LINKAGES BETWEEN OWNERSHIP CONCENTRATION AND FINANCIAL RATIO COMMUNICATION

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Abstract

This study examines the relationship between ownership concentration and the extent of financial ratio disclosures (EFRD) in the 2007 annual reports of Australian listed firms. Using agency theory as theoretical background, it is suggested that firms with more concentrated ownership structures are less likely to provide voluntary disclosure of financial ratios information. The univariate tests demonstrate that profitable firms, those firms audited by Big4 auditors and firms belonging to financial services industry communicate more financial ratio information. OLS regressions show that more dispersed shareholding firms' are significantly associated with EFRD. Profitable and larger firms audited by independent and Big4 audit firms additionally reported more extensive financial ratio information.

Keywords: ownership concentration, financial ratio disclosures, Australia

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1. Introduction

The purpose of this study is to examine the impact of ownership structure on the extent of financial ratio disclosures within the annual reports of Australian Stock Exchange (ASX) listed firms. The annual reports of 300 firms listed on ASX are gathered and analysed. The research objective is to derive insights on the reporting practices of financial ratios by Australian companies. Communication of information such as financial ratios enhances the understanding of the financial statements for potential investors. Financial ratios enable these investors to make more informed investment decisions.

A comprehensive financial ratio disclosure index is developed based on past literature (Horngren *et al.* 2006; Mitchell 2006; Morton and Harrison 2009; Peirson and Ramsay 2000; Stickney *et al.* 2004; Subramanyam and Wild 2009; Watson *et al.* 2002; Wild *et al.* 2007; Hoggett *et al.* 2006) to capture differences in disclosure patterns. Additional analysis examines the five key sub-categories of ratios: *Share Market Measures* (SMM), *Profitability* (PROF), *Capital Structure* (CS), *Liquidity* (LIQ) and *Cash Flow* (CF).

The provision of relevant and imperative views that reflect companies' performance is in line with government initiatives in promoting Australia as a promising business destination. Besides having economic strength ranking among the 20 largest in the world (Department of Foreign Affairs and Trade Australia 2008), Australia is also rated fourth in the 2009 Global Corporate Governance ratings (Governance Metrics International 2009). In addition, sophisticated information facilities and financial services offered to investors is another form of support provided by the Australian government. *Austrade*, the Australian Trade Commission, was created to assist international companies to develop trade and investment connections with Australia.

In balancing all incentives and supports initiated by the government, it is now the companies' task to accomplish their role in promoting Australian companies to potential investors, both locally and internationally. One possible way in highlighting companies' strong financial position is to disclose a comprehensive set of financial ratios in annual reports. Communicating this simple and quick data set will likely attract investors' attention and enhance decision-making.

An examination of the relationship between ownership concentration and financial ratio communication within Australian annual reports is important due to several factors. The Australian Securities Exchange (2008) recently conducted a study examining the attitudes, knowledge and behaviour of retail share market investors in Australia. From the survey, they find that 6.7 million people or 41% of Australian adults (18 years and above) are involved in the share market, a decrease from 55% and 46% in 2004 and 2006 respectively. In comparison, the percentage is 45% in the U.S, 21% in Switzerland, 18% in the U.K and Sweden, and 14% in Germany. In addition, Australian Securities Exchange (2006) notes Australian shareholders own more overseas shares, are increasing the number of companies held in their portfolios, have a more diverse mixture of large and small companies and have increased the number of shares bought and sold in 2006 as compared to previous years. These figures imply that the broad share ownership in Australia is an important and fundamental characteristic of the domestic economic landscape. This more active involvement in the share market possibly motivates them to seek important and relevant information such as financial ratios in making informed investment decisions.

Further, in relation to the investor' education background, the ASX's study provide evidence that 46% and 42% of post graduates and degree holder respectively owned shares in 2008, with 46% of them having more than $100,000 household income. However, 46% of the direct investors are self-rated as not being very knowledgeable, with only 5% feeling they are very knowledgeable. It seems that that at least half of contemporary Australian investors are non-sophisticated participants. Thus, providing them analytical tools like financial ratios is likely to enhance their understanding of a company's prospects and achievements. As suggested by Smith and Taffler (1992), sophisticated users are more likely to understand accounting language compared to unsophisticated users.

Smith and Smith (1971) link communication theory with the financial reporting function, specifically in relation to notes to the accounts. They find that notes to the financial statements are only understandable by certain groups of sophisticated readers. There is evidence that less than 20% of the U.S. adult population have sufficient education to understand this complex information. Chang *et al.* (1983) surveys 4000 individual investors, 900 institutional investors and 900 financial analysts in the U.S., UK and New Zealand. They conclude that financial statements are considered as most important source of information. However, sophisticated users (institutional investors and financial analyst) rank financial statements as more important than non-sophisticated users (individual investors).

In relation to financial ratio disclosures, Watson *et al.* (2002) argues that the financial ratio information is valuable to financial statements users in providing a useful tool to assess and compare a company's performance. The disclosure of financial ratio can be viewed as a new information or serving as a confirmation role for readily available old information. Watson *et al.* (2002) argue that new or confirmatory old ratio data is valuable. They state that the inclusion of old items aids users' understanding, provides economies on their time and reduces cost of obtaining information elsewhere.

There are two recent studies in the Australian context examining these issues. Mitchell (2006) applies signalling theory on early 1990s data. He finds that companies selectively communicate financial ratios that are favourable. On the other hand, Morton and Harrison (2009) utilise a different perspective of measuring financial ratio disclosure. They calculate the level of disclosure using content analysis based on number of pages taken up by any disclosure of financial ratio. They conclude that larger and profitable firms, with more independent board of directors allocate greater space for financial ratio communication. This study extends these past studies through an examination of possible linkages between ownership concentration and financial ratio disclosures.

2. Theoretical Position and Hypothesis Development

Many studies in the past examine the association between the financial reporting practices with agency theory (Taylor *et al.* 2008; Barako *et al.* 2006; Lakhal 2005; Ho and Wong 2001). Jensen and Meckling (1976) suggest a possible conflict arises when agents perform their duties on behalf of the principals. Agents (managers) are expected to act and make decision to the best interest of principals (shareholders).

Jensen and Meckling (1976) outline three components of agency cost: monitoring cost, bonding costs and a residual loss. Monitoring costs are exercised by the principals to monitor the agents' behaviour in aligning their interest, such as audit fees. On the other hand, bonding costs are incurred by the agents themselves to bond their actions, so that is in line with principals' concern. Cost of financial reporting is an example of bonding cost to ensure the principal are informed about agents' decisions and actions. Further, any misalignment of interests between agents and principals possibly would incur a residual loss.

One possible problem with conflicting agency relationship is information asymmetry. This is the situation where the agents have great advantages in possessing and utilising inside information for their own benefit than the principals. This situation occurs because the managers are dealing with day to day

operations of the firms and they have the first hand information, whether good or bad, especially about the company. It is argued that voluntary disclosure[12] reduces the information asymmetry problem (Healy and Palepu 2001).

A number of prior studies have investigated various determinants of companies' voluntary disclosure practices. For example, evidence has been offered from the US (Leftwich *et al.* 1981; Botosan 1997); US, UK and Continental Europe (Meek *et al.* 1995); Australia (McKinnon and Dalimunthe 1993; Singh and Mitchell Van der Zahn 2008; Guthrie *et al.* 2006; White *et al.* 2007); New Zealand (Whiting and Miller 2008; Hackston and Milne 1996; McNally *et al.* 1982); Hong Kong (Leung and Horwitz 2004; Gul and Leung 2004; Ho and Wong 2001) and Malaysia (Hossain *et al.* 1994; Haniffa and Cooke 2002; Mohd Ghazali and Weetman 2006) to provide empirical insights on various aspects of voluntary disclosure.

Very limited focus, however, has been given to the unique issue of voluntary disclosure of financial ratios (Morton and Harrison 2009; Mitchell 2006; Watson *et al.* 2002; Courtis 1996; Horrigan 1965). This study offers important insights to gain a better understanding of determinants of such communication practices.

A financial ratio is defined as a mathematical relation between two quantities (Subramanyam and Wild 2009). Financial ratio analysis is important for several reasons: it provides a better picture of the underlying firms' financial condition (Subramanyam and Wild 2009), a signalling tool (Mitchell 2006), allows better access and comparison of a company's performance (Watson *et al.* 2002) and serves as an alternative to possible misleading influence of the absolute dollar figures (Courtis 1996). In addition, financial ratios are often used in predictive studies (Altman 1968; Beaver 1966; Neophytou and Molinero 2004).

The disclosure of financial ratios in the annual reports arguably enhances stakeholders' knowledge base in several ways. First, the disclosures can enhance the understanding of stakeholders by providing them a quick and simple tool with easy to understand heuristics that highlight the firms' performance. Assessment of firm performance can be further enhanced if the ratio data is presented using graphs or tables (Courtis 1996) that depict changes over time. Second, communicating financial ratio information can provide users of financial statements with new information that is not comprehensively presented in any single media (Watson *et al.* 2002). This information would be especially meaningful for non-sophisticated users in evaluating and making informed investment decisions. Further, some ratios are not easily computable by readers because of the non-availability of inside information (Gibson 1982). Therefore, providing ratios such as account receivables turnover in the annual report could offer important insights of firms' financial health position to stakeholders. Alternatively, disclosure of financial ratios can efficiently reduce the time and cost of obtaining and processing information (Watson *et al.* 2002) elsewhere. Graham *et al.* (2005) suggests that among the reasons why companies choose to provide voluntary information is the reduction of the cost of capital and to provide important information to investors that is not readily available or understood in the mandatory financial statements. Arguably, when companies disclose financial ratio in the annual report, their management is communicating the importance of financial ratio information. By providing such voluntary disclosure, managers must believe that the benefits outweigh its cost (Watson *et al.* 2002).

There are three key recent studies focussing on financial ratio disclosures in the annual reports (Appendix 1 provides more detail). Morton and Harrison (2009) analyse the annual reports preceding and after the introduction of IFRS in Australia finding very similar results of virtual uniform communication of financial ratios between years. Watson *et al.* (2002) investigate the accounting ratios in the top 313 U.K. firms using a dichotomous measure to examine the level of disclosure of five major categories. They find evidence that company performance, size and industry significantly influence the level of ratio disclosure. However, both these studies did not specific what ratios were examined making direct comparisons impossible. Mitchell (2006) focuses on ten specific ratios in his examination of Australian firm's disclosure using early 1990s data. His result suggests that managers' incentive in providing financial ratios varies in term of frequency, location and type of ratio.

These past studies are thus hampered by the narrow or undefined choice of financial ratio selection. Therefore, this current study will provide greater insight and clarity by developing a comprehensive financial ratio disclosure index consist the 43 most common ratios (Hoggett *et al.* 2006; Horngren *et al.* 2006; Hoskin 1994; Maxwell *et al.* 1998; Mitchell 2006; Peirson and Ramsay 2000; Stickney *et al.* 2004; Subramanyam and Wild 2009; Watson *et al.* 2002).

Morton and Harrison (2009) raises an important question of the relevancy of such a topic focus. Why do companies still disclose ratios in their annual reports, despite the ease of calculation and availability of sources of similar information? Watson *et al.* (2002) provides a salient counterargument in stating that even when such ratios are available elsewhere, the provision of this confirmatory information in the annual reports might enhance the understandability of users. Mitchell (2006) posits that the communication of financial ratios in the annual reports signals companies' favourable performance and thus attracts

[12] Meek *et al.* (1995, p. 555) define voluntary disclosure as "disclosure in excess of requirements-represent free choices on the part of company managements to provide accounting and other information deemed relevant to the decision need of users of their annual reports"

users' attention. Such dissemination of information is arguably also more efficient for stakeholders, especially non-sophisticated users with limited accounting acumen or resources.

The significant role of ownership concentration in influencing financial disclosure practices is clearly evident in previous studies worldwide (Eng and Mak 2003; Haniffa and Cooke 2002; Chau and Gray 2002; Hossain *et al.* 1994). Firms with higher concentration of ownership structure may disclose less information to shareholders. Chau and Gray (2002), Lakhal (2005), Oliveira *et al.* (2006) and Hossain *et al.* (1994) find a negative relationship between share ownership concentration and voluntary disclosures in a variety of countries including Hong Kong, Singapore, France, Portugal and Malaysia. Mitchell (2006) states that firms with dispersed shareholding are more likely to have higher costs of equity, and therefore have greater incentives to disclose. He suggests reporting of financial ratios highlights critical relationships and reduces the costs associated with high shareholder dispersion. It is thus expected that ownership concentration influences the voluntary disclosure of financial ratio. Overall, the preceding discussions led to the sole hypothesis:

H_1: *The extent of financial ratio disclosures (EFRD) is negatively associated to the ownership concentration.*

3. Empirical Tests

A stratified randomly sample of 2007 annual reports for 300 firms listed on ASX is selected with 75 companies from each of four major industry classifications: Resources, Manufacturing, Services and Financials. The 2007 financial period is chosen because it represents the period after the adoption of International Financial reporting Standards (IFRS) in Australia which had a stated aim of enhancing the quality of reporting. This period also incorporates the post-implementation of Corporate Law Economic Reform Program (CLERP 9) focus on strengthening the financial reporting framework.

The research focus of this study is the Extent of Financial Ratio Disclosures (EFRD). EFRD is the proxy to measure the extensiveness of financial ratio disclosures in companies' annual reports. A comprehensive disclosure index comprising the 43 most common ratio measures is developed (Hoggett *et al.* 2006; Horngren *et al.* 2006; Hoskin 1994; Maxwell *et al.* 1998; Mitchell 2006; Peirson and Ramsay 2000; Stickney *et al.* 2004; Subramanyam and Wild 2009; Watson *et al.* 2002) is developed (see Table 2). The ratios are further categorised into five major categories- *Share Market Measure (SMM)*, *Profitability (PROF)*, *Capital Structure (CS)*, *Liquidity (LIQ)* and *Cash Flow (CF)* ratios. The Earnings Per Share (EPS) ratio is excluded since it is the sole financial ratio mandated by the Australian Accounting Standards Board (AASB 2006). Each of the 43 voluntarily ratio items disclosed is scored as one (1) if communicated in the annual report for each company; otherwise zero (0). The EFRD percentage score is computed by summing up all items communicated by the company divided by maximum possible number of 43 financial ratios that could be disclosed.

Prior studies have adopted different measures of ownership concentration. For example Setyadi (2009) and Chen (2001) use the top one investor; Depoers (2000) utilises the top 3 shareholders while Cheung *et al.* (2008) and Haniffa and Hudaib (2006) measure top 5 shareholdings. Studies conducted in Malaysia by Hossain *et al.* (1994), Haniffa and Cooke (2002) and Mohd Ghazali and Weetman (2006) calculate shareholding of top 10 shareholders. In Australia, McKinnon and Dalimunthe (1993); Birt *et al.* (2006); Mitchell (2006); Taylor *et al.* (2008) and Morton and Harrison (2009) analyse top 20 shareholding. In line with studies carried in Australia by previous researchers, the ownership concentration (OC) score is measured as a total shareholding of Top 20 shareholders. Ownership concentration (OC) is treated as continuous variable by dividing number of shares owned by top twenty shareholders by the total number of shares issues.

In testing this hypothesis, five other possible factors of financial disclosure practices, as suggested by prior papers, are controlled for. There are: Firm size (FSIZE) - natural log of total assets (Hossain *et al.* 1994; Taylor *et al.* 2008); Non-audit fess (NAF) - Ratio of non-audit related fees to total audit fees (Frankel *et al.* 2002; Habib and Azim 2008); Industry (IND) - Dummy variable for four major categories of industry - Resources, Manufacturing, Services and Financials (Tower *et al.* 1999); Profit/ Loss firm (PLF) - (1 for profit firm and 0 for loss firm) and Audit type (AUDTYPE) - Dichotomous variable for type of auditor; 1 for Big4, 0 for Non-Big4 (Barako *et al.* 2006).

4. Results

Table 1 presents the descriptive result for the EFRD and five key sub-categories. Overall, the communication of financial ratio in the annual reports is low. On average, the sample of Australian firms only communicates 5.3% of the 43 ratios investigated. The result also portrays two-tiers of reporting level, dominated by the first three sub-categories (*Share Market Measures*, *Capital Structure* and *Profitability*) ranging from 7.4% to 9.0%. On the other hand, the other two categories (*Liquidity* and *Cash Flow*) communicate less than 1% of ratios.

Table 1. Descriptive Statistics for Extent of Financial Ratio Disclosure (EFRD)

	Extent of financial ratio disclosure	Share Market Measures	Profitability	Capital Structure	Liquidity	Cash Flow
Mean (%)	5.3	9.0	7.4	7.9	0.9	0.2
Median (%)	2.3	9.1	0	0	0	0
SD (%)	5.6	9.6	10.8	12.5	4.6	1.7
Min. (%)	0	0	0	0	0	0
Max. (%)	30.2	36.4	55.6	57.1	42.9	22.2

Legend: SD is standard deviation; n=300.

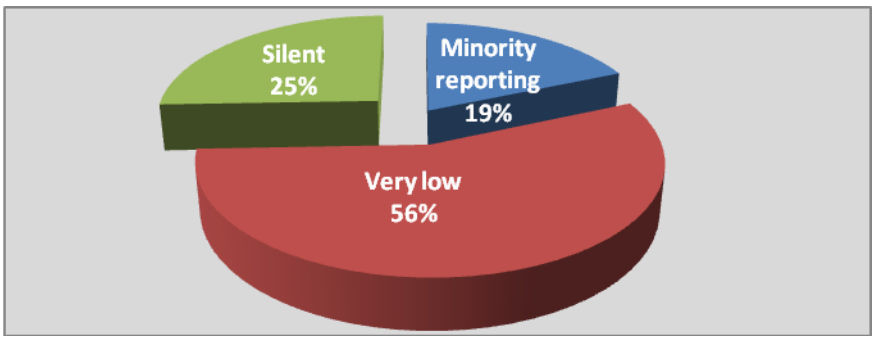

Figure 1. EFRD by specific ratio

Overall, the communication level of the specific ratio can be classified into three categories: minority reporting (more than 10%), very low (less than 10%); and silent (zero communication). 10% cut-off point is use because on average, none of the sub-category providing more than 10%. Figure 1 shows that out of 43 investigated ratios, 19% of them are minor communicated by the sample firms. More than half (56%) of the ratios are very low reported and 25% of them are not communicated at all. In summary:

- Minority reporting: 8 ratios (four *Share Market Measures*, two *Capital Structure* and two *Profitability* ratios);
- Very low: 24 ratios (four *Share Market Measures*, four *Capital Structure*, seven *Profitability*, six *Liquidity* and three *Cash Flow* ratios); and
- Silent: 11 ratios (three *Share Market Measures*, one *Capital Structure* and *Liquidity* and six *Cash Flow* ratios).

Table 2 provides a deeper level of detail by listing each specific ratio within every major sub-category. The key findings are that whilst there is some level of communication for the share market measure, capital structure and profitability categories (ranging from 7.4-9.0%) there is virtually no communication of any liquidity or cash flow style ratios (0.2-0.9%). Moreover, only four ratios are disclosed by more than 20% of the Australian companies. These are total shareholder return, net tangible assets per share, gearing and return on equities.

Univariate tests are conducted to examine the relationship between EFRD and several categorical variables. The findings indicate that the EFRD is significantly different between profit (with mean of 7%) and loss (with a much lower average of 1.2%) firms (Table 3). This result implies that profit-making firms communicate more financial ratio in their annual reports as compared to the loss firms. In addition, the t-test analysis also confirms that firms audited by Big 4 audit firms (KPMG Peat Marwick, Ernst & Young, Deloitte & Touche and PriceWaterhouse Coopers) report more extensive financial ratio information (6.9%) compared with non-Big4 auditors (2.4%).

Table 2. Extent of Financial Ratio Disclosures (EFRD) by Specific Ratio

Categories (% disclosure score)	Ratio	% disclosure score
1. Share Market Measure (9.0%)	1.Total shareholder return (TSR)	27.0
	2.Net tangible assets per share (NTAB)	25.7
	3. Dividend payout	20.7
	4.Dividend yield	18.3
	5.Net assets per share (NAB)	3.7
	6.Market capitalisation	1.7
	7.Price-to-earnings (P/E)	1.0
	8.Earnings yield	1.0
	9.Price-to-book	0
	10.Book value per ordinary share	0
	11.Market-to-book ratio	0
2. Capital Structure (7.9%)	1.Gearing	26.7
	2.Times interest earned	15.3
	3.Total debt/equity	7.0
	4.Capitalisation ratio	2.7
	5.Equity ratio	2.0
	6.Liabilities/ Assets	1.3
	7.Long Term debt/equity	0
3. Profitability (7.4%)	1.Return on equities (ROE)	21.7
	2.EBITDA/ Revenue	15.0
	3.Gross profit margin	7.3
	4.Total expenses/revenue	7.0
	5.Return on assets (ROA)	5.3
	6.Net profit margin	5.0
	7.Pre-tax profit margin	4.0
	8.Return on sales	0.7
	9.Sales turnover	0.3
4. Liquidity (0.9%)	1.Current ratio	3.0
	2.Inventory turnover	1.0
	3.Quick ratio	0.7
	4.Days to sell inventory	0.7
	5.Accounts receivable turnover	0.3
	6.Collection period	0.3
	7.Payment period	0
5. Cash Flow (0.2%)	1.Operation index	1.0
	2.Cash flow adequacy	0.3
	3.Cash flow ratio	0.3
	4.Repayment long term borrowings	0
	5.Dividend payment	0
	6.Reinvestment	0
	7.Debt coverage	0
	8.Cash flow to revenue	0
	9.Cash flow return on assets	0
Overall EFRD	5.3	

Table 3. T-test EFRD with Profit/ Loss Firms and Audit Firm Type

	EFRD				
	N	Mean (%)	Mean Difference (%)	t-stats	Sig.
Profit/Loss firms					
Loss	88	1.2	-5.8	-12.657	0.000*
Profit	212	7.0			
Audit firm type					
Non-big4	108	2.4	-4.5	-8.473	0.000*
Big4	192	6.9			

Legend: *,**,*** Highly significant at the 0.01 level, Significant at the 0.05 level, Moderately significant at the 0.1 level respectively (2-tailed); EFRD is Extent of financial ratio disclosure; Big4 audit firms are KPMG Peat Marwick, Ernst & Young, Deloitte & Touche and PriceWaterhouse Coopers; Non-big4 audit firms are all other auditor firms.

An ANOVA test is carried out to ascertain the association between EFRD and industry sector groupings. As shown in Table 4, the resource sector communicates the least EFRD (mean of 3.1%), while the other main industry groupings (manufacturing, services and financial) provide approximately almost double that figure. A Tukey HSD test (not shown for brevity) confirms that the resource industry companies report significantly lower EFRD than service and financial firms.

Table 4. ANOVA: EFRD with Four Industry Categories

	EFRD			
	N	Mean (%)	F	Sig.
Industry			6.706	0.000*
Resources	75	3.1		
Manufacturing	75	5.1		
Services	75	6.1		
Financials	75	6.9		

Legend: *,**,*** Highly significant at the 0.01 level, Significant at the 0.05 level, Moderately significant at the 0.1 level respectively (2-tailed); EFRD is Extent of financial ratio disclosure; Industry are the four major categories of industry (Tower *et al*. 1999) namely Resources, Manufacturing, Services and Financials.

Table 5 displays the correlation matrix between EFRD and predictors variables. EFRD appears to be not associated with ownership concentration. However, several control variables such as firm size, industry, profit/loss firms and type of auditors are related to EFRD for both Pearson and Spearman correlations. As the correlation coefficients between the variables is below the critical limit of 0.80 (Hair *et al*. 2006), multicolinearity is adjudged to not be a concern.

Table 5. Correlations between dependent, independent and control variables

	EFRD	OC	FSIZE	NAF	IND	PLF	AUDTYPE
EFRD	1	-.003	.625*	-.035	.246*	.477*	.387*
OC	.011	1	.088	.129**	.027	.184*	.082
FSIZE	.635*	.132**	1	.175*	.21**	.52**	.49**
NAF	.066	.127**	.230*	1	-.011	.091	.21**
IND	.261*	.021	.190*	-.008	1	.36**	.019
PLF	.554*	.186*	.555*	.121**	.360*	1	.27**
AUDTYPE	.397*	.087	.518*	.224*	.019	.279*	1

Legend: *, **, *** Correlation is highly significant at the 0.01 level, significant at the 0.05 level, moderately significant at the 0.1 level respectively (2-tailed); EFRD= Extent of Financial Ratio Disclosure; OC= Ownership Concentration; FSIZE= Firm Size; NAF= Non audit fees, IND= Industry; PLF= Profit/ Loss Firms, AUDTYPE= Big4nonBig4

Table 6 presents the multiple regressions finding for the dependent variable (EFRD) and the possible predictor variables. The result reveals that the model is statistically significant (1%) with F-value of 42.083. The adjusted R^2 is 0.452, indicating that 45.2% of the variation in the EFRD can be explained by the model.

Table 6. Multiple Regression Results for Extent of Financial Ratio Disclosure (EFRD)

	EFRD		
Adjusted R square	0.452		
Observations	300		
F Statistics	42.083		
Significance	0.000*		
Variables	Coefficients	t-stat	P-value
Intercept	-0.161	-6.974	0.000*
OC	-0.024	-1.665	0.095***
FSIZE	0.011	8.451	0.000*
NAF	-0.036	-3.472	0.001*
PLF	0.023	3.555	0.000*
IND	0.04	1.535	0.126
AUDTYPE	0.016	2.665	0.008**

Legend: *,**,*** Highly significant at the 0.01 level, Significant at the 0.05 level, Moderately significant at the 0.1 level respectively; 1-tailed and 2-tailed test is used for directional and non-directional association respectively; EFRD is Extent of financial ratio disclosures; OC is Ownership concentration; FSIZE is Firm size; NAF is Non-audit fees; PLF is dichotomous Profit/ Loss firm categorisation; IND is Industry; and AUDTYPE is type of auditor (Big4-NonBig4).

The regression result confirms that ownership concentration has a moderately significant (p-value < 10%) association with EFRD as expected. It seems that companies with more dispersed shareholding communicate more financial ratio in the annual reports. Thus, H_1 is supported; albeit at a moderate statistical level. This result is consistent with Mitchell's (2006) earlier Australian findings. In addition, several control variables also contribute valuable insights on the reporting policy of financial ratio. Firm size, auditors' independence (measured as the level of non-audit fees (NAF)) and profit/loss firms are highly significant (p-value < 1%) predictors in determining the level of FRDs. The results indicate that profitable and larger firms; with more 'independent' auditors disclose more financial ratio information. Lastly, the type of auditor (Big4 versus Non-Big4) also significantly influences the firms' decision to report financial ratio. Consistent with univariate tests, Big4 clients present more financial ratios than their counterparts in the annual reports. Interestingly this study finds uniformity in financial ratio communication across industry sectors.

4. Implications and Conclusion

This study provides a cross sectional evaluation of the extent of financial ratio disclosures (EFRD) within the 2007 annual reports of 300 Australian listed firms. The examination of EFRD and its five key sub-categories is based on an extensive 43-items disclosure checklist derived from the accounting literature. The findings show the level of EFRD is low in absolute figure with companies communicating only 5.3% of the 43 financial ratios benchmark list.

There are several possible reasons for such a low level of disclosure. Australian managers may feel that the dissemination of financial ratio data is not a critical issue to be addressed in the annual reports. Conversely, they may choose not to show a comprehensive range of ratios that may not show their companies in the best possible light, instead they may very selectively pick and choose what is to be highlighted. They may also feel that financial ratio analysis is best conducted by expert financial intermediaries thus focussing more on institutional shareholders and less on non-sophisticated investors.

The findings also suggest that the ratios in the *Share Market Measures*, *Capital Structure* and *Profitability* sub-categories are to a limited degree communicated (7-9%). One possible reason for the situation is that these categories are directly related to the stakeholders such as shareholders and future investors (Watson *et al.* 2002; Mitchell 2006). These categories of ratios portray the performance of the firm and how efficient the firm's managing their sources of capital. These are among important and useful elements in making investment and evaluation decisions. Another reason is that these ratios have been ranked as important ratios, either by the users or the preparers in the previous studies. In addition, Cotter (1998) notes that leverage and interest cover are the most commonly used covenants in public and private debt contracts. Hence, maintaining these ratios are important in ensuring companies continuously having sufficient funds. However, given the low level of reporting of such data noted in this study, it appears that Australian company managers do not believe that these ratios are important to be communicated to the shareholders.

Yet, Table 2 shows virtually no dissemination of liquidity and cash flow ratio data. Al-Ajmi (2008) surveys the perceptions of credit and financial analysts of the usefulness financial ratios. He finds that both credit analysts and financial analysts rank cash flow based ratios lower than non-cash-based ratios. It appears that investors consider the information in the cash flow statement as less important in comparison with the balance sheet and the income statement; company managers may share this viewpoint.

Overall, it can be concluded that the level of financial ratio in Australian annual reports remains very low with 81% of the ratios disclosed at a 10% or less rate. Ownership concentration is tested as a possible predictor for the level of EFRD. The statistical results reveal that there is a moderately negative association between the ownership concentration and the EFRD. It appears that voluntary disclosure of financial ratios (at least to some degree) mitigates agency problems when the company has dispersed shareholding. This result is consistent with prior studies such as McKinnon and Dalimunthe (1993) in Australia, Hossain *et al.* (1994) in Malaysia, Lakhal (2005) in France and Oliveira *et al.* (2006) in Portugal.

As a control variable, firm size is found positively and significantly[13] correlated with EFRD. The regression results also indicate that the more independent the auditor, the more financial ratios with higher quality provided in the annual reports. Moreover, both univariate and multivariate tests reveal that companies audited by Big4 audit firms

[13] Higher political visibility as argued by agency theory is one of possible reason by bigger companies provide more financial ratios in their annual reports. In addition, bigger firms appear to have higher agency costs, and the provision of freely available financial ratios in their annual reports possibly could lower the agency problems. Other possible reason is that bigger firm normally have better disclosure practices because they have lower unit cost in accumulating information. Bigger firms also provide more financial ratios because they need greater financing. By providing the relevant information, possibly they could attract more potential investors and financiers. This result is consistent with previous studies such as Ho and Wong (2001), Watson *et al.* (2002), Gul and Leung (2004), Wallace *et al.* (1994), Hossain *et al.* (1994) and Singhvi and Desai (1971).

provide more financial ratios. In addition, it appears that profit firms provide more financial ratios in their annual reports. One possible reason is that they wanted to show that they are performing well, and trying to attract potential investors in order to gain additional capital. Profit firms also could be associated with political visibility as suggested by agency theory. The result is consistent with pervious study conducted by Labelle (2002) who argues that firms with good performance are more likely to invest in quality disclosure. This is because profit making firms are better placed to invest in governance practices that can be subsequently be disclosed.

In conclusion, the findings of this study suggest the levels of financial ratio disclosures in the Australian annual reports are very low, with a slight improvement for *Share Market Measures*, *Capital Structure* and *Profitability* sub-categories. There is virtually no transparency of Australian companies' financial activities and prowess. Consideration should be given for more regulatory intervention consistent with the past requirement for mandatory disclosure of the Earnings per share ratio. A greater level of communication could enhance decision-making and stakeholder understanding particularly for the smaller less sophisticated users.

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Appendix 1

Study	Theory	Country	Disclosure source	DV	IV (expected sign)	CV	Findings
(Morton and Harrison 2009)	Signalling Agency	Australia	• 96 annual reports of 2004 and 93 annual reports of 2005 • Excluding remuneration report, corporate governance statement, financial statements and notes to the accounts	LogRatioDisclosure (LOGRD) = log of total proportion of a page taken up by the each ratio disclosure.	• Profitability (+) • Leverage (null) • Top20 (-) • Independent board (+) • Size (+)	• Industry	• On average, ratio is disclosed similarly for both years (about 70% of a page) or logged 20% of a page • Correlation : profitability, leverage, independent board and size are correlated • Regression: profitability, board independence and size positively and significantly related
(Mitchell 2006)	Signalling Agency	Australia	528 annual reports of 1990/1991	10 ratios classified into 5 categories: 1. Share Market Measures (NTAB and EPS) 2. Profitability (ROE and ROA) 3. Capital Structure (Debt to equity and Debt to assets) 4. Liquidity (Interest cover and current ratio) 5. Other (Payout and effective tax rate)	• Leverage (+) • Top20 (-) • No of analysts (+) • ROE industry (+)	• MktCap • Mkt/Bk • Earnings volatility • Industry	• The Share Market Measures (NTAB and EPS), Profitability (ROE) and gearing (D/E) mostly reported • Selective reporting where companies disclose ratios that significantly higher than their non-reporting (NTAB, EPS, ROE and D/E ratios) • Regression: Leverage, Number of analysts, ROE industry, Top 20 are significant predictors. Also EVol and Mkt/Bk.
(Watson *et al.* 2002)	Signalling Agency Legitimacy	UK	313 annual reports for 1989-1993 of Top 1000 list	Dichotomous measure (disclosure or non-disclosure) of at least one ratio in the whole annual report. Five categories: 1. Investment 2. Profit 3. Efficiency 4. Gearing 5. Liquidity	• Profitability (+) • Leverage (mixed) • Liquidity (mixed) • Efficiency (+) • Size (+) • Industry (mixed)		• Investment, gearing and profitability ratio most popular • Industry (media and utilities less likely), size and firm performance hold for certain years only.