

CHAPTER 4: SME FINANCIAL REPORTING PRACTICES

4.1 Introduction

This fourth chapter of the thesis is concerned with the nature and likely changing role of financial reporting practices during growth undertaken by small and medium-sized enterprises. Emphasis is placed wherever possible on businesses engaged in manufacturing and legally organised as proprietary companies. Of particular interest is whether greater sophistication in financial reporting practices accompanies, either spontaneously or deliberately, a smaller enterprise's experience of the challenges and problems posed by growth. Also of interest are relationships that might exist between the sophistication of financial reporting practices on the one hand and business growth and performance on the other.

The chapter first provides a broad overview of existing knowledge of financial reporting practices in smaller enterprises generally. Subsequently, the limited available evidence on actual financial reporting practices in growth SMEs is reported in some detail. There follows a review of evidence on any apparent relationships between the nature and frequency of financial reporting and achieved business growth and performance.

4.2 Financial Reporting Practices in Smaller Enterprises

4.2.1 Financial Reporting Evidence from Overseas

This section of the chapter provides an broad overview of existing knowledge of financial reporting practices in smaller enterprises generally – that is, without specific attention to possible influences on these practices such as the process of growth, and without specific consideration being given to possible effects of these practices on enterprise growth and performance. Overseas evidence on financial reporting practices is examined in this sub-section of the chapter, and Australian evidence is presented in following sub-section. Where empirical evidence available on financial reporting practices is specifically identified with smaller growth enterprises, this is reviewed in subsequent sections of the chapter. Throughout this chapter, considerable reliance is placed on reviews of available empirical evidence on SME financial reporting practices undertaken by McMahon & Holmes (1989, 1990), McMahon & Davies (1991a, 1991b), McMahon & Holmes (1991), McMahon & Davies (1992a, 1992b), McMahon & Holmes (1992), McMahon *et al.* (1992a, 1992b, 1992c), McMahon *et al.* (1993a, 1993b), McMahon & Davies (1994) and McMahon *et al.* (1994a, 1994b).

Schabacker's (1960) report on the cash planning practices of 28 small manufacturing businesses in the State of California in the United States indicates that 71.4 per cent do not use a written forecast of cash-flows, and suggests that this may have actually overstated the extent of use of cash-flow forecasts generally. All the owner-managers interviewed considered that they are able to adequately manage the

cash-flows of their business in their head, with occasional notes or simple calculations. Schabacker (1960) is unable to establish a significant relationship between the financial health and progress of the sample businesses and their use of formal cash-flow forecasting.

Sixty-two small and medium-sized manufacturers from throughout the United States responded to Luoma's (1966, 1967) questionnaire survey concerned with the use of accounting information in managerial decision-making. Eighty-six per cent of respondents report use of some form of financial statement analysis and interpretation. Of these, 40 per cent indicate that the founder of the enterprise is actively involved. Responses to a question dealing with the financial ratios used in the analysis and interpretation of financial statements are summarised in the following table:

Table 4.1: Financial Ratios Used

Financial Ratio	Per Cent Respondents	
	Annual Sales < U.S.\$5 million	Annual Sales > U.S.\$5 million
Current ratio	83	76
Accounts receivable turnover	72	59
Return on assets	38	47
Earnings per share	41	59
Profit margin	76	76
Acid test	28	35
Inventory turnover	76	71
Debt ratio	24	29
Asset turnover	14	24
Return of stock	38	35
Operating ratio	59	76
Fixed coverage ratio	28	18

Responses to a question dealing with the benchmarks to which financial ratios are compared in the analysis and interpretation of financial statements are summarised in Table 4.2 on the next page.

A study of the use of formal and informal cash-flow forecasting in 30 small manufacturing businesses located in the State of Colorado in the United States is undertaken by Bean (1974). All participants in the study undertake some form of cash-

Table 4.2: Financial Ratio Benchmarks Used

Financial Ratio Benchmark	Per Cent Respondents	
	Annual Sales < U.S.\$5 million	Annual Sales > U.S.\$5 million
Past performance	93	100
Industry averages	41	47
Other businesses	21	41
Goals	28	-

flow forecasting, and the adoption of cash-flow forecasting is reported to be directly correlated with the perceived need for such a technique by owner-managers. Public accountants and bankers are found to be remiss in failing to recommend the use of cash-flow forecasting to their small enterprise clients.

Reporting on a United States study conducted in 1977, Lindcamp & Rice (1983) shed some light on the familiarity with financial statement analysis of 102 owner-managers of small retail stores in the State of Mississippi. Around 73 per cent report that they analyse a detailed breakdown of their cost figures on a frequent or regular basis. Nearly 60 per cent indicate that they do not maintain up-to-date figures on the contribution to profit of individual products or product lines. A little over 50 per cent seldom or never compare their enterprise's performance with industry figures. Over 50 per cent of respondents do not appear to understand the meaning of 'debt/equity ratio'; and 59 per cent do not know the value of this ratio for their enterprise.

Grablowsky (1978) reports that only 33 per cent of a sample of 66 small enterprises from a number of industries in the State of Virginia in the United States prepare cash-flow forecasts, and that younger concerns are more likely to do so than longer-established businesses. The most common planning period is a year ahead, although some respondents also use weekly, monthly and quarterly forecasts. The frequency of updating of cash-flow forecasts is distributed widely over weekly, semi-monthly, monthly, quarterly and annual intervals.

Aspects of the cash-flow forecasting practices of small petroleum marketing concerns in the United States included in Cooley & Pullen's (1979) survey are summarised in Table 4.3 on the next page. Smaller concerns are reported to have a shorter planning horizon, a longer forecasting interval and less frequent updating when preparing and using cash-flow forecasts. Awareness and use of cash-flow forecasts in Murphy's (1979) United Kingdom research is revealed in Table 4.4 on the next page. Apparently, liquidity problems had caused some small manufacturing firms in the study to undertake cash-flow forecasting.

Table 4.3: Cash-Flow Forecasting Practices

Practice Characteristic	Per Cent Respondents
<u>Planning horizon:</u>	
Under 2 months	44
Between 2 and 6 months	29
Over 6 months	<u>27</u>
	<u>100</u>
<u>Forecasting interval:</u>	
Daily	21
Weekly	35
Monthly	<u>44</u>
	<u>100</u>
<u>Update frequency:</u>	
Daily	18
Weekly	26
Monthly	<u>56</u>
	<u>100</u>

Table 4.4: Awareness and Use of Cash-Flow Forecasts

Enterprise Size (number of employees)	Per Cent Respondents	
	Awareness	Utilisation
11 to 50	59	32
51 to 100	89	67
101 to 200	91	27
201 to 500	90	70

Hankinson (1982, 1983) presents the results of a study of investment decision-making in 52 small engineering enterprises in the south-west of England conducted between 1979 and 1982. As part of this study, Hankinson finds that only one enterprise in the sample uses financial ratio analysis.

Amongst the 62 small manufacturing concerns in the State of Illinois in the United States surveyed by Stoner (1983), 94 per cent are reported to prepare sales and earnings forecasts, and 81 per cent apparently prepare cash-flow forecasts. Around 10 per cent of firms produce *pro forma* financial statements as part of their long-range planning activities. Aspects of the cash-flow forecasting practices of the Canadian firms in Anvari & Gopal's (1983) survey are summarised in Table 4.5 on the next page.

Table 4.5: Cash-Flow Forecasting Practices

Practice Characteristic	Per Cent Respondents
<u>Planning horizon:</u>	
Weekly	7
Monthly	38
Quarterly	13
Annually	<u>42</u>
	<u>100</u>
<u>Update frequency:</u>	
Weekly	12
Monthly	42
Quarterly	19
Annually	<u>27</u>
	<u>100</u>

Page's (1984) study of 413 smaller enterprises in the United Kingdom was concerned primarily with the use made of financial reports, and no evidence is provided on the form and frequency of reporting. In the opinions of owner-managers surveyed, the ranking of uses of their annual statutory financial statements in order of importance is as follows:

Table 4.6: Ranking of Use of Financial Reports

Use	Per Cent First Ranks
Providing management information	41
Supporting tax returns	26
Providing information to financiers	17
Reporting to shareholders	7
Providing information to creditors	1
Other	1
No response	7
Total	100

Although supported by the North American findings of Abdel-Khalik (1983), Page (1984) finds the importance accorded to management use of information contained in annual statutory reports surprising given typical delays in their preparation. The remainder of the survey focused mainly on use made of other enterprise's financial statements in credit decisions. Page (1984, p. 275) concludes that responses to questions asked:

. . . do not support the view that publicly disclosed accounting information is a regular tool in the small businessman's credit granting decisions . . .

While principally concerned with the existence and extent of financial reporting burdens imposed on smaller enterprises by corporations legislation and accounting standards, the study of 50 smaller enterprises in the United Kingdom conducted by Carsberg *et al.* (1985) gives some useful insights into reporting practice, although little evidence is provided on the form and frequency of reporting. While a profit and loss statement and a balance sheet are normally included, only 58 per cent of owner-managers indicate that annual statutory financial reports on their enterprises include a funds statement; and apparently only 16 per cent actually use this statement. No adjustments for the impact of inflation are made to financial management information in 70 per cent of enterprises studied. Eighty per cent of respondents indicate that public accountants are responsible for preparation of their annual statements.

In the opinions of owner-managers surveyed by Carsberg *et al.* (1985), the ranking of uses of their annual statements in order of importance are as follows:

Table 4.7: Ranking of Use of Financial Reports

Use	Number First Ranks
Providing management information	18
Supporting taxation returns	11
Providing information to financiers	11
Reporting to shareholders	8
Providing information to creditors	0
Providing information to employees	0
No response	7

This evidence clearly supports Page's (1984) earlier finding on the importance accorded to management use of information contained in annual statutory reports. When asked about the extent to which information contained in annual statements for their enterprises actually influence certain financial management decisions, owner-managers responded as shown in Table 4.8 on the next page. Sixty-four per cent of owner-managers who use annual statutory reports for financial management apparently think they are adequate for this purpose. Recall from Chapter 3 of the thesis that Carsberg *et al.* (1985) additionally provide some support for the Austrian perspective on financial reporting by smaller enterprises.

Table 4.8: Decision Influence of Financial Reports

Decision Type	Per Cent Respondents		
	Major Influence	Minor Influence	No Influence
Pricing	14	26	60
Dividends/directors' remuneration	56	16	28
Borrowing	36	14	50
Cash management	36	16	48
Capital expenditures	40	32	28
Employee remuneration conditions	28	30	42

DeThomas & Fredenberger (1985) find that 81 per cent of the small enterprises in their United States survey regularly obtain summary financial information. Virtually all of this information is in the form of traditional financial statements, with the remainder being bank reconciliations and operating summaries. No respondent reports regularly receiving cash-flow information. Additional financial information respondents would have liked to receive includes:

Table 4.9: Additional Financial Information Desired

Financial Information	Per Cent Respondents
Cash-flow summary	67
Revenue and expenses by product	20
Contribution format income statement	43
Analysis of receivables and payables	15
Other	2

Responsibility for analysis and interpretation of financial statements is reported to be as in Table 4.10 on the next page. A low 11 per cent of respondents report using financial statement information formally as part of managerial evaluation, planning and decision-making; the remainder make only cursory use of the information. Yet, 61 per cent feel such statements provide the information they require for planning and decision-making. Only a small fraction (2 per cent) employ financial ratio analysis; and few make even simple historical comparisons. DeThomas & Fredenberger (1985) attribute the apparent paradox of a high proportion of respondents obtaining financial statements, but relatively

few making full use of them, to their use for taxation purposes only, and to the limited background in financial management of most owner-managers.

Table 4.10: Responsibility for Financial Statement Analysis

Person Responsible	Per Cent Respondents
Owner-manager	82
In-house bookkeeper	14
Outside accountant	4
Total	100

Arnold-McCulloch & Lewis's (1985, 1986) findings on the use of financial ratios in 52 recently-established enterprises in Scotland are as follows:

Table 4.11: Financial Ratios Used

Financial Ratio	Per Cent Respondents
Debtors to creditors	10
Acid test	6
Sales to debtors and cash	8
Stock turnover	10
Return on investment	12
Net return on sales	10
Gross return on sales	10

It appears that only one enterprise in the sample makes significant use of ratio analysis as a financial control technique. In Arnold-McCulloch & Lewis's (1985, 1986) research, 38 per cent of respondents report preparing sales forecasts and 42 per cent report preparing cash-flow forecasts. Arnold-McCulloch & Lewis (1986) indicate that forecasts are often produced to satisfy lenders, and are not used for financial management purposes.

The results of a study of 398 small pharmacies in the United States, some of which had closed or changed hands, are reported by Thomas & Evanson (1987). The pharmacies are located in Michigan, North Carolina, Nebraska, Rhode Island and Washington. Income statements and balance sheets are prepared at least quarterly by 62.5 per cent of respondents, and annually by 32.1 per cent. There are no significant

differences in frequency of obtaining financial statements between continuing enterprises, enterprises which eventually closed and those enterprises which changed hands. Over 85 per cent of respondents indicate that an outside accountant prepares the financial statements. The proportions of respondents reporting use of various financial ratios are as follows:

Table 4.12: Financial Ratios Used

Financial Ratio	Per Cent Respondents
Cost of goods sold to sales	68.5
Inventory turnover	68.0
Gross margin on sales	61.9
Net profit on net sales	47.1
Net profit on inventory	39.4
Current assets to current liabilities	39.1
Net sales on inventory	36.8
Average collection period	30.7
Total liabilities to net worth	26.1
Return on equity or investment	25.8
Days accounts receivable outstanding	25.1
Days accounts payable outstanding	22.0
Inventory to net working capital	21.5

Pelham & Clayson (1988) report the results of a United States study of receptivity to business decision and planning tools, including market research, financial analysis, quantitative decision techniques and strategic planning, amongst senior managers of small manufacturing concerns in the State of Iowa in 1986. Financial ratio analysis is rated important by 53 per cent of respondents, and is ranked third after formal investment analysis (53.5 per cent of respondents) and one element of strategic planning, namely formal analysis of the competitive environment (56.7 per cent of respondents). On a receptivity scale devised by the researchers, financial analysis is considered to be the most important of business tools. A high positive correlation exists between receptivity to financial analysis and the age of respondents. 'Financial analysis' includes both the use of financial ratios and formal investment analysis through

techniques such as return on investment, breakeven analysis and discounted cash-flow calculations.

Some evidence on the financial reporting practices of very small enterprises in the United Kingdom is provided by Nayak & Greenfield (1991, 1994). In a sample of 200 such enterprises, just over 65 per cent of owner-managers are found to monitor financial performance on a daily basis. Ninety-eight per cent of owner-managers feel they know how well their enterprise is performing without necessarily having access to formal financial reports. Information on orders or sales is very important in this regard. As far as formal reports are concerned, most owner-managers find the profit and loss statement useful, while less than half actively use their balance sheet.

In New Zealand, Cameron (1993) reports that 90 per cent of a sample of nearly 900 smaller enterprises indicate frequent use of public accountants for preparation of annual financial statements. Apparently, 40 per cent of respondents frequently obtain assistance from public accountants when attempting to interpret financial statements, with just over 30 per cent doing so sometimes. Most recently, Peel & Wilson (1996) indicate the following usage of cash-flow projections in a sample of 82 small concerns in Yorkshire, England:

Table 4.13: Use of Cash Budgeting

Frequency	Per Cent Respondents
Never	8.5
Sometimes	11.0
Quite often	20.7
Often	23.2
Very often	36.6
Total	100.0

Peel & Wilson (1996) report no statistically significant difference in use of cash-flow forecasting between respondents with fewer than 10 employees and those with 10 or more.

4.2.2 Financial Reporting Evidence from Australia

There have been a number of empirical studies conducted in Australia investigating the types of financial reports produced by smaller enterprises, the frequency of their preparation and their perceived usefulness for management purposes. Helpful reviews of this empirical evidence up to the early 1990s are provided by McMahon & Holmes (1989, 1990), Holmes & Nicholls (1990), McMahon & Davies (1991a, 1991b), McMahon & Holmes (1991), McMahon & Davies (1992a, 1992b), McMahon & Holmes (1992),

McMahon *et al.* (1992a, 1992b, 1992c), McMahon *et al.* (1993a, 1993b), McMahon & Davies (1994) and McMahon *et al.* (1994a, 1994b). All these sources are heavily relied upon below.

Mirza (1979) interviewed 50 small enterprise owner-managers in Townsville, Queensland regarding (*inter alia*) their preparation and use of future-oriented financial statements and he reports as follows:

Table 4.14: Types of Future-Oriented Financial Reports Used

Financial Report	Per Cent Respondents
Profit and loss forecast	44
Cash-flow forecast	38
Forecast balance sheet	22

McCahey (1986) reports on the financial reporting practices of 40 small companies situated mainly in Melbourne, Victoria and surrounding suburbs. Owner-managers are ranked as the most important users of financial reports, closely followed by bank lending officers. Where they exist, non-managing owners are ranked highly as users, but behind owner-managers. The financial reports apparently provided to external users are as follows:

Table 4.15: Types of Financial Reports Supplied to External Users

Report Recipient	Per Cent Respondents			
	Statutory Accounts	Taxation Returns	Detailed Profit & Loss Statement	Other
Bank lending officer	9	82	6	3
Non-managing owner	-	40	-	60
Other	-	-	-	100

Reflecting the types of financial reports mainly provided, reporting is predominantly on an annual basis. McCahey (1986, pp. 111-2) indicates that:

Many interviewees appear to think that the schedules prepared for taxation return purposes form part of the accounts. Indeed, the only formal records that some companies have of their financial position are copies of previous years' taxation returns.

Recall from Chapter 3 of the thesis that McCahey (1986) additionally provides some support for the Austrian perspective on financial reporting by smaller enterprises.

Although owner-managers appear to be the primary users of financial reports, it is considered unlikely that they have the ability to interpret them properly. McCahey (1986, p. 123) goes on:

Managers review the financial statements to ensure that their expectations of the company's performance, based on knowledge of the business, are confirmed by the formally presented results.

When asked what financial reports they provide in support of loan applications, the respondents to McCahey's (1986) survey indicate as follows:

Table 4.16: Types of Financial Reports Provided to Financiers

Financial Report	Per Cent Respondents
Previous year's financial statements	94
Updated management reports	17
Cash-flow projections	17

The respondents are of the opinion that bank lending officers do not regard the information contained in the financial reports as being as important to the lending decision as the enterprise's credit history.

Holmes (1986) summarises the financial information and analyses prepared both internally and externally, at least annually, for 60 smaller enterprises situated in Newcastle, New South Wales as follows:

Table 4.17: Financial Reports and Analyses Used

Financial Reports/Analyses	Per Cent Respondents	
	Prepared Internally	Prepared Externally
Statutory accounts	7.3	61.8
Taxation returns	3.6	92.7
Funds statement	18.2	12.7
Cash-flow statement	27.3	14.5
Production reports	25.5	1.8
Job costing reports	23.6	1.8
Ratio analysis	10.9	5.5
Inter-firm comparisons	10.9	-
Industry trends	10.9	3.6

In reporting the results of his longitudinal study of over 10,000 Australian smaller enterprises spanning twelve years, Williams (1986) indicates that the frequency of preparation of financial statements is as follows:

Table 4.18: Frequency of Financial Reporting

Frequency	Per Cent Respondents
At least monthly	7.7
Quarterly	12.5
Half-yearly	20.0
Yearly	59.8
Total	100.0

Williams (1986) reports that only 13 per cent of participants in his study use cash-flow forecasts 'consistently and well' with 48 per cent using them 'occasionally', and with the remaining 39 per cent 'rarely/never/poorly' preparing or using them. Williams (1986) assesses as follows the use made by owner-managers in his study of financial reports for managerial decisions:

Table 4.19: Competent Use of Financial Reports

Researcher Assessment	Per Cent Respondents
Excellent/good	14.5
Average	23.4
Rarely/never/poorly	62.1
Total	100.0

Holmes (1987a, 1987b, 1988) and Holmes & Nichols (1988, 1990) summarise the financial information and analyses prepared both internally and externally, at least annually, for a sample of 928 smaller enterprises situated in Sydney, New South Wales; Melbourne, Victoria and Brisbane, Queensland as in Table 4.20 on the next page. This evidence suggests that meeting statutory obligations is the predominant motivation for obtaining regular financial reports in Australian smaller enterprises. Confirmation is provided by a finding that 68.2 per cent of owner-managers give legislated requirements/taxation returns as the main reason for obtaining accounting information.

Only 28.6 per cent of owner-managers want information on enterprise performance primarily for internal use.

Table 4.20: Financial Reports and Analyses Used

Financial Reports/Analyses	Per Cent Respondents	
	Prepared Internally	Prepared Externally
Statutory accounts	9.7	51.7
Taxation returns	7.7	88.8
Balance sheet/ profit & loss statement	14.5	68.3
Manufacturing statement	6.0	2.6
Funds statement	10.0	7.7
Cash-flow statement	20.5	8.1
Production reports	10.3	4.3
Job costing reports	18.4	2.4
Ratio analysis	7.4	5.0
Inter-firm comparisons	5.9	2.7
Industry trends	6.9	1.4

Responsibility for preparation of financial statements amongst smaller enterprises responding to Holmes' (1987a) survey falls as follows:

Table 4.21: Responsibility for Preparing Financial Reports

Preparer	Per Cent Respondents
Owner-manager	15.4
Internal accountant	5.8
External accountant	74.8
Other	3.3
No response	0.7
Total	100.0

The frequency of preparation of financial statements for Holmes' (1987a) sample of smaller enterprises is reported to be:

Table 4.22: Frequency of Financial Reporting

Frequency	Per Cent Respondents
Monthly	18.9
Quarterly	7.8
Half-yearly	10.2
Yearly	61.7
No response	1.4
Total	100.0

This evidence is somewhat at odds with findings presented earlier, as it implies that more owner-managers should have been inclined to obtain financial reports relating to enterprise performance than has actually been observed.

Kent (1988) reports on the use made by 82 small Australian pharmacies operating in Brisbane, Queensland of management advisory services provided by public accounting firms. During the study she enquired as to the regularity of preparation of profit and loss statements:

Table 4.23: Frequency of Historical Profit and Loss Statement

Annual Frequency	Per Cent Respondents
None	1.2
Once	63.4
Twice	11.0
Three times	3.7
Four times	4.9
Twelve times	14.6
Other	1.2
Total	100.0

Again, the emphasis on annual financial reports is clear. Table 4.24 on the next page suggests that few respondents in Kent's (1988) study regularly use cash-flow forecasts.

Table 4.24: Frequency of Cash-Flow Forecast

Annual Frequency	Per Cent Respondents
Never	52.5
Once	8.5
Twice	2.4
Three times	1.2
Four times	7.3
Twelve times	24.4
Fifty-two times	3.7
Total	100.0

Holmes *et al.* (1990) report that almost 20 per cent of a sample of 122 small plumbing businesses located in Brisbane, Queensland use a computer-based accounting system, with those concerns having employees being more likely to possess such a facility. A significant relationship is found between the frequency of preparation of financial reports and owning a computer-based accounting system. Respondents with a computer-based accounting system perceive themselves as having better management control of their businesses than when they operated a manual accounting system.

The apparent influence of accounting standards promulgated by the professional accounting bodies on financial reporting by Australian smaller enterprises, and the extent of support for differential reporting, have been investigated by a number of researchers. Ramsay & Sutcliffe (1986) examine the financial reports for financial years ending in 1982 lodged with the Victorian Corporate Affairs Commission by 423 unaudited exempt proprietary companies. Compliance with certain aspects of four particular accounting standards (namely AAS 1, AAS 2, AAS 4 and AAS 6) is investigated. It is found that the companies studied exhibit a much higher level of non-compliance with the accounting standards in question than do listed public companies included in earlier Australian research.

In McCahey's (1986) study, few respondents appear to have knowledge of the accounting standards and legal requirements which apply to the financial reports of their small companies. When questioned on the cost burden imposed by these financial reporting imperatives, the respondents replied as shown in Table 4.25 on the next page. A review of the financial reports of companies included in McCahey's (1986) study reveals many cases in which the requirements of the relevant accounting standards are not met.

Table 4.25: Financial Reporting Cost Burden

Opinion On Cost Burden	Per Cent Respondents
The requirements as to preparation of financial statements do not impose a burden on the company	28
The requirements impose a cost for the company, but the company receives expertise in the area of finance and taxation in return, so is not concerned with the cost	23
The company is concerned with costs of complying with the requirements and simpler accounts may reduce these	5
The company is concerned that there is no benefit for management from the amount of detail currently included in the accounts. Accounts would be more useful for management in a simpler form	17
Both of the two previous statements are valid	17
The company considers that the costs of complying with the requirements are high, but questions whether a special set of standards would reduce these, yet still provide useful information to the users of accounts	10
Total	100.0

On the grounds that they play a key role in decisions regarding the content of financial statements prepared for smaller enterprises, the opinions of 91 accounting practitioners on the applicability of accounting standards to enterprises of various sizes and legal structures were obtained by Holmes *et al.* (1991b). Approximately 97 per cent of respondents indicate that they believe there is a need for differential reporting requirements associated with size and legal structure. The basis for differentiation favoured by respondents is the purpose of the financial statements. The justification inferred by the study is that general purpose statements complying with accounting standards are intended to meet the requirements of third party users, and smaller organisations with less complex legal structures are less likely to have third party users. Thus, substantially reduced financial reporting is considered appropriate. Other significant findings of the Holmes *et al.* (1991b) study include:

- Respondents consider only four of the 23 then existing accounting standards are appropriate to smaller enterprises (namely AAS 1, AAS 2, AAS 4 and AAS 5). These primarily concern valuation and disclosure relating to the determination of income. The study infers that other accounting standards are not relevant to the 'normal' business of such enterprises.
- Respondents were asked to identify the basis generally used by them in preparing financial reports for privately owned companies. The majority indicated that an income tax basis is used, suggesting that statements prepared are not general purpose reports, but returns prepared specifically to comply with taxation legislation requirements. Nevertheless, 60 per cent of respondents indicate that they consider it would not be appropriate to base differential reporting guidelines on taxation legislation.

Relying heavily on a comparative commentary from McMahon & Holmes (1989), the outcomes of this broad overview of existing knowledge of financial reporting practices in smaller enterprises generally may be summarised as follows:

- North American research indicates a relatively high frequency of financial statement preparation, with a typical smaller enterprise obtaining a profit and loss statement and a balance sheet at least quarterly (DeThomas & Fredenberger, 1985; Thomas & Evanson, 1987). External accountants play a significant role in preparation of such reports (Thomas & Evanson, 1987). Australian evidence suggests that financial statements for smaller enterprises are prepared predominantly by external accountants at annual intervals, and they normally comprise just the profit and loss statement and balance sheet. The content and presentation of reports is greatly influenced by taxation and statutory requirements (Holmes, 1986, 1987; Williams, 1986; Holmes & Nicholls, 1988; Kent, 1988). There is evidence that owner-managers do not consider the statements they receive particularly useful for decision making purposes (Holmes 1986, 1987; Williams, 1986).
- Inevitable liquidity pressures, and the requirements of lending institutions, have combined to make cash-flow forecasting particularly important for smaller enterprises. Based on studies in the United Kingdom (Murphy, 1973; Arnold-McCulloch & Lewis, 1986), North America (Schabacker, 1960; Bean, 1974; Grablowsky, 1978; Grablowsky & Rowell, 1980; Stoner, 1983) and Australia (Mirza, 1979; Williams, 1986), it would appear that between 30 and 40 per cent of smaller enterprises make significant use of cash-flow forecasting. Little evidence is available on use in such businesses of forecasted profit and loss statements and balance sheets.
- On the whole, North American studies reveal significant use of techniques for the analysis and interpretation of information in financial statements, although use of financial ratio analysis appears limited (Luoma, 1967; Lindecamp & Rice, 1983;

D'Amboise & Gasse, 1983; DeThomas & Fredenberger, 1985). Historical comparisons of financial statement numbers and ratios appear to be the principal basis for performance evaluation (Luoma, 1967). Primary responsibility for carrying out financial analysis seems to rest with owner-managers (Luoma, 1967; DeThomas & Fredenberger, 1985). There is persuasive evidence that the efficacy of financial statement analysis as a managerial tool in smaller enterprises is severely limited by a lack of sophistication in use of such techniques on the part of owner-managers (DeThomas & Fredenberger, 1985; Thomas & Evanson, 1987). Evidence from the United Kingdom (Hankinson, 1982, 1983; Arnold-McCulloch & Lewis, 1986), and from Australia (Holmes, 1986, 1987), suggests extremely limited use (< 10 per cent) of standard techniques of financial analysis amongst smaller enterprises.

4.3 Financial Reporting Practices in Smaller Growth Enterprises

4.3.1 Financial Reporting and Growth Evidence from Overseas

In this section of the chapter the emphasis is upon available empirical evidence on the financial reporting practices of smaller growth enterprises in particular. Of special concern is the extent to which, if at all, their financial reporting practices change as they experience growth and progress from one stage of development to another. The factors which appear to lead to such changes are clearly of interest. A search of the English-language literature internationally has revealed only a few published empirical studies of smaller growth enterprises with a similar focus to that of this thesis. Overseas evidence on financial reporting practices in growth SMEs is examined in this sub-section of the chapter, and Australian evidence is presented in following sub-section.

An early United States study of 37 small manufacturers experiencing growth, undertaken by Lawler (1946, 1947), finds that just below 20 per cent prepare written financial forecasts of any kind. Another early investigation that is similar in many respects to the present inquiry was undertaken in 1960 by the Bureau of Economic and Business Research of Temple University in the United States city of Philadelphia. This is a field study of the extent to which financial information is actually understood and used by smaller enterprises. As the report on the research observes (Bureau of Economic and Business Research, 1961, p. 1):

Construction of financial ratios for use by small business will serve little purpose unless [those involved] are reasonably familiar with standard financial terminology and with the meaning and potential uses of ratios in particular.

Commenting on the sample employed, the report (Bureau of Economic and Business Research, 1961, p. 2) indicates that it comprises larger small enterprises which have overcome the initial hurdle of survival (roughly speaking, have been established for two years or more), and that (*italics added for emphasis*):

The information collected from such a sample might throw light on the practices of a group of small business [owners/managers] who are concerned with the

problems of continuity and *growth* of their businesses and who would be reasonably aware of the need for utilizing techniques of financial analysis in their management.

At the time, no previous comparable studies were known to have been undertaken. Because of the distinctive parallels with the present research, the findings of the Temple University study are reviewed in some detail below.

The investigation involved personal interviews, structured around a questionnaire developed for the purpose, with the owners and managers of 299 smaller enterprises from throughout the State of Pennsylvania. Sometimes bookkeepers and accountants employed by the participating enterprises attended, as did representatives of associated accounting firms. The interviews were conducted by Temple University faculty members and graduate research assistants. The sample comprises manufacturing enterprises reporting from 50 to 250 employees and non-manufacturing enterprises reporting a net worth between U.S.\$20,000 and U.S.\$200,000. Considering principal activity, manufacturing enterprises comprise about one-half of the sample; the remainder being wholesaling, retailing and service enterprises. This distribution is not necessarily representative of the population of smaller enterprises in Pennsylvania at that time.

Around 70 per cent of manufacturing enterprises in the sample are reported to have been established for 30 years or more; and this is the case for about 44 per cent of the wholesaling and service enterprises and 31 per cent of the retailing enterprises. There is a high positive correlation between size of enterprise and age. These figures suggest that the sample has considerable maturity in terms of stage in the enterprise life-cycle. Just over 60 per cent of the participating businesses are legally organized as private companies. There is a high positive correlation between size of enterprise and incorporation, mainly accounted for by the fact that manufacturing enterprises in the sample tend to be both larger than other participants and more inclined to be legally organized as companies. The report on the study (Bureau of Economic and Business Research, 1961, p. 10) spells out the possible implications of these enterprise characteristics for financial information preparation as follows:

In general, as one moves away from the [sole] proprietorship, there is some presumption in favor of the business maintaining more detailed and careful financial records. This is specially so with [companies] which are generally subject to greater special regulation and taxation, both of which call for careful record keeping.

Table 4.26 on the next page provides information on the owner/manager role in bookkeeping activities, and on use of internal specialists for this purpose, amongst enterprises participating in the Temple University study. The responsibility for bookkeeping activities is a function of enterprise size, with larger participants being more likely to employ a full-time bookkeeper. The potential contribution of owners/managers to accounting and financial management in their enterprises might be gauged

Table 4.26: Responsibility for Bookkeeping

Bookkeeping Undertaken By	Per Cent Respondents
Owners/managers	23.8
Part-time bookkeepers	22.1
Full-time bookkeepers	54.1
Total	100.0

from the fact that 59.3 per cent report having had training in bookkeeping and/or accounting, and that 43.8 per cent claim to have been trained in finance. No indication is given of the level of this particular training; however, just over one-half of owners/managers indicate at least some formal education beyond high school.

The extent of reliance on external advisers concerned with accounting and financial management matters is indicated by findings such as the following:

- External accountants assist owners/managers undertaking bookkeeping activities or part-time bookkeepers in 36.5 per cent of enterprises participating in the study. A further 9.4 per cent do not use external support in these circumstances.
- External accountants are used to support full-time bookkeepers by 25.4 per cent of participants. A further 28.8 per cent of enterprises do not use external support in these circumstances.

Overall, 89.9 per cent of participants indicate using full-time bookkeeping or accounting personnel and/or external accountants; and 63.0 per cent report obtaining financial analysis and counselling services from these sources. The larger enterprises make greater use of, and experience greater diversity in, these analytical and counselling services than do their smaller counterparts. 'Tax advice only' is reported by 14.3 per cent of participants, and is a more significant response amongst those smaller in size. A small proportion of participating enterprises report receiving limited financial counselling from trade suppliers and lending institutions.

Information in the Temple University study report on specific financial reports produced in participating enterprises is limited to statements requested by banks and other lending institutions as a condition in loan agreements, as per Table 4.27 on the next page. The pattern of these requirements may reflect the financier's traditional concern with liquidity and solvency (hence the primacy of the balance sheet). Narrow as it is, this emphasis does not necessarily correspond to that which might be considered appropriate to the overall financial management of a smaller enterprise. Of course, the situation could be that for management purposes the participating enterprises merely make do with the financial information they must in any case produce for external parties such as financiers, taxation authorities, credit rating agencies, trade suppliers,

Table 4.27: Financial Statements for Financiers

Financial Statement	Per Cent Respondents
Balance sheet	82.5
Profit and loss statement	64.6
Operating budget	10.6

etc. This point is not pursued in the Temple University study report (Bureau of Economic and Business Research, 1961, p. xiii), apart from a ventured impression conveyed without specific support that for a large proportion of enterprises which cooperated in the research (*italics added for emphasis*):

Financial statements are probably prepared primarily to satisfy government and, sometimes, to meet the requirements of creditors. *They are not management tools.*

Information from the Temple University study report on frequency of financial reporting is limited to that for statements in general and no breakdown by specific financial statements is provided in the following table:

Table 4.28: Financial Reporting Frequency

Frequency	Per Cent Respondents
Annually	30.4
Semi-annually	8.0
Quarterly	21.1
Monthly	39.9
Other	0.6
Total	100.0

The larger enterprises participating in the study tend to prepare financial statements more frequently than others, with a decided preference for monthly reporting.

In order to establish the incidence of financial ratio analysis amongst the small enterprises which took part in the Temple University study, those interviewed were asked, in an intentionally indirect manner, whether they keep track of ten specific balance sheet, profit and loss statement and mixed financial 'relationships' (that is, ratios) which are commonly recommended in the literature. The response indicates that 82.0 per cent make at least some use of these ratios. Only 9.7 per cent of enterprises, mostly of larger size, employ all ten ratios; while 72.3 per cent use as few as

one and up to nine of them. The following table provides information on the extent of use by participating enterprises of specific financial ratios mentioned by interviewers:

Table 4.29: Financial Ratios Used

Financial Ratio	Per Cent Respondents
Net profit/sales	68.6
Current assets/current liabilities	64.2
Sales/receivables	42.8
Cash plus receivables/current liabilities	42.1
Sales/inventory	40.5
Net profit/net worth	36.8
Inventory/net working capital	28.4
Net worth/debt	27.4
Net profit/assets	22.1
Net worth/fixed assets	16.1

This indication of the popularity of both the net margin on sales ratio and the current (working capital) ratio is confirmed by the response to a further question asking those interviewed to rank, in order of importance, the ratios which they consider most helpful in assessing two critical aspects of the financial health of their enterprises – profitability and solvency (or liquidity).

The findings on the importance of various financial ratios for tracking and managing enterprise profitability are as follows:

Table 4.30: Importance of Financial Ratios for Profitability

Financial Ratio	Importance Index
Net profit/sales	100
Net profit/net worth	29
Sales/inventory	19
Net profit/assets	15
Current assets/current liabilities	5
Gross profit/sales	2

The presence of the current ratio in this list is considered by the Temple University study report (Bureau of Economic and Business Research, 1961, p. 27) to be the result of 'confusion and grasping at straws in an attempt to give answers to the interviewers'. The report also considers it probable that the gross margin on sales ratio would have ranked more highly had it been specifically mentioned by interviewers (it was in fact volunteered by some participants). The findings on the importance of various financial ratios for tracking and managing enterprise solvency are as follows:

Table 4.31: Importance of Financial Ratios for Solvency

Financial Ratio	Importance Index
Current assets/current liabilities	100
Inventory/net working capital	25
Sales/inventory	23
Cash plus receivables/current liabilities	18
Net worth/debt	7
Sales/assets	2

There appears to be some confusion here between ratios which might more properly be considered measures of 'liquidity' (for example, the current ratio and the so-called 'acid test') and those which are usually associated with 'solvency' (for example, the debt to equity ratio). The researchers obviously chose not to make this distinction.

Other important findings of the Temple University study bearing on the use of specific financial ratios include:

- Most of those interviewed seemed to think of enterprise profitability in terms of profit margins, rather than some measure of return on investment such as return on owners equity or return on total assets/total funds employed. The Temple University study report attributes this, in part, to a poor understanding amongst those in the participating smaller enterprises of basic accounting and financial management concepts.
- Amongst those interviewed indicating use of financial ratios other than those specifically mentioned, there is considerable interest expressed in some which assist in the analysis of the profit and loss statement (so-called 'operating ratios' such as gross margin on sales and various expense ratios). The Temple University study report ventures that, had this type of ratio been nominated by interviewers, affirmative responses would have been quite frequent.
- In responding to a question on other financial management techniques in use, only 17.4 per cent of those interviewed report preparing cash-flow forecasts.

Although not suggested in the Temple University study report, this in itself might help to explain the apparent high dependence on the current ratio as an alternative indication of enterprise 'solvency' (more properly, liquidity). The popularity of the current ratio amongst external advisers, lending institutions, credit agencies, etc. is also likely to have been a major influence.

An attempt was made to also determine the standards against which the financial ratios of participating enterprises are judged; and, in particular, the extent to which these benchmarks are derived internally from the experience of the owner/manager and historical trends for the enterprise concerned and/or externally from published industry data. Internally established standards are reported to be in use by 96.2 per cent of those employing ratio analysis. Only 10.1 per cent of enterprises, mainly larger manufacturing concerns, appear to be using externally published norms – usually obtained from trade association sources

These findings of the Temple University study specifically dealing with financial analysis must be interpreted with some caution. Apparently, there are many respondents who answered questions in the affirmative despite having little technical understanding of the application of the techniques involved. Furthermore, the feeling of the researchers is that there are a large number of small enterprise owners/managers who keep track of the relationships which underlie financial ratios even though they are not consciously using ratio analysis as a formal management tool. An appropriate perspective on the overall findings of the Temple University study of financial reporting and analysis practices in smaller enterprises may be provided by the following comments which appear in the study report (Bureau of Economic and Business Research, 1961, p. xii-xiii):

One cannot help feeling that even among the small businesses sampled in this survey, which are probably among the larger and more well-established small businesses in the country, that a very large proportion are 'seat of the pants' operations, where the checkbook balance and on-the-spot observation of inventories are the principal guides.

and:

It cannot be affirmed that the sampled businesses are unsuccessful as a consequence, if success is to be measured simply in terms of survival. They are not fly-by-nights. Their managements have, in most cases, built up a substantial backlog of continuous experience. The survey provides no basis for judging the relative profitability of the interviewed businesses. One might ask, however, whether they would have done better had they maintained more adequate records and utilized them as management tools.

In Chapter 2 of the thesis it is indicated that the most extensive research study found dealing with overall financial management in growth small enterprises is that reported by Hutchinson *et al.* (1975), Ray (1980a, 1980b), Hutchinson *et al.* (1981), Ray & Hutchinson (1983, 1985) and Hutchinson & Ray (1986). It is also indicated that this investigation, most fully reported by Ray & Hutchinson (1983), seeks evidence on the manner in which financial reporting systems and practices appear to change as a result

of smaller enterprises experiencing rapid growth; and also attempts to contrast these circumstances with those in non-growth concerns with otherwise similar characteristics. The type and frequency of historical financial reporting in the super-growth enterprises at various stages up to and following flotation on the London Stock Exchange is indicated in the table below (adapted from Ray & Hutchinson, 1983, p. 116, Exhibit 8.6):

Table 4.32: Historical Financial Reporting in Growth Enterprises

Financial Information	Financial Reporting Frequency				
	Before (years)		Flotation	After (years)	
	-10/-6	-5/-1	0	+1/+3	+4
<u>Profit & loss statement:</u>					
Full statement	half-year	half-year	quarter	quarter	month
Sales	month	month	month	month	month
Wages	month	month	month	month	month
Materials	month	month	month	month	month
Overheads	month	month	month	month	month
Product costs	quarter	month	month	month	month
<u>Balance sheet:</u>					
Full statement	annual	half-year	half-year	half-year	quarter
Debtors	month	month	month	month	month
Creditors	month	month	month	month	month
Stocks	quarter	month	month	month	month
Cash	month	week	week	week	week
Fixed assets	annual	month	annual	annual	annual

In this table, there is clearly a tendency towards more frequent historical financial reporting as the enterprises grow and become public companies. However, there is reported to be no significant difference between this pattern for super-growth enterprises and that for historical financial reporting by the matched sample of non-growth enterprises.

The type and frequency of future-oriented financial reporting in the super-growth enterprises at various stages up to and following flotation on the London Stock Exchange is indicated in Table 4.33 on the next page (adapted from Ray & Hutchinson, 1983, p. 116, Exhibit 8.6). Again, there is a tendency towards more frequent future-oriented financial reporting as the enterprises grow and become public companies. Ray & Hutchinson (1983) report there is a dramatic contrast between this pattern for super-growth enterprises and that for future-oriented financial reporting by the matched sample of non-growth enterprises, in that the latter prepare little more than annual forecasts for profit and loss items.

Table 4.33: Future-Oriented Financial Reporting in Growth Enterprises

Financial Information	Financial Reporting Frequency				
	Before (years)		Flotation	After (years)	
	-10/-6	-5/-1	0	+1/+3	+4
<u>Profit & loss statement:</u>					
Full statement	<i>ad hoc</i>	annual	half-year	half-year	quarter
Sales	<i>ad hoc</i>	half-year	quarter	quarter	month
Wages	<i>ad hoc</i>	half-year	quarter	quarter	quarter
Materials	<i>ad hoc</i>	half-year	quarter	quarter	quarter
Overheads	<i>ad hoc</i>	half-year	quarter	quarter	quarter
Product costs	<i>ad hoc</i>	<i>ad hoc</i>	<i>ad hoc</i>	<i>ad hoc</i>	<i>ad hoc</i>
<u>Balance sheet:</u>					
Full statement	-	-	annual	annual	annual
Debtors	<i>ad hoc</i>	annual	half-year	half-year	quarter
Creditors	<i>ad hoc</i>	half-year	quarter	quarter	month
Stocks	<i>ad hoc</i>	annual	half-year	half-year	quarter
Cash	half-year	month	month	month	month
Fixed assets	<i>ad hoc</i>	<i>ad hoc</i>	<i>ad hoc</i>	<i>ad hoc</i>	<i>ad hoc</i>

In the United States, Brunell *et al* (1990) have investigated the cash management practices of two samples of SMEs – 31 younger, rapidly growing businesses and 26 older, more stable concerns. The growth firms are typically larger in sales terms than those in the non-growth sample. Findings on the preparation of projected financial statements for cash management purposes are presented in the following table:

Table 4.34: Use of Projected Financial Statements for Cash Management

Financial Reports	Per Cent Respondents	
	Growth Enterprises	Non-Growth Enterprises
<i>Pro forma</i> income statement	0.0	3.9
Cash budget	29.0	23.0
<i>Pro forma</i> income statement and cash budget	64.5	23.0

Overall, 93.5 per cent of the growth enterprises appear to prepare cash-flow forecasts, as compared to only 46 per cent of the non-growth businesses. Furthermore, the growth enterprises appear to update their cash-flow forecasts more frequently than the non-growth businesses. Around 30 per cent of growth concerns update them weekly, with 40 per cent doing so monthly. In comparison, 21 per cent of non-growth firms update them weekly, with 29 per cent doing so monthly.

In Chapter 2, it is indicated that the research study found in the smaller enterprise literature that most extensively overlaps with the inquiry forming the basis of this thesis is that reported by McMahon & Davies (1991a, 1991b, 1992a, 1992b, 1994) and McMahon *et al.* (1992a, 1992b, 1994a). It was part of a two-year investigation of the essential growth characteristics of a non-random convenience sample of just over 100 smaller growth enterprises from a variety of industries situated in North-East England. There were five questions in the interview schedule employed in the research that sought information on financial reporting and analysis practices. Descriptive statistics for responses to these questions are presented below:

- Which of the following financial statements are used by the management of your business to monitor financial position and performance?

The response based on 102 cases is as follows:

Table 4.35: Use of Financial Reports

Financial Statement	Per Cent Respondents		
	Regularly	Occasionally	Total
Balance sheet	72.5	23.5	96.0
Profit & loss statement	84.3	10.8	95.1
Funds statement	48.0	18.6	66.6
Cash-flow statement	36.3	5.9	92.2
Other	19.6	-	19.6

Every respondent reports regular or occasional use of at least one financial statement. In view of the liquidity problems which usually attend growth, it is interesting to note that the cash-flow statement ranks ahead of the others in regular use. In terms of aggregate (regular and occasional) usage, the balance sheet ranks highest, closely followed by the profit and loss statement and cash-flow statement in that order. Responses in the 'other' financial statement category include financial forecasts (5.6 per cent), accounts (3.9 per cent), budgets (2.9 per cent), own reporting system (2.0 per cent) and bank statement (2.0 per cent).

- How frequently are the financial statements used usually prepared?

The response based on 102 cases is as shown in Table 4.36 on the next page. Clearly, monthly financial reporting dominates. The response also indicates that the balance sheet tends to be obtained rather less frequently than the other major statements. The cash-flow statement is most popular in the more frequent reporting categories, especially weekly reporting – again signalling the importance of liquidity management in smaller growth enterprises. The evidence presented

suggests there are statistically significant differences between the reporting frequencies for the various financial statements ($n=97$, $\chi^2=31.910$, $df=8$, $p<0.01$).

Table 4.36: Frequency of Use of Financial Reports

Financial Statement	Per Cent Respondents						
	Yearly	Half-Yearly	Quarterly	Monthly	Weekly	Daily	Total ^a
Balance sheet	16.7	4.3	16.7	53.9	3.9	-	96.1
Profit & loss statement	5.9	2.0	17.6	64.7	5.9	-	96.1
Funds statement	5.9	1.0	9.8	38.2	7.8	-	62.7
Cash-flow statement	3.9	-	9.8	58.8	20.6	1.0	94.1
Other	-	-	2.0	16.7	3.9	1.0	23.6

^a Some relatively minor discrepancies exist between totals for financial statements in this table and totals in the previous table.

- Do you use financial ratios to aid in the interpretation of financial statements obtained?

Based on 102 cases, there are affirmative responses to this question from 61.8 per cent of the smaller growth enterprises investigated. Responses to subsequent questions suggest this a optimistic estimate.

- Are there any financial ratios you use regularly or in particular (nominate a maximum of five)?

Based on the 63 cases that report using financial ratios in the interpretation of financial statements, the response is as revealed in Table 4.37 on the next page. In addition to those in the table, 14.3 per cent of respondents claim to obtain multiple unspecified financial ratios; in some cases, reportedly of their own devising. In Table 4.37, financial ratios relating to working capital management (stock turnover, debtors days, etc.) appear to have primacy; closely followed by measures of margin (net profit on sales and gross profit on sales). Traditional measures of liquidity such as the current (liquidity) ratio and the acid test have fairly low rankings. Noticeably absent are recognised measures of return on investment (return on owners equity, return on total assets, etc.).

Table 4.37: Use of Financial Ratios

Financial Ratio	Per Cent Respondents
Stock turnover	28.6
Debtors days	17.5
Debtors as per cent of sales	15.9
Net profit on sales	15.9
Creditors days	12.7
Gross profit on sales	12.7
Debtors days/creditors days	9.5
Liquidity ratio	6.3
Labour as per cent of total costs	6.3
Profit margin on labour	6.3
Acid test	4.8
Interest cover	3.2
Asset turnover	3.2
Labour expense ratio	3.2
Materials expense ratio	3.2
Other (each one respondent)	22.2

McMahon & Davies (1991a, p. 29) comment as follows on their findings on use of specific financial ratios:

The modal number of financial ratios specifically identified is zero. This suggests that the active recall of financial ratios by respondents is poor and/or the extent of use of financial ratios is limited. Either way, the impression is that financial ratio analysis is not a significant part of the participating owner-managers' approach to financial management of their enterprises.

- If financial ratios are used by management of your business, to which of the following standards are they compared?

Based on the 63 cases that report using financial ratios in interpretation of financial statements, the response is as shown in Table 4.38 on the next page.

Table 4.38: Use of Financial Ratio Standards

Financial Standard	Per Cent Respondents
Rules-of-thumb	17.5
Past performance	74.6
Industry averages	20.6
Targets	66.7
Other	1.6

Notable here is the high degree of reliance placed on internally set financial ratio standards related to past performance, and the relatively low usage of industry averages (that is, inter-firm comparisons). It was not established whether target standards are established with reference to external benchmarks. Around 80 per cent of respondents use only one or two financial ratio standards. Thus, the overall impression gained is that participating owner-managers make limited use of financial standards that are more likely than not to be based on their own enterprise's past performance and/or established targets.

The principal findings of McMahon & Davies (1991a, 1991b, 1992a, 1992b, 1994) study of correlates with the historical financial reporting practices of smaller growth enterprises in the North-East of England can be summarised as in Table 4.39 on the next page. On the basis of this evidence, McMahon & Davies (1991a, 1991b, 1992a, 1992b, 1994) believe comprehensive historical financial reporting is more likely to be undertaken by smaller growth enterprises which:

- Are larger in size and older.
- Have more formal organisational structures.
- Use computers, especially in the financial management function.
- Have owner-managers who think in strategic terms and who are willing to undertake more formal strategic planning.
- Have owner-managers who are personally involved in financial management and have some useful experience in this function.
- Employ internal support staff, particularly professionals such as accountants and managers.

McMahon & Davies (1991a, 1991b, 1992a, 1992b, 1994) believe financial ratio analysis based on historical financial statements is more likely to be undertaken by smaller growth enterprises which:

- Are larger in size.
- Undertake more comprehensive financial reporting.

- Have owner-managers who have some useful experience in financial management.

Table 4.39: Correlates With Historical Financial Reporting Practices

Enterprise Characteristic	Statistically Significant Associations ^a ($\alpha=0.10$ or better)	
	With Financial Reporting	With Financial Analysis
Financial reporting practices	perfect, positive	weak, positive
Enterprise size	weak to moderate, positive	weak, positive
Enterprise age	weak, positive	none
Legal structure	none	none
Capital intensity	none	none
Organisational formality	weak, positive	none
Computer usage ^b	weak to moderate, positive	none
Strategic orientation	weak, positive	none
Owner-manager role ^b	weak, positive	none
Owner-manager experience ^b	weak to moderate, positive	weak to moderate, positive
Internal support staff ^b	weak, positive	none
External advisers ^b	none	none

^a Established using correlation coefficients, Chi-Square tests and other types of non-parametric tests of association.

^b Especially in financial management.

McMahon *et al.* (1992a, 1992b, 1994a) take the findings above and use them as the basis for exploratory modelling of historical financial reporting practices in smaller growth enterprises in the North-East of England. The intention was to systematically identify those factors that determine whether particular historical financial reporting practices are undertaken, and to represent these explanatory factors in an expression that reflects their relative and combined influence on the practices in question. Principally because the dependent financial reporting and financial analysis variables are categorical, logistic regression was selected as the modelling methodology.

Following procedures recommended by Hosmer & Lemeshow (1989), a total of 27 univariate and multivariate polytomous logistic regression models of historical financial reporting practices were examined by McMahon *et al.* (1992a, 1992b, 1994a). The dependent historical financial reporting variable (FSINDEXG) has three levels corresponding to low (designated 1), intermediate (designated 2) and high (designated 3) in terms of the extent and frequency of financial reporting undertaken. Because in preliminary modelling it became apparent that the availability of a computer in the participating enterprises swamps the influence of all other independent variables, subsequent modelling of historical financial reporting practices was carried out only for the 91 participants with computers. Details of the most parsimonious multivariate logistic regression model with acceptable explanatory power are presented in the table below:

Table 4.40: Logistic Regression Model of Historical Financial Reporting

Fitted Model	Odds Ratio	Bounds of Odds Ratio ^a		Statistical Significance ^b		Derivatives ^c		
		Upper	Lower	Parameter	Fitted Model	FSINDEXG		
						1	2	3
Part A:^d 3.967 -0.015EMPLOY +0.048AGEBUS -0.926FINCOMP -1.144STRATEGY	0.985 1.050 0.396 0.319	1.003 1.109 2.978 0.816	0.967 0.993 0.053 0.124	0.040 ^e 0.102 0.087 ^e 0.368 0.017 ^e				
Part B:^d 4.881 -0.081EMPLOY -0.193AGEBUS -2.641FINCOMP +0.186STRATEGY	0.922 0.824 0.071 1.204	0.997 1.013 0.664 2.991	0.853 0.671 0.008 0.485	0.048 ^e 0.041 ^e 0.067 ^e 0.020 ^e 0.689	0.000 ^e	0.000 0.010 -0.036 -0.132	-0.007 -0.019 -0.220 0.046	0.007 0.009 0.256 0.086

^a Bounds are 95 per cent confidence limits.

^b Probability for appropriate significance test. For individual parameters this is a Student's t-test. For fitted model this is a Likelihood Ratio test comparing 'constant only' model with fitted model

^c Derivatives are for whole model. These are rounded and, as shown, may not sum to zero.

^d Model has two parts, one for each response level of the dependent historical financial reporting variable FSIINDEXG. Reference level is FSIINDEXG = 3.

^e Significant at $\alpha=0.10$ or better.

The independent or explanatory variables remaining in this logistic regression model of historical financial reporting practices in smaller growth enterprises are EMPLOY, the number of equivalent full-time employees; AGEBUS, enterprise age; FINCOMP,

whether or not a computer is used in financial management; and STRATEGY, how frequently the owner-manager thinks about his or her enterprise in a strategic manner (measured on 5-point Likert scale ranging from 'never' to 'a great deal').

Using the information in Table 4.40, McMahon *et al.* (1992a, 1992b, 1994a) interpret the coefficients of the independent variables in their logistic regression model of historical financial reporting practices as follows. Considering EMPLOY first, the odds ratios and derivatives suggest that increasing the size of an enterprise in terms of employment numbers increases the likelihood of historical financial reporting being carried out at the high level. Interestingly, the odds ratios and derivatives for AGEBUS suggest that the likelihood of both the low level and the high level of historical financial reporting increases with enterprise age. In other words, there may be some degree of polarisation in historical financial reporting practices as smaller growth enterprises get older. The odds ratios and derivatives for FINCOMP suggest that the likelihood of undertaking historical financial reporting at the high level is substantially increased if a computer is available for financial management purposes. However, the confidence bounds for the odds ratios are quite wide, indicating a relatively uncertain outcome. Finally, the odds ratios and derivatives for STRATEGY indicate the likelihood of historical financial reporting at the intermediate or high level increases with increased strategic thinking on the part of the owner-manager(s). Again, the confidence bounds for the odds ratios are quite wide.

McMahon *et al.* (1992a, 1992b, 1994a) believe the broad implication of their selected logistic regression model is that, as small enterprises get larger in employment terms, and survive longer, it becomes more likely that their owner-managers will install historical financial reporting systems that are comprehensive in terms of the number of financial statements obtained and the frequency of their preparation. This may be because the demands on an owner-manager are greater when there are more employees to oversee, and his or her primary role moves towards supervision of the work of others rather than direct hands-on involvement in the operations of the enterprise. It may also be due to greater managerial sophistication acquired by the owner-manager over time through experience and possibly training. It would seem, furthermore, that comprehensive historical financial reporting is more likely where a computer is available to facilitate this, and where the owner-manager has a strong strategic orientation. Thus, the situational and enabling factors identified in the model combine to explain observed financial reporting practice.

A summary of classification success statistics for the logistic regression model of historical financial reporting practices selected by McMahon *et al.* (1992a, 1992b, 1994a), for the 79 cases from which the model is derived, is presented in Table 4.41 on the next page. The statistics presented in the table above are described by McMahon *et al.* (1992a, 1992b, 1994a) as fairly encouraging. The model appears to provide gains in the range of 20 to 40 per cent over a corresponding 'constant only' model, which assigns

Table 4.41: Classification Success of Historical Financial Reporting Model

Statistic	Financial Reporting Level		
	Low FSINDEXG=1	Intermediate FSINDEXG=2	High FSINDEXG=3
Observed overall per cent	16.5	21.5	62.0
Per cent correctly classified	23.1	58.8	89.8
Percentage points improvement	6.6	37.3	27.8
Overall per cent correctly classified	72.2		

probabilities to every case equal to the observed proportions of the respective samples in each dependent variable category. The gain is greatest for the intermediate financial reporting level; although the classification success of the model is best for the highest level. The overall classification success of just over 72 per cent noticeably exceeds the arbitrary cut-off of being correct 50 per cent of the time. Thus, McMahon *et al.* (1992a, 1992b, 1994a) hold that the model is reasonably good at specifying the level of historical financial reporting that is typically undertaken given the size and age of a smaller growth enterprise, the availability of computer facilities for financial management, and the strategic orientation of its owner-manager(s). They believe the model could be used with good effect to screen for owner managers who have not already implemented historical financial reporting systems seemingly appropriate to their circumstances. The owner-managers so identified might represent a group with potential interest in a relevant training programme or professional counsel.

The results of logistic regression modelling carried out by McMahon *et al.* (1992a, 1992b, 1994a) employing a dichotomous dependent variable indicating whether or not financial ratio analysis is in use (styled FRATUSE) are now considered. Following the Hosmer & Lemeshow (1989) procedures, a total of 9 univariate and multivariate dichotomous logistic regression models of financial analysis practice were examined. Details of the most parsimonious multivariate logistic regression model with acceptable explanatory power are presented in Table 4.42 on the next page. The independent or explanatory variables remaining in this logistic regression model of financial analysis practice in smaller growth enterprises are FSINDEXF, indicating the comprehensiveness of historical financial reporting practices over a continuous interval from 0 to 5; and OMEXPFM, whether or not the owner-manager has had useful experience in financial management.

Table 4.42: Logistic Regression Model of Financial Analysis

Fitted Model	Odds Ratio	Bounds of Odds Ratio ^a		Statistical Significance ^b		Derivatives	
		Upper	Lower	Parameter	Fitted Model	FRATUSE	
						0	1
-1.219				0.099 ^c			
+0.419FSINDEXF	1.521	2.222	1.041	0.030		-0.092	0.092
+0.898OMEXPFM	2.455	7.071	0.852	0.096 ^c	0.026 ^c	-0.197	0.197

^a Bounds are 95 per cent confidence limits.

^b Probability for appropriate significance test. For individual parameters this is a Student's t-test. For fitted model this is a Likelihood Ratio test comparing 'constant only' model with fitted model.

^c Significant at $\alpha=0.10$ or better.

Using the information in Table 4.42, McMahon *et al.* (1992a, 1992b, 1994a) interpret the coefficients of the independent variables in their logistic regression model of financial analysis practice as follows. Considering FSINDEXF first, the odds ratio and derivatives imply that increasing the level of historical financial reporting undertaken in a smaller growth enterprise increases the likelihood that financial ratio analysis will be undertaken. The odds ratio and derivatives for OMEXPFM suggest that providing owner-managers with useful experience in financial management makes use of financial ratio analysis more likely. However, the confidence bounds of the odds ratio are quite wide, implying that the outcome is far from certain. Nevertheless, the confidence interval is skewed to the right.

McMahon *et al.* (1992a, 1992b, 1994a) believe the broad implication of their selected logistic regression model is that merely encouraging owner-managers of smaller growth enterprises to increase the extent and frequency of historical financial reporting on their businesses is not likely to be as effective a strategy for improving financial management as doing this as well as providing necessary experience so that skills in financial analysis may also be acquired and used. This supports the widely held view that training and/or professional advice could supply much needed leverage to lift the general competency level in financial management amongst smaller enterprise owner-managers.

A summary of classification success statistics for the logistic regression model of financial analysis practice selected by McMahon *et al.* (1992a, 1992b, 1994a), for the 102 cases from which the model is derived, is presented in Table 4.43 on the next page. Again, the statistics presented in the table above are described by McMahon *et al.* (1992a, 1992b, 1994a) as fairly encouraging. For FRATUSE=1, the model appears to provide gains of approximately 25 per cent over a corresponding 'constant only' model.

Table 4.43: Classification Success of Financial Analysis Model

Statistic	Financial Ratio Analysis	
	No FRATUSE=0	Yes FRATUSE=1
Observed overall per cent	38.2	61.8
Per cent correctly classified	28.2	87.3
Percentage points improvement	-10.0	25.5
Overall per cent correctly classified	64.7	

However, the classification success is clearly asymmetric, with the anticipation of non-use of financial ratio analysis being approximately 10 per cent worse than for a 'constant only' model. On the basis of the null hypothesis that financial ratio analysis is not used, the Type 1 error (classifying a non-user as a user) is very high at 0.718; but the Type 2 error (classifying a user as a non-user) is more acceptable at 0.127. The overall classification success of approximately 35 per cent noticeably exceeds an arbitrary cut-off of being correct 50 per cent of the time.

McMahon *et al.* (1992a, 1992b, 1994a) point out that, ultimately, a judgement on the classification success of the model must be influenced by its application. To identify non-users of financial ratio analysis so that they can be encouraged to attend a training course or seek advice on this technique, the model would obviously be ineffective. However, it could be used with good effect to screen for owner-managers who have implemented comprehensive historical financial reporting systems, and who possibly have sufficient financial management experience to benefit from expertise in the analysis of financial statements. A check would then need to be made to determine whether financial ratio analysis is used. If this is not so, then the owner-managers concerned might be a group with considerable latent interest in a relevant training programme or professional counsel.

4.3.2 Financial Reporting and Growth Evidence from Australia

As is the case overseas, there are relatively few Australian research studies focusing on the financial reporting practices of smaller growth enterprises. In Chapter 3 of the thesis it is indicated that Moores & Mula (1993) set out to discover more about the role of managerial control systems, specifically including financial reporting, in survival and successful growth of almost 300 Australian family businesses that had been in existence for at least five years, and which had the involvement of second or later generation family members. Their broad discovery is one of increasing emphasis on financial

reporting as businesses grow in employment terms and progress through stages of an enterprise life-cycle model. Among their more specific findings are:

- Conventional historical profit and loss statements and balance sheets, largely prepared using computerised systems, are the primary managerial control tools used.
- Managerial controls, including financial reporting, are dynamically developed so as to be congruent with the external and internal environments, and with the stage of development reached.
- When high uncertainty arises from a changing business environment, increased computerisation of accounting systems occurs in order to provide information in a more timely manner.

A fuller exposition of Moores & Mula's (1993) results is presented in Chapter 3 of the thesis when considering Australian evidence relating to strategic management perspectives on financial reporting by businesses.

The only Australian study found which attempts to model financial reporting practices in smaller growth enterprises is that described in Holmes & Nicholls (1989), Holmes *et al.* (1989) and Holmes *et al.* (1991a), which extends a 1986 study described in Holmes (1987a, 1988) and Holmes & Nicholls (1988). The paucity of modelling studies of financial reporting practices in smaller enterprises is noted in Holmes & Nicholls (1989), Holmes *et al.* (1989) and Holmes *et al.* (1991a).

The modelling of financial reporting practices undertaken by Holmes & Nicholls (1989) is based on a three-way classification of financial information prepared or acquired at least annually by their sample of 928 Australian smaller enterprises:

- Statutory (ST) - predominantly returns required for government authorities such as the Australian Taxation Office and the Australian Securities Commission.
- Statutory/Budget (SB) - ST plus operational and capital budgeting information.
- Statutory/Budget/Additional (SBA) - SB plus additional financial information such as cash-flow statements, breakeven analysis, production reports, inter-firm comparisons and industry trends.

Employing the classification scheme above, Holmes & Nicholls (1989) use logistic regression to develop an explanatory model from which the probability of a smaller enterprise preparing or acquiring a particular level of financial information (specifically SBA) can be estimated given the values of certain enterprise and owner-manager characteristics expressed as categorical variables. After testing many possible models involving a variety of independent variables selected by reviewing prior research undertaken by others and through exploratory data analysis, the following model is found through sensitivity analysis to have the best fit (predictive ability) for the data at hand:

$$y = c + \sum_{i=1}^7 a_i T_i + b_i TR + \sum_{i=1}^3 d_i I_i + \sum_{i=1}^5 e_i B_i + \sum_{i=1}^2 f_i E_i + a \quad \text{Eqn 4.1}$$

where y = natural logarithm of the odds ratio $p/(1-p)$ in which p is the probability that a particular level of financial information (specifically SBA) will be prepared or acquired

T_i = turnover categories $i = 1$ to 7

TR = whether or not the owner-manager has sought management training since entering the enterprise

I_i = industry categories, $i = 1$ to 6

B_i = enterprise age under existing management categories, $i = 1$ to 5

E_i = number of employees categories, $i = 1$ to 2

a = stochastic disturbance term representing that part of y which is unexplained the independent variables

The c , a_i , b_i , d_i , e_i and f_i are coefficients, Holmes & Nicholls' (1989, Appendix 4) estimates of which are presented in Table 4.44 on the next page. Note that the values of the relevant coefficients suggest that the probability of a smaller enterprise preparing or acquiring financial information at the SBA level increases with increasing turnover and employment, but decreases with increasing enterprise age.

Holmes & Nicholls (1989) report that, during development of the model, certain variables were found not to have a significant influence on the dependent variable, y . These include legal structure, turnover trend, number of years of high school education undertaken by the owner-manager, what type of post-secondary qualifications (if any) the owner-manager possesses, and the number of hours per week the owner-manager works. In the context of the present research, turnover trend reflecting growth or contraction (increasing significantly, increasing moderately, steady, declining slowly, declining rapidly, or fluctuating) is particularly noteworthy in its absence from the model. Holmes *et al.* (1989) use the same data set and logistic regression methodology to develop an explanatory model from which the probability of an owner-manager preparing or acquiring future-oriented financial information on profit and loss and cash-flow can be estimated. The explanatory variables investigated are as in Holmes & Nicholls (1989). After testing many possible models involving a variety of independent variables, the model found to have the best fit (predictive ability) for the data at hand is as follows:

Table 4.44: Coefficients in Holmes & Nicholls' (1989) Model

Variable	Coefficient Estimate	Standard Error	t-Statistic
Constant	-0.153	0.412	-0.37
Turnover:			
2	-1.617	0.362	-4.46
3	-1.117	0.334	-3.34
4	-0.457	0.287	-1.59
5	-0.506	0.309	-1.64
6	-0.158	0.317	-0.50
Training:			
2	-0.833	0.182	-4.58
Industry:			
2	-0.926	0.391	-2.37
3	-0.082	0.296	-0.28
4	-0.493	0.292	-1.69
5	-1.086	0.355	-3.06
6	-0.441	0.302	-1.46
7	-0.262	0.311	-0.84
Enterprise Age:			
2	0.850	0.330	2.57
3	0.772	0.291	2.65
4	0.580	0.278	2.08
5	0.086	0.288	0.30
Employment:			
2	0.782	0.243	3.22
3	0.989	0.295	3.35

$$y = c + \sum_{i=1}^4 g_i S_i + \sum_{i=1}^6 d_i I_i + u \quad \text{Eqn 4.2}$$

where y = natural logarithm of the odds ratio $p/(1-p)$ in which p is the probability that budgeted will be prepared or acquired

S_i = legal structure categories, $i = 1$ to 4

I_i = industry categories $i = 1$ to 6

u = stochastic disturbance term representing that part of y which is unexplained the independent variables

The c , g_i and d_i are coefficients, Holmes' *et al.* (1989, Appendix 2) estimates of which are presented in Table 4.45 on the next page. Clearly, this model employs fewer explanatory variables than the earlier model; and again it is noteworthy in the context of the present research that turnover trend is not included.

Table 4.45: Coefficients in Holmes' *et al.* (1989) Model

Variable	Coefficient Estimate	Standard Error	t-Statistic
Constant	-1.511	0.464	3.26
<u>Legal structure:</u>			
1	-0.470	0.462	-1.02
2	-0.356	0.448	-0.79
3	0.168	0.430	0.39
4	-0.509	0.479	-1.06
<u>Industry:</u>			
2	0.202	0.332	0.61
3	0.605	0.292	2.08
4	0.949	0.282	3.36
5	0.415	0.329	1.26
6	0.362	0.311	1.16
7	0.433	0.314	1.38

Using the three-way classification of financial information prepared or acquired at least annually described earlier the same data set and logistic regression methodology, Holmes *et al.* (1991a) propose and find support for a financial information cycle arising from a modified stage or life-cycle model of smaller enterprise development. As indicated in Chapter 3 of the thesis, Holmes *et al.* (1991a) argue that models of this type should incorporate plateaus - static or settling or levelling-off periods - between each major stage of development, and they suggest that such periods might be expected following significant growth, new investment activity or deterioration in an enterprise's fortunes. The validity of the financial information cycle concept is examined by statistical testing of four hypotheses:

H₁: No relationship exists between the level of information prepared or acquired and enterprise age (which is treated as a proxy for the financial information cycle).

H₂: No relationship exists between the level of information prepared or acquired and firm size (measured in terms of employment).

H₃: No relationship exists between the level of information prepared or acquired and industry classification.

H₄: No relationship exists between the level of information prepared or acquired and owner-manager educational background.

Using a generalised form of logistic regression, each of these null hypotheses is rejected. In the context of the present research, H₁ and H₂ are of most interest. Enterprises less than five years old are found to have a higher probability of preparing or acquiring financial information at the SBA level than older enterprises. Holmes *et al.* (1991a) explain this finding in terms of the critical need for financial information in the

start-up phase. They argue that, as enterprises subsequently develop, the level of financial information required decreases as owner-managers retain information initially obtained and acquire skills necessary to manage their enterprises. Larger enterprises in employment terms are found to have a higher probability of preparing or acquiring financial information at the SBA level than smaller enterprises. The suggested explanation for this finding is that, as enterprises become larger, increased levels of information are required to manage them due to the greater scale of operations.

Holmes & Nicholls (1989), Holmes *et al.* (1989) and Holmes *et al.* (1991a) appear enthusiastic about the potential usefulness of the explanatory models of financial reporting practices in smaller enterprises developed by them. They identify the following possible applications for various parties with an interest in smaller enterprises:

- Public accountants – to predict the likely demand for financial information by smaller enterprises of different types so that they can target the marketing of their services to best effect, and also provide more relevant and timely support to clients in the smaller enterprise sector.
- Government policy-makers – to assist in understanding the financial information needs of smaller enterprises so that government assistance, advice and counselling services, publications, etc. can be made more relevant and targeted more accurately for specific user groups in the smaller enterprise sector.
- Educators and trainers – to assist in understanding the financial information needs of smaller enterprises so that education and training programs can be designed more effectively, made more relevant and targeted more accurately for specific user groups in the smaller enterprise sector.
- Smaller enterprise owner-managers – to ascertain the typical level of financial information prepared or acquired by competitors in the same industry and adjust their own demands accordingly.

The underlying thrust of these suggestions is that models of the type described above can lead to improved understanding of the role of financial information in smaller enterprise financial management in a manner, and to an extent, not achievable through less enlightening descriptive and/or associative research which has conventionally been undertaken.

4.4 Financial Reporting and SME Growth and Performance

The focus in this section of the chapter is upon evidence of any relationships that might exist between the sophistication of financial reporting practices on the one hand and business growth and performance on the other. Some empirical evidence on this matter has already been presented in the thesis. In Chapter 3 it is indicated that Schwenk & Shrader (1993, p. 60) have conducted a meta-analysis of 14 individual studies of the relationship between formal strategic planning and performance in smaller enterprises, and they have found a significant but weak positive association to exist across studies. It

should be noted, however, that no evidence is provided concerning specific future-oriented financial reporting practices followed in strategic planning. In some depth in Chapter 3 and briefly earlier in this chapter, the findings are reviewed for Moores & Mula's (1993) study of the role of managerial control systems, including financial reporting, in survival and successful growth of nearly 300 Australian family businesses. Moores & Mula's (1993) results clearly indicate increasing emphasis on financial reporting as businesses grow in employment terms and progress through the earlier stages (including a growth stage) of a business life-cycle model.

Seeking further evidence it is useful at the broadest level to examine the meta-analysis conducted by Capon *et al.* (1990) of 320 empirical studies, published between 1921 and 1987, examining the relationship between environmental, strategic and organisational factors on the one hand and financial performance on the other. Only two investigations of the impact of 'accounting techniques' on financial performance are included in the meta-analysis, and these fail to provide any definitive outcomes. Certainly, financial reporting (however labelled) is not included amongst significant influences on financial performance mentioned in the conclusions of the Capon *et al.* (1990) meta-analysis.

In analysing the findings of their study of 398 small pharmacies in the United States, some of which had closed or changed hands, Thomas & Evanson (1987) are unable to demonstrate, using multiple regression analysis, a significant association between the number and frequency of use of financial ratios and enterprise survival or profitability (measured as either net profit or net margin on sales). They hypothesise that this may be due to a lack of sophistication in financial ratio interpretation on the part of owner-managers which prevents usage from making a discernible difference.

In their study of 122 small plumbing businesses located in Brisbane, Queensland, Holmes *et al.* (1990) report a weak relationship between owning a computer-based accounting system and enterprise performance measured in terms of asset turnover ratio. However, Holmes *et al.* (1990, p. 326) indicate that 'it cannot be determined from the results whether use of computer accounting systems leads to an increase in profits or whether more profitable plumbing firms tend to purchase computer accounting systems'.

The principal findings of McMahon & Davies (1991a, 1991b, 1992a, 1992b, 1994) study of associations between with the financial reporting practices of smaller growth enterprises in the North-East of England and their achieved growth rates and financial performance can be summarised as in Table 4.46 on the next page. Thus, for the smaller growth enterprises in the McMahon & Davies (1991a, 1991b, 1992a, 1992b, 1994) study, there do not appear to be any substantial associations between undertaking more comprehensive financial reporting and use of financial ratio analysis on the one

Table 4.46: Correlates With Financial Reporting Practices

Enterprise Characteristic	Statistically Significant Associations ^a ($\alpha=0.10$ or better)	
	With Financial Reporting	With Financial Analysis
Enterprise growth rate	none	none
Enterprise financial performance	very weak, positive	none

^a Established using correlation coefficients, Chi-Square tests and other types of non-parametric tests of association.

hand and achieved rates of growth and financial performance on the other. As indicated earlier, the Temple University investigation (Bureau of Economic and Business Research, 1961) and Thomas & Evanson (1987) have similarly been unable to establish such relationships.

The apparent lack of reliable evidence for a growth and/or performance benefit from undertaking more sophisticated financial reporting presents a considerable dilemma for those who study, influence, regulate and support small and medium-sized enterprises engaged in growth-oriented activities. Hard-nosed owner-managers are likely to expect a demonstrable pay-off in terms of higher growth rates and improved financial performance before they will fully adopt the many financial reporting practices recommended in the literature. The majority of enterprises examined in research conducted to date could not be described as unsuccessful. In the main, they have survived what for many is a traumatic experience of rapid growth. And some have accomplished quite remarkable improvements in various measures of financial performance. However, in the spirit of closing comments made in the Temple University study report (Bureau of Economic and Business Research, 1961) quoted earlier, one cannot help but wonder whether the inherent stresses imposed by growth might have been ameliorated, and realised growth rates and financial performance made even more impressive, had the participating owner-managers made more extensive use of the financial reporting practices being investigated.

An appropriate perspective on the dilemma identified could stem from recognition that associations between other specific managerial practices, regardless of function (production, marketing, personnel, etc.) and success in terms of survival and prosperity are likewise difficult to establish (D'Amboise & Gasse, 1980; Lenz, 1981; Capon *et al.*, 1990; Storey & Westhead, 1994; Westhead & Storey, 1996). For example, as part of a larger study, Storey & Westhead (1994) and Westhead & Storey (1996) sought for evidence in research from Europe, Canada, the United States, the United Kingdom and Australia of a linkage between undertaking management training and SME performance in terms of survival, profits and growth. Their review concludes that the existence of

such a relationship is currently not well established. Westhead & Storey (1996, p. 18) comment that 'if such a positive link exists, it . . . requires considerably more analytical sophistication than has been applied to date'. This quotation resonates with the earlier words of Lenz (1981, p. 141) in his interdisciplinary review of determinants of organisational performance:

Throughout this [review] one theme has become unmistakably clear: that is, there exists little evidence that relatively simple, unidirectional causal relationships among the constructs examined account for organizational performance. Instead, we observe a complex network of interdependent elements in which words such as 'cause' and 'effect' should be used with caution.

Commenting on possible relationships between quality of management (including managerial practices) and organisational performance, Lenz (1981, p. 139) points out that 'Although acknowledged as important, this aspect of organization usually takes a backseat to other variables in most contingency theories'. And, in their meta-analysis of determinants of financial performance, Capon *et al.* (1990, p. 1144) indicate that:

Virtually all studies of financial performance acknowledge the existence of joint causal factors; various multivariate tools (particularly regression analysis) have provided the most common way to establish control of covarying causes by statistical means'.

The conclusion therefore appears to be that, in the present research, use of multivariate analytical techniques is required in order to discover financial reporting influences (if any) upon smaller enterprise growth and performance.

4.5 Chapter Review

This chapter of the thesis has sought to thoroughly review existing international and Australian empirical knowledge concerning the financial reporting practices of small and medium-sized enterprises, especially those that are growing. Close attention has been paid to whether or not greater sophistication in financial reporting practices appears to accompany experience of the challenges and problems posed by growth. Evidence has also been sought for any relationships that might exist between the sophistication of financial reporting practices on the one hand and business growth and performance on the other.

In the main, the empirical evidence reviewed early in the chapter suggests that, particularly in Australia, financial reporting by smaller enterprises is typically infrequent, with there being an heavy emphasis on annual statements to satisfy taxation and other statutory reporting requirements where these apply. There is also evidence that SME owner-managers do not consider the financial reports which are obtained to be especially useful for decision-making purposes. Thus McMahon *et al.* (1992c, p. 24) conclude that, generally speaking, the financial reporting undertaken by small and medium-sized enterprises appears 'lacking in emphasis on the provision of timely and relevant information to owner-managers for the purposes of sound financial management'. Furthermore, it seems well established in the empirical literature that the

level of external financial reporting undertaken by smaller enterprises is limited because there are few imperatives, other than debt-related obligations, for doing this.

Relationships in either direction between financial reporting practices on the one hand and business growth and performance on the other are very difficult to discover, describe and explain. There does appear to be evidence that historical financial reporting practices become more comprehensive with increasing enterprise size and age, and with progression through stages of an enterprise life-cycle. It also seems possible that it is the nature and frequency of use of future-oriented financial reporting practices that change most substantially during SME development. Little can be said at all regarding historical financial statement analysis practices. From the opposite viewpoint, there is an apparent lack of reliable evidence for a growth and/or performance benefit from undertaking more sophisticated financial reporting practices. It certainly seems likely that multi-variate analytical techniques will be required to unearth any impact that financial reporting practices could have in the present study sample.