Understanding Voluntary Disclosures in Australia

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Abstract

This study provides preliminary analysis of the extent and quality of financial ratio disclosures in the 2007 annual reports of Australian listed companies. The extent of financial ratio disclosures is captured through a 43 item template. In addition a unique 16 item matrix, evolved from the International Accounting Standards Board's conceptual framework to measure the quality of financial ratio disclosures, is developed. The extent of financial ratios by Australian firms is a surprisingly low 9.2 percent. Shareholders return and return on equity ratios were reported by at least half of the companies yet 16 other ratios had zero communication. The quality of the financial ratios is rated somewhat better with reliability tenets best presented and comparability issues the worst. Resource firms tended to have the lowest quality of disclosure. Consistent with agency theory, statistical analysis shows that larger firms—those with a higher proportion of independent directors and entities that have a higher proportion of independent auditors—are likely to disclose financial ratio information more extensively. The findings of this research have important implications for understanding managerial disclosure incentives as they relate to the extent and quality of financial ratio disclosures in Australia. Economic drivers seem to better explain extent than the inherent quality of such communication.

Introduction

This study provides evidence on financial ratio disclosure patterns in the annual reports of Australian listed firms for the 2007 financial year. Based on agency theory tenets, corporate governance, ownership structure and firm size variables are predicted to influence the level and quality of these disclosures.

A financial ratio disclosure index is developed based on literature to investigate the extent of financial ratio disclosures (EFRD) in annual reports. The five main categories of financial ratio information examined are share market measures, profitability, capital structure, liquidity and cash flow ratios.

The quality of financial ratio disclosures (QFRD) is measured using the four key qualitative characteristics of financial information embedded within the 'Framework for the preparation and presentation of financial statements' issued by the International Accounting Standards Board (IASB, 1989): relevance, reliability, comparability and understandability. This framework is utilised by virtually all national accounting standard-setting bodies including the Australian Accounting Standards Board (AASB, 2004) and represents an objective means to measure disclosure quality. Further, these overarching principles are widely accepted both by academics and practitioners as a measure of quality (e.g., Giordano-Spring & Chauvey, 2007).

Financial ratio analysis is useful for many reasons. First, financial ratios are a planning and benchmarking tool for understanding a company's financial health (Watson *et al.*, 2002). Second, they are a platform from which companies can demonstrate transparency and accountability. Third, financial ratios are, Horrigan (1965) claims, an efficient predictor of a variety of financial problems and future profitability of firms and, as Gibson (1982) states, 'probably no tool is more effective in evaluating the financial future of a company than the proper use of financial ratios' (p. 18). Fourth, disclosures may provide new information that is not presented in other media. This is particularly important for non-sophisticated users where the disclosure of financial ratio would provide a quick picture of a company's financial position and enable them to make informed investment decisions without having to rely on multiple sources of information. Some ratios cannot be calculated by external stakeholders because of the non-availability of insider information, such as accounts receivable turnover (Gibson, 1982). Therefore, providing detailed ratios in the annual report would benefit those users outside the firm. This is important as these financial ratios are a significant driver of share prices of Australian Stock Exchange (ASX) listed firms. Financial ratios are also utilised by sophisticated investors, such as analysts, as this information is important in confirming valuations. Fifth, disclosures may reinforce other sources of data in an efficient manner by reducing the time and cost of obtaining information (Watson *et al.*, 2002). Finally, Graham, Harvey and Rajgopal (2005) suggest that companies choose to provide voluntary information to reduce the cost of capital and to provide important information such as future plans to investors that is not included in mandatory financial reporting.

The above arguments present a clear case for extensive voluntary disclosure. Yet despite its wide use and suggested importance, financial ratio information in practice is rarely disclosed in company annual reports. To date there has been little agreement on what should be disclosed within the annual report due to the voluntary nature of financial ratio disclosures. In a study of Australian companies' financial ratios in the early 1990s, Mitchell (2006) finds that share market measures and profitability ratios

are the most informative and relevant items to be provided in the annual reports. Watson *et al.* (2002) argue that mandating the measurement and disclosure of financial ratios via the issuance of a new accounting standard would possibly be useful. However, they note the paucity of such data in the UK environment.

Little direct attention has been paid to the qualitative characteristics of financial information as inculcated into the IASB's (and AASB's) Framework. These framework attributes, recognised worldwide, are believed to be a legitimate foundation for assessing the quality of reporting. Thus, a detailed examination of the extent and quality of financial ratios arguably generates important new insights into managerial disclosure incentives.

The following section involves a literature review. Section three describes the method and data used in the study. The results are discussed in section four. In the final section, implications and conclusions are offered.

Theoretical Background and Hypotheses Development

This research employs agency theory to assist in determining suitable factors that could influence voluntary financial ratio disclosure patterns. A major agency problem is information asymmetry where the agents possess and utilise information for their own personal welfare to the disadvantage of the principals. Healy and Palepu (2001) and McNally, Eng and Hasseldine (1982) suggest that information asymmetry and agency conflicts between contracting parties in an organisation has led to the development of financial reporting and disclosure policy. Botosan and Harris (2000) argue that extensive disclosure can lower the cost of capital by reducing the uncertainty of a firm's value.

Corporate governance factors have the potential to minimise agency problems between managers and shareholders (Ho, Tower & Barako, 2008). For the purpose of this study, the strength of corporate governance is measured as the proportion of independent directors on the board. The definition of *independent directors* is in accordance with the ASX Corporate Governance Council (2003). Bathala and Rao (1995) argue that independent directors are needed on the boards to monitor and control the actions of executive directors, who may engage in opportunistic behaviour, and also to better ensure that managers are working in the best interest of the principal (Baysinger & Hoskisson, 1990). Haniffa and Cooke (2002) assert that an independent board serves as an important check and balance mechanism in enhancing board effectiveness.

Chen and Jaggi (2000) and Cheng and Courtenay (2006) find that boards with a larger proportion of independent directors are significantly and positively associated with higher levels of voluntary disclosure. These findings are consistent with agency theory tenets where a higher proportion of independent directors enhances voluntary financial disclosures (Barako *et al.*, 2006).

The effect of good governance practices on the quality of financial reporting has recently received more attention from researchers (Beasley *et al.*, 2000). Beasley (1996) suggests that no-fraud firms have boards with a significantly higher percentage of outside members than fraud firms, demonstrating that the inclusion of outside members on the board potentially reduces the occurrence of financial statement fraud and, therefore, assists in the provision of reported information that faithfully represents the value of financial statement elements. Goodwin and Seow (2002) argue that sound governance by a board of directors influences the quality of financial reporting. The presence of independent directors makes the release of voluntary information less costly because insiders have less to hide (Patelli & Prencipe, 2007). Consistent with this rationale, it is hypothesised that the extent and quality of financial ratio information disclosed is positively related to the percentage of the independent directors on the board.

Ownership structure is another mechanism that aligns the interest of shareholders and managers (Hossain, Tan & Adams, 1994; Chau & Gray, 2002; Haniffa & Cooke, 2002; Eng & Mak, 2003). It is believed that agency problems will be higher in the widely held companies because of the diverse interests between contracting parties (Mohd Ghazali & Weetman, 2006). By utilising voluntary disclosure, managers may provide more information to signal that they work in the best interests of shareholders. Using agency theory tenets, it is argued that firms with a higher ownership concentration will voluntarily disclose less financial ratio information to shareholders. This is because a concentrated ownership structure reduces firms' incentives to voluntarily disclose information to meet the information needs of non-dispersed shareholders groups. In Australia, McKinnon and Dalimunthe (1993) note, companies with a dispersed ownership structure disclose more voluntary information. The significant role of ownership concentration in influencing financial disclosure practices is also evident in previous worldwide studies regarding financial disclosure practices of firms (Hossain *et al.*, 1994; Lakhal, 2005; Oliveira *et al.*, 2006). Haniffa and Cooke (2002), however, report a negative relationship while Barako (2004) and Craswell and Taylor (1992) find no relationship. Based on past literature and agency theory tenets, it is hypothesised that ownership structure negatively influences both the extent and quality of financial ratio information disclosures.

Finally, a large number of sources have noted the positive association and influence of firm size on the disclosure practices of firms (Singhvi & Desai, 1971; Buzby, 1975; Chow & Wong-Boren, 1987; Hossain *et al.*, 1994; Wallace *et al.*, 1994). Singhvi and Desai (1971) argue that larger firms tend to provide better quality disclosure because of the lower cost of accumulating detailed information. Managers of larger companies are more likely to realise the possible benefits of better disclosure and small companies are more likely to feel that full disclosure of information could endanger their competitive position. According to Jensen and Meckling (1976), larger firms tend to have a higher proportion of outside capital and higher agency costs. It can be concluded that firm size does matter to the voluntary financial reporting

practices of companies. Therefore, the impact of firm size is hypothesised to be positively associated with the extent and QFRD.

Empirical Testing

Sample Selection and Data Source

The 2007 year annual reports of 40 ASX listed companies are examined to relate the extent of disclosures of financial ratio information and the quality of financial ratio information disclosed to key predictor variables. The companies were randomly selected from the ASX stratified by four industry grouping, namely resources, manufacturing, services and financials (Tower *et al.*, 1999).

Dependent Variable Measure

Extent of Financial Ratio Disclosure (EFRD)

The EFRD Index captures the amount of voluntary financial ratio disclosures in the annual reports. A disclosure index template comprising a comprehensive list of ratios commonly examined by seminal authors is developed. Financial ratios are categorised into five major categories using Mitchell (2006) classifications: share market measures, profitability, capital structure, liquidity and cash flow. Earnings per share (EPS) ratio is excluded since it is the sole financial ratio mandated by the AASB. Consistent with past literature, each voluntary ratio is dichotomously scored as being disclosed (1) if present in the annual report for each company and (0) otherwise. The EFRD score is computed by summing up all items disclosed divided by the maximum number as determined by the literature (Table 2). The EFRD score is mathematically represented as follows:

$$EFRD_j = \frac{\text{Total number of financial ratios disclosed}}{\text{Total possible financial ratios (43) – (non applicable items)}}$$

Where $EFRD_j$ = Extent of Financial Ratio Disclosures for firm j

Quality of Financial Ratio Disclosure (QFRD)

The QFRD index measures, naturally, the QFRD. This matrix is based on the qualitative characteristics of financial information as advocated by the IASB/AASB theoretical framework. It innovatively measures the quality of reporting by constructing 16 key quality criteria based on IASB authoritative pronouncements. The index captures the quality of disclosure by looking at the narrative nature surrounding the financial ratio information itself.

There are many accounting studies that claim to measure the quality of reporting and all use vastly different measurement bases. Singhvi and Desai (1971) defined quality as completeness, accuracy and reliability of information and quantified them through a 24-point index. Sengupta (1998) also used a disclosure metric to measure disclosure quality focusing on financial analysts' point of view of timeliness, detail and

clarity of information provided by companies. Beretta and Bozzolan (2004) argue that merely counting quantity of disclosure is not sufficient for measuring their quality, and propose incorporating the content, economic sign, type of measures and outlook orientation to measure the quality of risk communication. McDaniel *et al.* (2002) is one of the very few to apply FASB qualitative characteristics of accounting information as a framework to an evaluation of financial reporting quality.

The equivalent IASB and AASB frameworks identify the core qualitative characteristics that make information in financial statements useful including relevance, reliability, comparability and understandability. This paper creates an initial quality-oriented template comprising of these four key elements (Jonas & Blanchet, 2000; Mensah *et al.*, 2006; Giordano-Spring & Chauvey, 2007). For each element, four components measure the quality of ratio disclosures:

1) relevance - prediction, confirmation, timeliness, importance

2) reliability - verifiability, faithful representation, completeness, expertise

3) comparability - temporal, industry benchmark, consistency, segmental

4) understandability - comprehension, presentation, location, explanation.

This study utilises the characteristics in a matrix to determine the quality of financial ratios disclosure. Both frameworks state that information in financial statements is *relevant* when it influences the economic decisions of users. Relevancy of information can be defined as helping users evaluate past, present or future events relating to an enterprise as well as confirming or correcting past evaluations they have made. Further, to be relevant, information is provided in a timely manner to users with the importance noted. Overall, to be relevant, financial ratios should be useful in predicting the future and confirming the historical performance of the firms.

Information in financial statements is *reliable* if it is free from material error and bias. With regards to financial ratios, information is assumed to be reliable if it is verifiable (i.e., through an independent audit assessment), faithfully represented (i.e., no audit qualification of the financial report) and complete in its breadth. Reliable information is vetted through financial expertise via the audit committee.

Comparability enables users to compare the financial reports of an entity in order to identify trends in its financial position and performance. Financial ratio information should be provided to allow determination of trends in profitability, liquidity and other key measures over time and also to make comparisons against industry or segment averages. Provision of computed ratios should be done on a consistent basis. These tenets would enhance comparability of financial ratio information.

To highlight *understandability*, both frameworks state that the information should be presented in a way that is readily understandable by users. Enhancing the understandability of financial ratio information to users, via comprehension (formula),

presentation (graphs or table), location in the annual report, and sufficient explanation of ratios provided would be useful to stakeholders.

This study measures the quality of financial ratios (QFRD) using a matrix of qualitative characteristics outlined by the IASB and AASB Frameworks. QFRD is a measure of relevance, reliability, comparability and understandability of financial ratios disclosed in the annual reports.

To operationalise the measurement of QFRD, a 16 item (4x4) metric of qualitative characteristics is constructed. Each ratio disclosed is dichotomously scored as: one (1) if criterion is met or zero (0) otherwise. A QFRD score is then computed by summing all quality items divided by maximum score of quality (16 total criteria). A QFRD score is calculated for each firm. The QFRD score is mathematically represented as follows:

$$QFRD_j = \frac{\text{Total score for disclosure quality}}{\text{Maximum number of qualitative items (16) – Non applicable items}}$$

Where $QFRD_j$ = Quality Financial Ratio Disclosure for firm j

Independent Variables

The association between the independent variables (board composition, ownership concentration and firm size) and the extent and quality of financial ratio information is then statistically tested. Board composition (BODCOMP) is defined as the proportion of independent directors on the board. To create a proxy measure for ownership concentration, total shareholding of the top 20 shareholders (TOP20) is used. Firm size is measured as the natural logarithm of total assets. As noted by Hossain *et al.* (1994), natural logarithmic transformation reduces skewness in the size measure.

Control Variables

In order to control for other effects on the dependent variables, six control variables are employed. These are:

- industry—categorised into four major classifications: (1) Resources (2) Manufacturing (3) Services (4) Financials

- leverage—ratio of total debt to total assets

- return on assets (ROA)—ratio of net profit to total assets

- liquidity (LIQ)—ratio of current assets to current liabilities

- auditor's independence (AUDIND) is measured as a ratio of audit service fees to non-audit service fees

- type of auditor (AUD) is measured as a categorical variable where a score of one (1) is assigned to Big4 audit firms, otherwise zero (0).

These variables are frequently employed in disclosure studies (Watson *et al.*, 2002; Barako *et al.*, 2006; Mitchell 2006).

Results

Table 1 displays the descriptive statistics. The first dependent variable, EFRD, has a very low 9.2 percent average score (median 8.1%). QFRD (measuring the quality of financial ratio disclosures) has a mean score of 32.2 percent (median 34.4%). The board composition (BODCOMP) average score is high at 72.5 percent (median 77.4%) and average TOP20 shareholding is 58.5 percent (median 55.5%). Average total assets are AUD49,411 million (with a much smaller median value of AUD2,945 million). In order to reduce the skewness, size is converted to the natural log of total assets.

Table 1: Descriptive Statistics

Variables	Min.	Max.	Mean	Median	Standard deviation
Extent of Disclosure (EFRD) (%)	0.0	34.9	9.2	8.1	7.3
Quality of Disclosure (QFRD) (%)	6.3	62.5	32.2	34.4	14.5
Independence of Board (BODCOMP) (%)	20.0	91.7	72.5	77.4	16.4
Ownership Concentration (TOP20) (%)	1.5	97.5	58.5	55.5	23.3
Firm Size ($ millions)	5	564,634	49,411	2,945	134,242
LOG SIZE	15.5	27.1	21.5	21.8	2.9

Source: Original table.

Table 2 provides more detail concerning the extent of communication. It shows massive levels of non-disclosure across the board. There is variance of reporting for the five major sub-categories for extent. Profitability (14.7%) and share market measures (14.3%) have the highest levels, followed by capital structure ratios (12.1%). In contrast, companies virtually never communicated liquidity ratios (only 2.1%) or cash flow ratios (0.5%). The table also reveals that, in terms of specific ratios, only total shareholders return and return on equity were disclosed by at least half of the sample firms. The next highest tier of presented ratios include dividend payout (42.5%), net tangible assets backing per share (35%), gearing (25%) and times interest (25%). All other financial ratios have less than one quarter of the firms' disclosures with zero levels of reporting for 16 ratios.

Table 3 highlights the findings for the quality of reporting financial ratios. The overall level of quality is approximately 32 percent. In terms of the major sub-categories for quality, reliability obtains the highest average of 42 percent followed by 38.75 percent for understandability, 31.25 percent for relevancy and only 16.25 percent

for comparability characteristics. Each component within the overall quality matrix shows widely different communication with high scores for faithful representation, timeliness, financial experts, temporal, presentation and location. Yet other key qualitative characteristics are not found for any company in the Australian sample. These missing elements include: completeness, industry benchmarking, consistency, segment data and comprehension of ratios.

Table 2: Extent of Financial Ratio Disclosures

Major Category (Percentage disclosure score)	Specific ratio	Percentage disclosure score
1. Profitability (14.7%)	1. Return on equity	50.0
	2. Expense revenue ratio	22.5
	3. Net profit margin	15.0
	4. Return on assets	12.5
	5. Pre-tax profit margin	12.5
	6. EBITDA revenue ratio	10.0
	7. Gross profit margin	5.0
	8. Return on sales	2.5
	9. Sales turnover	2.5
2. Share Market Measures (14.3%)	1. Total shareholders return	62.5
	2. Dividend payout	42.5
	3. Net tangible assets backing per share	35.0
	4. Net assets backing per share	7.5
	5. Market capitalisation	5.0
	6. Price-to-earnings ratios	2.5
	7. Dividend yield	2.5
	8. Earnings yield	0.0
	9. Price-to-book	0.0
	10. Book value per ordinary share	0.0
	11. Market to book value ratio	0.0
3. Capital Structure (12.1%)	1. Gearing	25.0
	2. Times interest earned	25.0
	3. Total debt to equity	12.5
	4. Capitalisation ratio	12.5
	5. Equity ratio	10.0
	6. Long term debt to equity ratio	0.0
	7. Liabilities to assets ratio	0.0
4. Liquidity (2.1%)	1. Current ratio	5.0
	2. Quick ratio	2.5
	3. Inventory turnover	2.5
	4. Account receivables turnover	2.5
	5. Days to sell inventory	2.5
	6. Collection period	0.0
	7. Payment period	0.0
5. Cash Flow (0.5%)	1. Operation index	5.0
	2. Cash flow ratio	0.0
	3. Repayment of long term borrowings	0.0
	4. Dividend payment	0.0
	5. Reinvestment	0.0
	6. Debt coverage	0.0
	7. Cash flow to revenue	0.0
	8. Cash flow adequacy	0.0
	9. Cash flow return on assets	0.0
Overall EFRD average		**9.2**

Sources: Hoskin, 1994; Larson, 1997; Maxwell *et al.*, 1998; Peirson and Ramsay, 2000; Bergevin, 2002; Fridson and Alvarez, 2002; Hoggett *et al.*, 2006; Horngren *et al.*, 2006; Stickney *et al.*, 2004; Wild *et al.*, 2007; Subramanyam and Wild, 2009.

Table 3: Quality of Financial Ratio Disclosures (QFRD)

Specific qualitative characteristic	Percentage disclosure score	Major component of QFRD	Percentage disclosure score
Prediction	12.5	Relevancy	31.25
Confirmation	27.5		
Timeliness	70.0		
Importance	15.0		
Verifiability	5.0	Reliability	42.5
Faithful representation	97.5		
Completeness	0		
Expertise	67.5		
Temporal	65.0	Comparability	16.25
Industry benchmarking	0		
Consistency	0		
Segmental	0		
Comprehension	0	Understandability	38.75
Presentation	62.5		
Location	60.0		
Explanation	32.5		
Overall QFRD average			**32.19**

Source: Original table.

Statistical analysis is also conducted to explain differences in the disclosed information. ANOVA analysis reveals the industry variable is highly significant for both dependent variables, EFRD and QFRD. For EFRD, the service and financial companies had the most financial ratios. In terms of quality (QFRD) the financial sector was the highest. In both measures, resources have far fewer financial ratios in their annual report than any other industry sector. The Tukey HSD (honestly significant different) post-hoc test highlights that services and financials industry sectors are statistically (at 0.05 level) higher than resources for the EFRD. Spearman and Pearson correlation coefficients not shown for briefing confirms that the EFRD is highly significant (at 0.01 level) correlated with quality of disclosures (QFRD), corporate governance, firm size, four types of industries, leverage and auditor's independence for both Pearson and Spearman correlations (except for Spearman significant at 0.05 level between EFRD and auditor's independence).

In addition, QFRD is highly significant (at 0.01 level) correlated with firm size and industries and significant (at 0.05 level) correlated with leverage and ROA for both Pearson and Spearman correlations. The correlation matrix also reveals that all correlation coefficients are less than 0.80 critical limit (Hair *et al.*, 2006), which suggests that the multicollinearity problem is not a concern between the independent variables in multiple regression analysis. To ensure there is no econometric issues with number

of variables and sample size, bivariate regressions and backward regressions are also conducted and statistical findings show similar results.

Table 4 presents the multiple regression best-model fit. This shows that the motivation to disclose a certain extent of financial ratio data is not the same as for providing more quality in such ratios.

Table 4: Multiple Regression Analysis

Regression model	Findings			
	EFRD		QFRD	
N	40 annual reports		40 annual reports	
F-value	13.212		9.839	
Significance	0.000		0.000	
Adjusted R Squared	0.49		0.31	
Variables	**t**	**p-value**	**t**	**p-value**
Constant	-3.5	0.001	0.3	0.739
Governance: BODCOMP	2.5	0.009**	0.9	0.17
Ownership: TOP20	0.7	0.73	2.6	0.93#
Size: LOG SIZE	3.2	0.002*	1.6	0.055
Industry: IND (control variable)	1.2	0.24	3.9	0.000*
Auditor: AUDIND (control variable)	2.6	0.014**	0.1	0.96

Source: Original table.

Note: * highly significant (p-value<0.01); ** significant (p-value<0.05); 1-tailed test for directional hypotheses; # TOP20 finding was in the opposite direction as that predicted and thus the related hypothesis is rejected.

For the EFRD, the overall model is statistically significant (p-value<0.001) and almost 50 percent of the variation (adjusted R squared) in the EFRD can be explained by the predictor variables. Corporate governance (BODCOMP) measured by the percentage of independent directors on the board is positively significant (p-value 0.009). This result indicates that the higher the percentage of independent directors on the board, the more financial ratio disclosures in the annual reports. Moreover, LOG SIZE is highly significant (p-value<0.01) in a positive direction as expected. Larger Australian companies disclose more financial ratios in their annual report. However, the ownership concentration (TOP20) variable does not affect the EFRD. As a control variable, auditor's independence (AUDIND) is also positively significant (p-value of 0.014).

Regressions are also conducted for the QFRD. The overall model is statistically significant (p-value<0.001) explaining over 30 percent of the variation (adjusted R squared). This regression reveals that all of the variables are rejected in the hypotheses testing. Interestingly, if a two-tailed test is utilised, TOP20 is significant but in a positive direction. This unexpected finding suggests that the more concentrated the ownership, the higher the QFRD in the annual reports. Neither corporate governance

nor size explains quality. However, size is borderline in the statistical testing (p-value 0.055) in the expected positive direction. Industry category is a predictor with the resource companies communicating fundamentally less quality.

Conclusions

This study provides evidence on the extent and QFRD. Agency theory is utilised to test the relationship between corporate governance, ownership concentration and firm size with the dependent variables EFRD and QFRD. The EFRD template (43 items) is developed based on past literature and the QFRD template (16 items) is evolved from qualitative characteristics within the IASB's 'Framework for the preparation and presentation of financial statements'.

The descriptive results show that the EFRD is very low across the spectrum, except for the total shareholders return and return on equity ratios. Clearly, the voluntary nature of financial ratio disclosures is not encouraging large scale reporting. When the ratios are grouped, the most popular categories disclosed are profitability and share market measures. This is consistent with the Watson *et al.* (2002) findings that investment, gearing and profitability ratios are the most frequently disclosed ratios by companies due to their perceived usefulness and relevance to shareholders. The quality of communication tells a more mixed message. The reliability characteristic is best met but the comparability tenet is far less evident.

The multiple regression results indicate that strength of corporate governance (independent board of directors) is significant in influencing the EFRD. This is consistent with agency theory tenets wherein the higher proportion of independent directors on the board may mitigate the agency problem through voluntary financial reporting, in this case financial ratio disclosures. In addition, size of the firm affects the EFRD practices of the firms. This result is consistent with the findings of Watson *et al.* (2002) that large firms are more likely to disclose ratios than small firms in their annual reports. It is suggested that larger firms (Jensen & Meckling, 1976) reduce the agency cost through their disclosure policy. The level of ownership concentration does not make any difference in the EFRD.

For the quality of financial ratios disclosures, the corporate governance mechanism does not have predictive properties. This finding implies the need for a stronger board focus concerning the quality of reporting. Yet ownership concentration may affect the QFRD but in the opposite direction than what was hypothesised. The more concentrated the ownership, the higher the QFRD in the annual reports. It is concluded that agency theory tenets are less insightful in the prediction of the quality of financial ratios. Consideration should be given to other theoretical applications.

Overall, the extent of financial ratios by Australian firms is low and this is consistent with the earlier 1990s study by Mitchell (2006). He notes that the frequency and location of financial ratios varies and firms tend to be selective in deciding what ratios are disclosed. However, using more contemporary 2007 data, this study

statistically links the corporate governance element with financial ratio disclosure. Agency theorists argue that economic drivers best explain disclosure behaviour. However, the overall level of communication remains low therefore there may be a need for more mandated regulation as patterned after the EPS provisions, especially for hard-to-calculate ratios. In addition, this study not only investigates the extent of financial ratios disclosure, but also creates an initial matrix template for the QFRD.

Acknowledgements

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