profit (earnings after corporate tax less minority interest), information contained as extraordinary item contributes nothing further towards explaining risk-adjusted returns of shares. However, Cheng, Ariff and Shamsheer (2001) study on Malaysia show that extraordinary income changes have information content beyond total earnings changes and are significant for share price changes. Thus, there is mixed findings of the importance of extraordinary items for investors to change share prices.

There is also research based on accounting earnings, which can be decomposed into *sub-categories* as permanent earnings and transitory earnings. Permanent accounting earnings can be thought of as the expected value of future accounting earnings. As time passes the expected or permanent earnings for a given year may change. Events such as strikes and catastrophic events that have impacts on current earnings may precipitate changes as transitory component of earnings. Ali and Zarowin (1992a) studied the explanatory power of the earnings level variable to answer consistency of responses with the presence of transitory components in annual earnings. They use a sample selection technique through ranking the firm's earnings-to-price ratio, and then estimate separately as to which firm's previous period's earnings are likely to be either transitory or primarily permanent. They categorized the upper and lower rank as transitory in earning and the middle-ranking sample as primarily permanent in earning sample. They show that, with predominantly permanent earnings in the previous period, the incremental explanatory power increases are small compared to a regression model with only the earnings change as an explanatory variable. They also show that, for firms with predominantly transitory earnings in the previous period, the incremental explanatory power and increase in the size of the earning response coefficient are much larger. Ali and Zarowin (1992b) show that, in the presence of transitory components of earnings, the change in earnings may be a poor proxy for unexpected

earnings, causing the earnings response ERC to be biased towards zero. This is a potential reason for the widely documented, empirically low ERC (Lev 1989).

There is, to the best of our knowledge, no published study of earnings-to-price relation for banking firms except for one in the US. In many respects banking income, though dependent heavily on business cycle, can be conveniently categorized as (i) fee income and (ii) interest income, thus providing a neat categorization of the sub-categories. Though fee-income is increasingly becoming a significant portion of total earnings especially in more de-regulated developed economies (recall in the U.S., it is about 40%), interest income is the mainstay of commercial banks and may be considered traditionally as the item of interest to investors as to how the banks are faring or likely to fare in the future. During the sub-prime crisis of 2007/8, change in interest-income has become the major item that has seriously affected the earnings of financial institutions in several major economies, thus in aggregate this interest income decline helped to reduce share prices of banks by 30 percent during this period because of huge declines in interest incomes. That signifies and underscores the interest income number as the primary driver of information flowing to the investors. Second, fee-income is dependent on the extent of de-regulation in a country. The more liberal the policies the more is the commercial banks' ability to increase fee income in semi-monopolistic banking systems, which is the norm in most countries. Thus, investors would place priority to interest income while paying less attention to fee income information in financial disclosures.

Fees income has contributed to an increasing portion of bank's total incomes in US banks. We referred to a study on the fees incomes and financial performance of commercial banks (DeYoung and Rice, 2004). Their results indicate that well-managed banks expand more slowly into fees activities, and that marginal increases in fee incomes are associated with poorer risk-return tradeoffs, on average. Their findings suggest that fee income is coexisting with, rather than replacing, interest incomes from the intermediation activities and that interest income still remains banks' core yield from financial services function. The other theory is that diversification

of banks into non-bank product lines may reduce the risk to banking returns or cash flows provided appropriate portfolio conditions are satisfied, in which case fee income may be relevant.

The commercial banks of Malaysia have an additional classification of Islamic finance based incomes in their gross income. There are very few studies on Islamic banking in Malaysia. Previous studies are on the performance of one Islamic bank: Ariff (1989) and Samad and Hassan (1989), both of which were on performance of Bank Islam Malaysia Bhd, then the sole Islamic bank in Malaysia. There is no study on earnings impact.

The above review of non-financial firms and one study of financial firm have shown that extraordinary items disclosed in financial statements by non-financial firms generally are less significant for price formation. Thus, a priori, it may be stated that changes in interest income of commercial banks should have a positive price effect on bank shares while disclosure of changes in fee income may either elicit no effect or even negative effect on share prices at the disclosure times. Similarly, changes in the Islamic finance based non-interest income may or may not affect the share prices of banks for the simple reason that interest income is the mainstay of the Malaysian banks to the tune of about 90 percent of income. This is despite the fact that the Islamic finance based non-interest income is a surrogate for interest income, but as at 2007 it is not of significant proportion at this stage to be considered as a permanent component of earnings. It stands to reason that studying the share price response to disclosures of interest income and fee income of banking firms may provide findings different to those of non-financial firms.

The difference between actual and expected earnings is considered in the literature as the surprise element or *unexpected* news that investors use to revalue shares. The reaction of investors towards that surprise news at disclosure times translates into share price changes through investors' trading of shares of banks undergoing unexpected earnings changes. The earnings variable is subdivided into sub-earnings variables in studies of non-financial firms while, it appears to us, the surprise element of unexpected earnings of commercial banks could be subdivided into (i) interest income changes vs fee income changes and (ii) Malaysian banks' interest

incomes vs fee income vs Islamic finance based non-interest income. By relating the unexpected changes in share prices and the unexpected changes in the total income as well as the sub-category of incomes, it is possible to determine the price effect.

3. RESEARCH DESIGN, HYPOTHESIS AND DATA

(i) Research Design

In this section, we explain the research process in some details. The two key variables are: the unexpected earnings (independent variable) and the share price changes measured as cumulative abnormal returns (dependent variable). Unexpected earnings may relate to (a) changes in total earnings of a bank, (b) changes in interest income of a bank, (c) changes in fee income of a bank and (d) changes in Islamic finance based income. In all cases of these four variables, observation is made across any two years as the “unexpected” change by measuring the actual in year t+1 against the actual in year t (following the well-entrenched prior literature). The study is over several years.

The dependent variable of price change is measured using share price data of each bank at the time of disclosure of financial statement to the market. The actual change in share price may be due to the release of the information on earnings or due to market-wide changes at a point in time. To exclude the market-wide price changes so as to measure the change due to earnings changes, we estimate the Market Model to adjust the price changes for changes across the market. We compute the *abnormal Returns* (Sharpe's (1963)) by subtracting from the gross price changes due to market-wide changes as the adjustment factor $[\alpha_i + \beta_i R_{mt}]$: the three variables in the adjustment factor are estimated by running a Market Model regression using share returns and market returns data over a period of time prior to the time announcement had any effect on the prices.

Abnormal returns are at time t for a given bank disclosure is thus:

$$AR_{it} = R_{it} - [\alpha_i + \beta_i R_{mt}] \quad (1)$$

$R_{it} = \text{Ln}(P_{it}/P_{i,t-1})$ and $R_{mt} = \text{Ln}(I_t/I_{t-1})$, Ln is natural logarithm and m refers to market's composite index. The market parameters α_i and β_i are estimated by ordinary least square regression over trading periods -71 months to -11 months as estimation period relative to the announcement month: we used monthly data to ensure that the estimates of parameters are robust. The price reactions to annual release of information are the observations as ARs over 12 months. The windows of analysis are from the month of earnings announcements to 11 months prior to the announcements. The ARs over the period is cumulated as cumulative abnormal returns or CAR and thus the dependent variable in the regressions to be discussed is this CAR

(ii) Unexpected Annual Accounting Earnings

Unexpected annual earnings are computed using the naive expectation model, which assumes that the next period's expectation is simply the current period's annual earnings. This is also consistent with the design of the study to study the contemporaneous effect of price change at a point in time, and is consistent with prior studies. Unexpected annual earnings (UEs) are computed using this naive expectation model to generate the unexpected earnings:

$$UE_{it} = E_{it} - E_{i(t-1)} \tag{2}$$

The unit normal variables are created by dividing the variable by standard deviation:

$$SUE_i = UE_i/\sigma_{(UE_i)} \tag{3}$$

$\sigma_{(UE_i)}$: standard deviation of UE.

This again follows the Ball and Brown technique used in several prior studies. This transformation, which mitigates the effect of changing variance or heteroscedasticity on the variables, help to estimate yields from unexpected value of annual earnings variable adjusted for volatility differences, $\sigma_{(UE_i)}$.

The price-to-earnings relation can be investigated using the dependent and independent variables in a regression. Inferences regarding the information value of changes observed on an

annual basis is then made by testing the model fit and also by examining the significance of the coefficient(s) on the earnings changes (recall earnings change will be specified in four different categories). The explanatory power (R^2) of the following linear model is also estimated cross-sectionally:

$$CAR_{it} = a + b*SUE_{it} + e_{it} \quad (4)$$

where,

CAR_{it} : a measure of risk-adjusted cumulative return of stock i over 12 months period t,

SUE_{it} : a measure of standardized unexpected annual earnings changes, and

e_{it} : is a random disturbance term assumed to be normally distributed.

The slope coefficient of the regression, b, is the earnings response coefficient, ERC. Theory suggests that this will be positive and significant (sub-categories will be specified below).

(iii) Fees Incomes and Islamic Finance Income

The available evidence indicates that fee incomes and financial performance are interrelated in general. In one study, banks with large proportions of fee incomes have been shown to suffer declines in risk-adjusted performance, while banks with high-quality management should be better at generating fee income. The fee income and Islamic finance income are measured as two categories. The first measure is income ratio as the percentage of the fee incomes over the total income: similarly, percentage of Islamic income over the total income. The second set of measures is the standardized unexpected fee income (and Islamic income) during the current year less the fee income (and Islamic incomes) in the previous year divided by standard deviation of respective income. The second measures are also called the standardized unexpected fee income (and standardized unexpected Islamic income).

Defined by formula, the incomes ratio variables are as follows:

$$NI_{it} = \text{Fee Income}_{it} / \text{Total Income}_{it}$$

$$ISI_{it} = \text{Islamic Income}_{it} / \text{Total Income}_{it}$$

But the unexpected income variables are:

$$\begin{aligned} \text{UNI}_{it} &= \text{Unexpected NI} = (\text{NI}_{it} - \text{NI}_{it-1}) \\ \text{UISI}_{it} &= \text{Unexpected ISI} = (\text{ISI}_{it} - \text{ISI}_{it-1}) \\ \text{SUN}_{it} &= (\text{NI}_{it} - \text{NI}_{it-1}) / \sigma_{(\text{UNI}_{it})} \text{ (Standardized)} \\ \text{SUIS}_{it} &= (\text{ISI}_{it} - \text{ISI}_{it-1}) / \sigma_{(\text{UISI}_{it})} \text{ (Standardise)} \\ \sigma_{(\text{UN/UISI})} &= \text{standard deviation of UNI or UISI} \\ t &\text{ indicates period of measurement; } i \text{ represents the firm.} \end{aligned}$$

This study tests the relation between price change variable as dependent variable and the standardized unexpected earnings, fees incomes and Islamic finance based incomes first as ratio data and then later as standardized unexpected variables by using the following formula. The regressions are panel ordinary least square regression following Wooldridge (2001):

$$\text{CAR}_i = a_1 + a_2 \text{SUE}_{i+} + a_3 \text{SUN}_{i+} + a_4 \text{SUIS}_{i+} + \varepsilon_i \quad (5a) \text{ (Malaysia)}$$

$$\text{CAR}_i = a_1 + a_2 \text{SUE}_{i+} + a_3 \text{SUN}_{i+} + \varepsilon_i \quad (5b) \text{ (Australia)}$$

$$\text{CAR}_i = a_1 + a_2 \text{SUE}_{i+} + a_3 \text{NI}_{i+} + a_4 \text{ISI}_{i+} + \varepsilon_i \quad (6a) \text{ (Malaysia)}$$

$$\text{CAR}_i = a_1 + a_2 \text{SUE}_{i+} + a_3 \text{NI}_{i+} + \varepsilon_i \quad (6b) \text{ (Australia)}$$

where (using the same coefficient symbols above to preserve readability),

- CAR_i : Abnormal returns are AR cumulated over a 12 months window,
- SUE_i : Standardized Unexpected Annual Earnings,
- NI_i : Noninterest income/Total Incomes in percentage,
- ISI_i : Islamic income/Total Incomes in percentage.
- SUN_i : Standardized Unexpected noninterest income, and
- SUIS_i : Standardized Unexpected Islamic income.

There are many studies that used ratio variables and others that used standardized variables by dividing by standard deviations. The argument for using incomes ratios variables is that incomes

ratios variables produce more significant results in the information beyond unexpected earnings studies, as would be the case using standardized unexpected incomes data. However such results sometime have more econometric problems. The standardized unexpected income variables have less econometric problem (see Easton and Harris, 1991, Ohlson and Shroff, 1992 and Strong, 1993). This study uses both the standardized unexpected variables and the ratio based variables.

(iv) Hypotheses

The major hypothesis in this study is: there is a significant positive relationship between the stock price changes and the unexpected annual earnings changes as surprises from disclosure statements. We can test this by examining the coefficients in the regression by observing if the t-statistics are statistically significant for (a) earnings changes, (b) interest income changes, (c) fee income changes and (d) Islamic finance based income changes. The null of the hypothesis will be accepted if we fail to observe a significant coefficient a_2 on the variable as judged by t-statistics against the critical value. Further, the null hypothesis if accepted would suggest that the coefficients for fee income and Islamic finance income are not statistically significant. The null will be accepted if the t-statistics for a_3 and a_4 are not significant.

(iv) Data

The Australia data were accessed from the monthly closing prices, annual earnings and balance sheet information in the following sources: Bloomberg financial data in the Australia Stock Exchange (ASX); the financial information from the Company Annual Reports; and the annual earnings announcements obtained from ASX web-site. Data relate to the period 1998, after the deregulation of banks following the Wallis' report, to the year 2005. The population consists of 10 listed and traded banks over the test period. These are the only listed commercial

banks, so we could only obtain that many banks for observations. Imposing the selection criteria led to removal of rights, bonus, and special issue announcements in order to obtain only those disclosures purely relating to earnings in the study, and nothing else. If such disclosures appeared at the same time in the 6-month window test period, the observation is dropped. Confounding effects therefore from these other events are not present in this study. In performing outliers test, cases with residual greater than three standard deviation values were identified and excluded from the final regression: The final sample consists of 73 firm-years of observations for analysis.

The Malaysian data were accessed from the monthly closing prices, annual earnings and balance sheets information in the following sources: Bloomberg financial data in the Kuala Lumpur Stock Exchange (KLSE); the financial information from the Company Annual Reports and/or the *KLSE Annual Company Handbooks*; and the annual earnings announcements obtained from *Investors Digest* and *KLSE Daily diary*. Data relate to the period 2000, after the merger of the financial institutions into 10 banks, to the year 2005. The population consists of 10 listed and traded banks over the test period. These 10 banks were the result of amalgamating some 54 deposit-taking institutions into ten major banks ahead of the opening of the Malaysian banking market to international players as required under the WTO services agreement. Imposing the selection criteria led to removal of rights, bonus, and special issue announcements in order to obtain only those disclosures purely relating to earnings, and nothing else. Outlier tests were performed using three standard deviation values. The final sample consists of 47 firm-years of data for analysis. Thus, in total we have a small sample of 120 observations from two countries.

The financial reform in Malaysia led to the 54 financial institutions being merged into 10 banking groups. The merger led to each banking group having a minimum shareholders fund of RM2 billion and an asset base of at least RM25 billion, which improved the capital ratio marginally. In the case of Australia, the financial deregulation after the Wallis' report was implemented. The Australia financial institutions have also experienced the impact of various consolidations and mergers of banks with building societies, regional banks and credit unions

after the 1994 and again 1999 structural changes and liberalization. Therefore, in both cases, we see that the period of study is over a time after the reforms were implemented.

4.0 RESULTS

(i) Fees Incomes of Australia Banks

Table 2a provides summary statistics on total income, total assets and fee income of the listed Australia commercial banks in this study. The assets of the banks vary from AUD 15 billion (Bendigo Bank) to AUD 484 billions (National Australia Bank). The total assets of all the 10 commercial banks is AUD 1,817 billion, 1 for 2 GDP ratio. The total income of the commercial banks varies from AUD 1.1 billion (Bendigo Bank) AUD 32.4 billion (National Australia Bank). The average total incomes of commercial banks of Australia is AUD 13 billion over average assets of AUD 181.7 billions. Thus the average return of total income to total asset is 7.2 percent, which must be noted as among the highest in the world. This result is peculiar to a period of exceptional growth in the economy following bouts of reformation that preceded the study period.

Statistics in Table 2a, in columns 2, 3, 4 and 5 show the total income, interest income, fees incomes for the commercial banks. The highest percentage of interest income/total incomes is 90.3 percent for one and the lowest is 37.9 percent. The industry average of interest income, and fees income are 77.7 percent and 22.4 percent respectively: this is about half the numbers of US commercial banks. The other half of the banks in the sample has interest income/total incomes above the industry average. While non-interest income steadily increased to the highest amount in 2006, the proportion of fee income peaked at 28.6 percent in 2002, and is steadily declining since then due to consumer complaints and also central bank persuasion.

Table 2a: The Total assets, Shareholder equity, Total Income, Interest Incomes and Non-Interest Incomes of 10 Australia Commercial Banks (In ASD Million)

Bank	Total Asset	Total Income	Interest Income	Int. Income/ Total (%)	Non Interest Income	Non/Total (%)
BENX	15,196	1,070	908	84.8	162	15.2
BOQX	15,797	1,132	1,017	89.8	115	10.2
ADBX	26,211	1,774	1,602	90.3	172	9.7
SUNX	57,369	7,619	2,887	37.9	4,732	62.1
MBL	106,211	6,937	3,136	45.2	3,801	54.8
SGBX	107,002	7,775	6,781	87.2	994	12.8
WBCX	299,578	21,666	18,091	83.5	3,575	16.5
ANZX	335,771	25,510	22,301	87.4	3,209	12.6
CBAX	369,103	25,540	19,768	77.4	5,772	22.6
NABX	484,785	32,390	25,553	78.9	6,837	21.1
Total	1,817,023	131,413	102,044	77.65	29,369	28.78
Average	181,702.3	13,141.3	10,204.4	77.65	2,936.9	28.78

TABLE 2b: Accumulated Total Income, Interest Income, Non-Interest Incomes and of 10 Australia Commercial Banks (AUD million), 1998 to 2006

Year	Total Income	Interest Income	(%)	Non Interest Income	(%)
2006	131,413	102,044	77.7	29,369	22.3
2005	114,823	84,639	73.7	30,184	26.3
2004	78,605	56,918	72.4	21,687	27.6
2003	67,776	48,550	71.6	19,226	28.4
2002	63,306	45,189	71.4	18,117	28.6
2001	68,272	51,439	75.3	16,833	24.7
2000	66,430	49,304	74.2	17,126	25.8
1999	58,213	44,379	76.2	13,834	23.8
1998	57,793	45,902	79.4	11,891	20.6

Table 2b shows the total income, interest income, and fee income from year 1998 to 2006 for the commercial banks. The interest incomes of these commercial banks have decreased from 79.4 percent in year 1998 to 71.4 percent in year 2002 and then increased slightly back to 77.6

percent in 2006. The interest income declined by 8 percent over 1998 to 2002. This decrease was the result of the increase in fee income. The fee incomes increased from 20.06 percent in year 1998 to 28.6 percent in year 2002. Thereafter it declined to 22.3 percent in 2006, an increase of 4.24 percent over 1998 to 2002.

(ii) Fee incomes of Malaysia banks

Table 3a provides summary statistics on total income, and total assets of the Malaysian commercial banks. In term of total assets, the values vary from RM 23 billions for (Alliance bank) to RM 180 billion (Maybank). Similarly, except for one bank all the other commercial banks have total assets of more than RM 25 billion (USD 7.6 billion). The total asset of all the commercial banks is RM 696 billion, a 1: 1.7 GDP ratio. Out of that amount, the Islamic banking asset is worth RM 54 billion (8% of total assets in commercial banks). The total incomes of commercial banks varied from 1.3 billion for one bank to RM 9.5 billion for the largest bank, Maybank. The average total income of commercial banks is RM 4.1 billion over average assets of RM 69.6 billions. The average return is 5.6 percent, which is also quite high, but not as high as that in Australia.

The numbers in Table 3a also show the total income, interest income, fee income and Islamic banking income for the commercial banks. One bank (HLB) has the highest percentage of interest income/total incomes with a ratio of 85.93 percent while another, AMMB, has the lowest percentage of interest income/total incomes ratio, 71.04 percent. The industry average of interest income, fees income and Islamic finance income are 77.8 percent, 17.41 percent and 4.75 percent respectively. Three banks have the interest income/total incomes ratio below the industry average. The others appear to have this ratio above the average.

TABLE 3a: Total Income, Interest Income, Non-Interest Incomes and Islamic Incomes of Commercial Banks, (RM million)

Bank	Total Asset	Total Income (A)	Interest Income (B)	(B)/(A) %	Noninterest Income (C)	C/A %	Islamic Income (D)	(D)/(A) %
Affin	32,850	1,835	1,439	78.45	292	15.93	103	5.62
AMMB	60,478	4,298	3,054	71.04	907	21.12	337	7.84
Alliance	23,312	1,302	1,104	84.80	165	12.68	32	2.52
Commerce	111,970	6,750	5,276	78.16	1,458	21.60	15	0.23
EON	33,313	1,887	1,601	84.85	154	8.18	131	6.97
Hong Leong	49,060	2,412	2,072	85.93	230	9.54	109	4.53
Maybank	179,507	9,539	7,237	75.87	1,779	18.66	521	5.47
Public	92,087	4,919	3,815	77.56	723	14.71	380	7.73
RHB	82,128	5,597	4,46	79.70	938	16.77	197	3.52
Southern	31,466	2,051	1,536	74.93	415	20.27	98	4.81
Total	696,175	40,594	31,600	77.84	7,066	17.41	1,927	4.75
Average	69,617	4,059	3,160,		706,		192	

TABLE 3b: Accumulated Total Income, Interest Income, Non-Interest Incomes and Islamic Incomes for 10 Malaysia Commercial Banks (RM million), 1999 to 2005.

Yr-end	Total Income	Interest Income	%	Noninterest Income	%	Islamic Income	%
31/6/2005*	18,949	13,802	(72.84)	3,798	(20.04)	1,349	(7.12)
31/12/2004	40,594	31,600	(77.84)	7,066	(17.41)	1,927	(4.75)
31/12/2003	36,381	29,409	(80.84)	5,701	(15.67)	1,387	(3.81)
31/12/2002	32,376	26,415	(81.59)	4,973	(15.36)	1,136	(3.51)
31/12/2001	31,008	25,485	(82.19)	4,658	(15.02)	863	(2.79)
31/12/2000	29,931	25,008	(83.55)	4,451	(14.87)	471	(1.56)
31/12/1999	30,062	26,212	(87.19)	3,592	(11.95)	257	(0.86)
Total	216,783	177,934	(82.08)	34,242	(15.80)	7,393	(3.41)

Note: * Cumulative until June 2005. Figure in bracket is percentage over total income.

CIMB has the lowest Islamic income of 0.23 percent, because during the bank

restructuring all Islamic banking assets and liabilities of this bank was transferred to another. AMMB has the highest Islamic incomes among all the banks. The average Islamic banking income/total income ratio for commercial banks is 4.75 percent. Six banks have above average Islamic finance income while the others have below average ratios in this regard. Compared with Malaysia's commercial banks, the Australia's bank interest income is generally of the same magnitude as in the other country. The percentage of interest income varies from 77.4 percent to 90.3 percent.

Table 3b contains the statistics on total income, interest income, non-interest income (fee) and Islamic income over 1999 to 2005 for the Malaysia commercial banks. The interest income of these commercial banks has decreased from 87.19 percent in year 1999 to 72.84 percent in year 2005. The interest income is reduced by 14.25 percent, which is about a 2 percent decline per year. This decrease was the result of the increase in non-interest incomes and Islamic finance income. The fee income increased from 11.95 percent in year 1999 to 20.04 percent in year 2005, an increase of 4.24 percent. The Islamic income increased from 0.86 percent to 7.12 percent from year 1999 to year 2005. The increase in Islamic income is more than 7 times. In the year 1999, the Islamic income was only RM 257 million for all commercial banks. However, by year 2004, the Islamic banking income has increased to RM 1.9 billion. The Islamic assets in the commercial banks are worth RM 54 (US\$ 15) billion. The Islamic assets provide a return of 3.5 percent, which is a lot lower than is the case for other incomes as well as compared to the returns of Australian banks.

The Australia banks have a stable interest income since 1998 with a share of 79.4 percent which decreased slowly to 71.4 percent in 2002 only to increase slightly back to 77.7 percent in 2006. In Malaysia, interest incomes decreased steadily from 87.19 percent to 72.84 percent from

1999 to 2005. Therefore Malaysia's commercial banks appear to have slightly surpassed the Australia commercial banks in term of diversification with more non-interest income perhaps due to two sources of non-interest incomes, namely genuine fee income and the Islamic finance income.

(iii) Regression results on standardized unexpected fees income

Table 4 shows the panel data regression results for the earnings-to-return relation for the commercial banks using data from years 1999 to 2006. Cumulative abnormal return is the dependent variable. The independent variables are (a) standardized unexpected annual earnings (SUE), (b) standardized unexpected fee income, and (c) standardized unexpected Islamic income (Malaysian case only). Models 1 and 5 are the regression models using the above-mentioned variables. These models are the traditional basic earning response coefficient regressions, but for the first time obtained by using panel data regression. Previous papers applied ordinary least squares, and hence, did not control for time series and cross-sectional residuals. The models 2, 3, and 4 use using Malaysian data whereas models 6 and 7 (using Australia data) show the regression results of regressing SUE with other independent variables one at a time.

The statistics in Table 4, using Model 1, show the regression results of share price changes and the SUE using Malaysia data. The coefficient on SUE is 0.061 with t-statistics of 3.249 and a p-value of 0.002. The coefficient of SUE is thus significant at 0.002 level. The R-squared value for Model 1 is 0.183 meaning that almost 20 percent of variation in share price returns is explained by earnings changes. This number is higher than that reported by Cheng *et al.* (2001) of 0.099 using ordinary least square methodology. The result is consistent with all previous research on earnings response coefficients literature relating to non-financial corporations, and is now verified as also being true for commercial banks. The R-squared value indicates that the relationship arising from investors trading on the news in financial statements is much higher than the results obtained for non-banks in a comparable previous study.

TABLE 4: Regression Results For Returns-to-Earnings Relation For Commercial Banks From Period 1999 to 2006. Regression Model: $CAR_i = a_1 + a_2 SUE_i + a_3 SUN_i + a_4 SUIS_i + \epsilon_{ii}$ (Malaysia). $CAR_i = a_1 + a_2 SUE_i + a_3 SUN_i + \epsilon_{ii}$ (Australia)
Dependent Variable: Abnormal returns (AR).

	Malaysia Model, n=47				Australia Model, n=72	
Independent Variables	1	2	3	4	5	6
Constant, a_1	-0.006 (-0.199) (0.843)	-0.021 (-0.064) (0.529)	-0.011 (-0.236) (0.814)	-0.27 (-0.552) (0.584)	-0.040 (-2.77) (0.030*)	-0.065 (-2.846) (0.006**)
SUE, a_2	0.061 (3.249) (0.002**)	0.052 (2.522) (0.015*)	0.061 (3.205) (0.002**)	0.052 (2.496) (0.016*)	0.057 (3.936) (0.000***)	0.058 (4.059) (0.000***)
SUN, a_3		0.037 (1.134) (0.263)		0.037 (1.123) (0.267)		0.022 (1.794) (0.077*)
SUIS, a_4			0.017 (1.68) (0.101)	0.004 (0.154) (0.878)		NA
R-square	0.183	0.171	0.148	0.152	0.181	0.195
F-stat	10.52 (0.002**)	5.951 (0.005**)	5.176 (0.009**)	3.891 (0.0158)	15.494 (0.000***)	9.603 (0.000***)
VIF	1.000- 1.000	1.195- 1.195	1.018- 1.018	1.018- 1,212	1.000	1.042
D-W	1.49	1.51	1.496	1.518	2.25	2.347

Note: Values in bracket are t-statistics and p-values significant at (*) 0.1, (**) 0.05 and (***) 0.001 level.
 NA- not applicable

The results in Table 4 for Model 2 from another regression contain an additional standardized unexpected fee income as the independent variable. The results show that the coefficient for SUE is 0.052 with a t-statistic of 2.522 and a p-value of 0.015, thus highly significant, same as in Model 1. The coefficient for standardized unexpected fee income (SUN) is 0.037, has a t-statistic of 1.134 and a p-value of 0.263. The coefficient for standardized unexpected fee income is therefore insignificant although having a positive effect. This suggests that unexpected fee income information has no significant information content beyond total earnings, but has positive effect on share prices. This result is consistent with the unexpected fee income form information but that the share values are not significantly affected by this

information. This would have us believe that information on fee income, perhaps because it is still merely a quarter of the total income, is not used by investors to affect the share prices significantly in this banking system. There is some evidence to suggest that well-managed banks have less fee income dependency than not-so-well-managed banks. Thus, having increasing fee income, though important in itself, is offset by the signal that such banks are more likely to be not well managed. This is an explanation found in a US study, and may or may not apply here.

The statistics in Table 4, using Model 5, show results for the Australia data. The coefficient of SUE is 0.057 with t-statistics of 3.936 and a p-value of 0.000. The coefficient of SUE is significant at 0.000 levels. Thus, as in the other economy, information on unexpected change in earnings as conveyed by the disclosures has a positive and significant impact on share prices. The R-squared for Model 1 is 0.18, which is also higher than the results in Cheng *et al.* (2001) of 0.099 again. The value is of similar size as in the Malaysia data in Model 1. This result is consistent with all previous research on earnings response coefficients literature on non-banks. The ERC of both countries are significant. The R-squared value indicates that the relationship arising from investors trading the news in financial statements is much higher than the results obtained for non-banks in the previous studies. Information in banking disclosures appears to have greater impact than is the case of non-financial corporations.

The results in Table 4, using Model 6, from regression includes additional standardized unexpected fee income (SUN) as another independent variable to that of unexpected income. The results show that the coefficient for SUE is 0.058 with a t-statistic of 4.059 and a p-value of 0.000, highly significant, same as in Model 5. The coefficient for standardized unexpected fee income (SUN) is 0.022, has a t-statistic of 1.7954 and a p-value of 0.077. The coefficient for standardized unexpected fee income (SUN) is not significant at the usual 0.05 probability value but is positive. This suggests that standardized unexpected fee income (SUN) has weak information value to investors compared to information on earnings change in Australia. However, the coefficient is positive similar to the case of Malaysian data as in Model 2. This suggests that the standardized

unexpected fee income variable affects the prices positively but not significantly. This result is again consistent with the concept that well-managed banks have less reliance on fee income than not-so-well-managed banks.

Comparing the results of models 1 and 5 in Table 4, the commercial banks in both banking systems have about the same magnitude in their earnings response coefficients. The ERCs are 0.061 and 0.057 for both models. The R-squared values for models 1 and 5 in Table 4 are also approximately the same at slightly less than 20 percent. The main conclusion that can be derived from the results of models 2 and 6 in Table 4 is that the coefficients for standardized unexpected fee income (SUN) for Malaysia and Australia banks are not significant, despite the sign of the coefficient being positive but the p-value is not significant at the normal 0.05 acceptance level. Therefore, in both banking systems selected for study, the information on the *unexpected* fee income (SUN) had a weak impact and that the main impact is from the total earnings changes.

This evidence provides two significant findings. First, as in the cases of well documented non-financial firms, the dominant effect is from information on unexpected changes in total earnings that decides the share price changes in both countries. Second, the fee income, despite having the theory-suggested signs in both regressions, produced results that led to us accepting the null hypothesis that fee income appears to be treated as unimportant by investors for changing share prices. These results are consistent with theory that market incorporates news about the main earnings, which is the interest incomes of banks and that the sub-category of incomes is less relevant. Investors perhaps perceived fee income as not permanent, and hence they relegated bank's dependence on that to be at best neutral news. This result is consistent with DeYoung and Rice (2004), where they reported that well-managed banks expand more slowly into fees or non-interest fee activities, and that marginal increases in fee incomes are associated with poorer risk-return tradeoffs.

These findings reinforce the accounting theory that investors in the share market view

non-interest-based fees incomes as coexisting with, rather than replacing, interest income. The lending and deposit taking activities that generate the main interest income for commercial banks appear to remain in the minds of investors as a bank's core business.

(iv) Regression results on standardized unexpected Islamic income

The numbers in Table 4 for models 3 and 4 are from the regressions for the commercial banks using Malaysian data. Cumulative abnormal return is the dependent variable to represent the share price changes at disclosure times. Standardized unexpected *Islamic incomes variables* (SUIS) are added to the regressions in addition to earnings and fee incomes. In the models 3, and 4, it is seen that the regression results are from systematically adding one variable at a time. Model 3 and Model 4 are the regressions that consist of independent variables of SUE and two income standardized *unexpected* variables.

The standardized unexpected fees incomes (SUN) and standardized unexpected *Islamic incomes variables* (SUIS) are in the regressions 3 and 4 respectively as independent variables. The coefficients for SUE are again highly significant, thus the result has not changed in this regression. However, the coefficients for other independent variables are not significant at all. This evidence shows that the standardized unexpected fee income (SUN) and standardized unexpected *Islamic incomes variable* (SUIS) both have no information value to investors beyond the first variable, the unexpected earnings. In Model 3, the coefficient for standardized unexpected Islamic banking income is positive at 0.015, which means that the investors still respond positively to this income in this market (as would also be perhaps the case with other markets trading Islamic banking products) to any amount of unexpected Islamic income. The direction of the valuation is positive. The other two coefficients are not significantly different from zero, which shows that the sub-category of earnings in this banking system appear to the investors as conveying information on transitory income, thus not good news enough to affect the prices significantly. Thus, we accept the null hypotheses in respect of both fee and Islamic

finance incomes.

(v) Regression results on fees incomes ratios

To investigate whether there is incremental information content beyond earnings response coefficients (as done in many non-financial firm studies), we added additional independent variables to the standard model $R_{it} = a + b UE_{it} + e_{it}$. This is meant to extend the study in a sort of ways to see the robustness of the results to different specifications of the variables. Table 5 shows the results from such an effort using again the more accurate panel data regression for the earnings-to-return relation. Cumulative abnormal return represents the share price change and it is the dependent variable. The independent variables are standardized unexpected annual earnings (SUE), fees incomes ratios (for Australia) and Islamic incomes ratios (for Malaysia only). Models 1 and 5 are run as regression between the cumulative abnormal returns and the standardized unexpected earning (SUE) for Malaysia and Australia respectively, much similar to the way models 1 and 5 were run and the results are shown in Table 4. This is the traditional basic earning response coefficient regression, as explained in section (iii) earlier that need no more explanation. This section will focus on the models 2, 3, 4 (using Malaysia data) and 6 (using Australia data) as summarized in Table 5 that show the regressions results for performing regression using SUE with other independent ratios variables one at a time.

The results in Table 5, Model 2, from regression contain additional fee income ratios as the independent variable. The results show that the coefficient for unexpected earning SUE is 0.061 with a t-statistic of 3.194 and a p-value of 0.003 is highly significant, same as in Model 1. The coefficient for fee income (NII) is -0.17, has a t-statistic of -0.26 and a p-value of 0.979. The coefficient for fee income (NII) is thus insignificant, but is negative this time. This suggests that the amount of fees incomes (NII) specified as ratios not only have no information content beyond earnings, but affects the prices negatively: compare this result with Table 4, Model 2 (in section (iii)) where the fee income has negative effect on share price. But the unexpected changes in the

fee incomes are positive. This may be viewed as banks with high fee income will not have high unexpected change in the fee income anymore, the growth of fees income may be stagnant/or that it has peaked or even possibly decrease in future. This is in line with the interpretations of results in the US study for fee income. However, statistically the effect is not significant. This finding strengthens the earlier concept that well-managed banks have less dependence on fee income than not-so-well-managed banks, and this result is the first for Malaysia, other than the US market.

TABLE 5: Regression Results For Returns-to-Earnings Relation For Commercial Banks From Period 1999 to 2006. Regression Model: $CAR_i = a_1 + a_2 SUE_{i,t} + a_3 NII_{i,t} + a_4 ISI_{i,t} + \varepsilon_{ii}$ (Malaysia). $CAR_i = a_1 + a_2 SUE_{i,t} + a_3 NI_{i,t} + \varepsilon_{ii}$ (Australia) Dependent Variable: Abnormal returns (AR).

	Malaysia Model, n=47				Australia Model, n=72	
Independent Variables	1	2	3	4	5	6
Constant, a_1	-0.006 (-0.199) (0.843)	-0.021 (-0.064) (0.529)	-0.012 (-0.244) (0.808)	-0.050 (-0.053) (0.958)	-0.040 (-2.77) (0.030*)	0.182 (0.037) (0.970)
SUE, a_2	0.061 (3.249) (0.002**)	0.061 (3.194) (0.003**)	0.061 (3.213) (0.002**)	0.061 (3.164) (0.003**)	0.057 (3.936) (0.000***)	0.057 (3.975) (0.000***)
NII, a_3		-0.17 (-0.26) (0.979)		-0.057 (-0.080) (0.936)		-0.225 (-0.933) (0.354)
ISI, a_4			0.0175 (1.53) (0.879)	0.207 (0.170) (0.866)		NA
R-square	0.183	0.171	0.148	0.129	0.181	0.168
F-stat	10.52 (0.002**)	5.164 (0.009**)	5.178 (0.009**)	3.891 (0.0158)	15.494 (0.000***)	8.167 (0.001**)
VIF	1.000- 1.000	1.015- 1.195	1.000- 1.000	1.015- 1,136	1.000	1.003
D-W	1.49	1.49	1.49	1.49	2.25	2.241

Note: Values in bracket are t-statistics and p-values significant at (*) 0.1, (**) 0.05 and (***) 0.001 level.

The results in Table 5, using Model 6, from regression contain additional fee income ratios (NII) as the independent variable. The results show that the coefficient for SUE is 0.057 with a t-statistic of 3.975 and a p-value of 0.000, highly significant, same as in Model 5. The

coefficient for fee income ratio (NII) is -0.225, has a t-statistic of -0.933 and a p-value of 0.354. The coefficient for fee income ratios (NII) is thus not significant but negative. The p-value is not within the cut-off region for normal acceptance at 0.05 level. This suggests that fee income ratios (NII) do not have information value to investors beyond the total earnings also in Australia. The evidence from Australia is similar to that in Malaysia as explained in the last section. This result is again consistent with interpretation in the literature that well-managed banks have less dependence on fee income, hence whichever way we specified this variable, we did not get any significant result.

The evidence in the robustness testing also indicates that the investors are using the unexpected changes in total earnings as a cue for their share trading activities. If this factor is shown in disclosures as going up, the investors mark the prices up, and if it is shown in disclosures as declining the share prices go down. Thus, the strategic hypothesis that accounting disclosures on the earnings changes affect bank share prices is upheld. By the same token release of information, while perhaps being useful to investors, as the sub-categories of earnings as fee income in Australia, and fee income as well as Islamic finance income in Malaysia appear to be having no significant impact on share prices in both countries. These findings reinforce again the accounting theory that investors in the share market view non-interest-based fee income as coexisting with, rather than replacing, interest income. The lending and deposit taking activities resulting in interest income that generate the main incomes of the commercial banks appear to remain in the minds of investors as a bank's core business information for pricing purposes.

(vi) Regression results on Islamic incomes ratios

Table 5 contains the results of regressions using models 3 and 4. Cumulative abnormal return is the dependent variable. *Islamic incomes ratios variables* (ISI) are added to the regressions in addition to SUE and NII. The results shown against the models 3 and 4 show the regression results of regressing the stock price change variable with these other independent

variables entered one at a time. Models 3 and 4 are the regressions that consist of independent variables of SUE and two incomes ratio variables.

The coefficients for unexpected earnings or SUE are again highly significant. However, the coefficients for other independent variables are not significant at all. This evidence show that the fee income ratio (NII) and *Islamic incomes ratio* variables (ISI) have no information content beyond that provided to the investors by unexpected earnings. In Model 3, the coefficient for Islamic banking income/total incomes ratios is positive 0.0175, which means that the investors still respond in this market (as would also be perhaps the case with other markets trading Islamic banking products) positively to any amount of unexpected Islamic income.

The final results for Model 4 are from regressing all independent variables with cumulative abnormal returns as the dependent variable. The coefficients for fee income ratio and Islamic Income ratios are both insignificant. The coefficients for Islamic banking income ratio are positive. This positive coefficient means, in terms of the directional effect, that investors view the magnitude of Islamic banking incomes in this economy positively in revaluing the share prices and that this effect in this market is in addition to the effect from unexpected changes in total earnings. That is, the sub-category of incomes from Islamic banking is viewed as *some importance* as that of mainstream earning, while the fee income elicited a negative information value. This new finding is important for commercial banks to plan their future business strategies for growth in the Islamic finance. Malaysia has become a global hub for Islamic banking and finance (see several *Euromoney* reports). That perhaps reflects the importance of this new source of incomes for the conventional banks in Malaysia as being important for future growth. The growth in the Islamic incomes in commercial banks will contribute to be important in the Islamic capital market. The F-statistics for all the models are significant.

5.0 CONCLUSIONS

Commercial banks all over the world have embarked on expanding into other non-traditional, non-core sources of incomes to generate earnings for the banking businesses. This paper reports the findings of a study applying for the first time (in other than in the US) the concept of earnings response to commercial banks in Australia and Malaysia. Also this study examines fee income and the unique Islamic banking income (which is profit-share based income replacing the interest income of conventional banks) effect on the price-to-earnings relationship. The last two sources of incomes for banks contributed 20 percent and 7.12 percent respectively of the total incomes of commercial banks in Malaysia. The fee income contributed 27.6 percent of the total incomes of commercial banks in Australia. The traditional core-business based interest incomes contributed 72.84 percent and 72.4 percents for commercial banks in Malaysia and Australia respectively.

The regression results in this paper have two pertinent points. The first is on standardized unexpected (change) in fee and Islamic incomes, and is on the magnitude of fee income ratio and Islamic income ratio. The evidence indicates that the fee income reporting in financial statements is not significant used by investors as information content beyond reported total earnings changes, although its effect is more pronounced for Australia. However, the markets are sensitive to increases in the non-traditional, non-core sources of business incomes of banks, more so than in the cases of non-banks as reported in previous studies. The evidence further supports that the markets do not revalue the non-interest incomes to be more important than the main interest incomes in the price adjustment of commercial bank shares when earnings changes are reported. That is consistent with DeYoung and Rice (2004) that marginal increases in fee incomes are associated with poorer risk-return trade off. The investors view the interest incomes as the permanent incomes and thus, at this stage of markets, fee income ratios are valued as neutral information in pricing the stocks. This is in line with studies of permanent and transitory incomes theory of Ali and Zarowin (1992a,b) and Cheng *et al.* (1996) where transitory earnings have a smaller marginal impact on security returns.

The contribution to income from Islamic banking incomes is increasing rapidly in Malaysia although this source of income is still less than 10 percent of the total incomes of commercial banks in Malaysia. The results in this study show that the coefficients for the Islamic banking incomes are positive, but not significant. This suggests that investors do factor in the increasing share of this source of earnings as positive news, and thus adjust share prices upwards when this information is included in the financial statements. These results are consistent with the general perception of investors in valuing the intermediation functions of banks as the managers of risks and liquidity providers in the financial system.

Endnote

¹ *Islamic finance* refers to a system of banking practices consistent with what is considered (as reinterpreted in the last 40 years) as Islamic law (*Sharia*) principles relating to lending and as guided by contemporary Islamic economists and jurists. Because Islamic law prohibits usury entirely, the giving or receiving of interest has been replaced in Islamic finance in banking practices (in the last 40 years) by “dividend declaration” in place of interest payments. Such dividends are paid at the expiry of an agreed reporting period *after* the lending/borrowing takes place unlike interest, which is pre-agreed at the start of lending contract, and, in most commercial contracts, interest is collected as annuity due at the start of the contracts. Such non-interest income the Islamic finance incomes *under* this form of banking, which we intend to model and study as to whether it has a price effect on bank shares of Islamic banking firms.

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