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## **An exploratory analysis of patterns of movement in the financial structure of Australian small firms**

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This paper uses data from the Australian Bureau of Statistics Longitudinal Database to explore changes in the equity and debt structure of small firms in Australia. Initially the paper provides descriptive detail of financial structure groupings based on previously determined clusters. The nature of movements between groups across the three years included in the analysis is then outlined. Finally, results are presented of exploratory analysis that seeks to identify associations with a range of variables likely to be associated with a firm's membership of one of the five financial structure groups and possible temporal shifts. Included are industry, age, sales and number of employees (as indicators of size), profit (measured in absolute and relative terms), sales growth, and asset structure. Results suggest that, as expected, there are strong associations with demographic variables such as age, industry, size, and asset structure. While there is some association with performance measured by profit, no statistical association with growth was detected.

### **Introduction**

As is the case with many of their characteristics, small firms appear to exhibit a high level of diversity in their capital (debt and equity) structures. Various theoretical approaches, including pecking order frameworks and variations on agency theory, indicate that many variables might influence the final debt-equity mix of a firm. Past studies have identified the presence of groups of firms with common capital structures and of variables which influence those structures. Few studies, however, provide any indication of possible temporal movements between groups. It is the purpose of this paper to identify any patterns of movement over time in the membership of the capital structure groups of small firms, and to analyze those patterns against possible influencing variables.

The paper is structured to provide a background of expectations regarding financial structure, a review of theories used to explain apparent differences in capital structure and a discussion of potential influences on that capital structure. The research method is then outlined before results are presented and discussed. Concluding comments reflect on limitations of the study and identify implications of the findings.

### **Financial structure expectations**

Financial structure is an important outcome in firms and is related to a firm's production activities (Vickers 1970). To fund production (and the provision of services), financial resources are required. These resources are either in the form of debt, the cost of which is the interest paid, or in the form of equity which has a cost represented by the providers required rate of return (Reid 1996).

Berger and Udell (1998) also suggest the nature of private equity and debt contracts may provide a mechanism to enhance understanding of the business attitudes and managerial behavior of small firms. The apparently irrational economic behavior of maximizing attributes other than financial wealth that is so often associated with the

owners of small firms (Gibson 1993) may be better understood alongside an enhanced understanding of their finance structure outcomes. The genesis of this enhanced understanding of small firms' financial behavior has emerged in various attempts made to explain apparent anomalies of small firm capital structure. Gibson (2002) recently summarized the major attempts as including:

- The *life cycle approach* that suggests that access to finance is dependent on the stage of development of the firm.
- The *pecking order framework* that suggests firms initially use internally available funds (founding owner's equity and retained profits), then access debt if further finance is required, and seek to access third party external equity only as a last resort.
- *Trade-off choice explanations* that explore frictions between costs of financial distress such as bankruptcy and the tax deductibility of the costs of debt finance.
- *Agency theory* that is in part incorporated into the explanations already discussed above and extends consideration to the information asymmetry, costly state verification, moral hazard and adverse selection problems that exist in relationships between small firms and finance providers.
- *Alternate resource (bootstrapping) explanations* that suggest, faced with a finance access gap, firms develop alternate means of securing resources that do not require traditional funding.

Thus it appears that a debt-equity ratio will emerge in small firms, that is significantly influenced by their current circumstances. There is no "universal" optimum in respect of capital structure, although the expectation from the preceding discussion seems to point small firms toward a high reliance on short-term debt and little or no third party external equity.

### **Influences on capital structure**

Many variables are identified as indicative of the circumstances that might influence financial structure and include industry, age, profit, asset structure, size, and growth. Without downgrading their potential importance, other influences are not further discussed in this paper because they could not be effectively measured from the data available. The major variables analyzed in this paper, that are also more fully discussed by Gibson (2002), include:

- *Industry*. An association with industry is strongly anticipated because of the differing asset structures across industries. Sectors with strong tangible asset holdings are expected to be associated with groups that have higher average debt levels than is evident in sectors associated with intangible or risky assets.
- *Age*. The possible influence of age is consistent with stage of growth explanations. Because older firms have most likely achieved a well-established source of internal equity they are expected to be in group that have lower debt.
- *Size*. Generally smaller firms are expected to have less debt. This is because higher costs in resolving information asymmetry problems with financiers discourage the use of outside finance. Gibson (2002) notes that equivocal results are evident in prior research and these could be consequence of quasi equity and debt confusion.

- *Profit*. Higher profit being associated with lower levels of debt is anticipated because the costs of outside capital are greater than the costs of internal sources and, because more profitable firms have greater internal funds, they can reduce reliance on external debt.
- *Growth*. The pecking order framework explanation would suggest growth, that normally cannot be funded from internal sources would lead to higher levels of debt.
- *Asset Structure*. Association with asset structure is anticipated because the degree to which assets are tangible and generic increases a firm's ability to reduce the magnitude of potential losses that financiers might incur and consequently improves access to outside finance and lower finance costs.

Studies that lead to the results summarized above provide valuable insight into small firm capital structure. However, they tend to present aggregate results and do not develop effective patterns of alternatives. There is a strong element of confusion created by the number of feasible alternate explanations and the range of potential influencing variables. Very few studies have sought to shape the aggregate results into potentially defining common structures (although Kotey (1999) and Gibson (2001, 2002) are exceptions) or attempted to map changes in structure over time. In part overcoming these deficiencies is the purpose of this paper.

## Research analysis

The results that are reported in this paper had two research questions guiding the outcomes:

1. Are there temporal shifts by small firms across identifiable patterns of capital structure?
2. Are there major demographic or performance variables that are associated with these shifts?

Data used in the analysis was accessed from the Business Longitudinal Survey (BLS) Confidentialised Unit Record File (CURF) made available by the Australian Bureau of Statistics and used in similar research by Gibson (2001, 2002) and others (for example, McMahon 2001, Cassar, Holmes 2001, Gibson, Cassar 2002). This survey made available aggregate financial details of a large number of firms for up to four consecutive years. After a number of adjustments made in order to provide a reliable and representative sample, responses from 2 552 firms formed the basis of analyses in this paper.

Gibson (2001, 2002) had previously determined five financial structure clusters from the same database. Because of the heuristic based nature of the cluster analysis process (Milligan 1996), membership of the clusters themselves was not considered a sufficiently stable basis to track temporal movements. Consequently a trial and error process was used to develop a mechanism for defining group membership that was stable across the three years. The metric used was to allocate, in sequence and using the fund proportion variables indicated, firms to the following groups:

1. The *related persons debt group* where funds from involved individuals were greater than 45 % of all funds used.

2. The *bank loan debt group* if not already allocated to the related persons debt group and if the total funds from bank loans and overdrafts combined exceeded 50%.
3. The *other debt group* where funds from other liabilities were greater than 50% and the firm was not already allocated to one of the above two groups.
4. The *trade credit debt group* if not already allocated to one of the above groups and the proportion of trade credit as a funding source was more than 50% and the proportion of working owner equity funding was below 20%.
5. The *working owner equity group* for all firms not allocated to one of the previous four groups.

This process resulted in between 77% (1998) and 90% (1996) of the firms being allocated to the same clusters identified by Gibson (2002). The major variations were in respect of seemingly under represented clusters (related persons debt in 1998 and bank loans debt in 1997) and a shift in the proportion of firms in the working owner equity group. A summary of the aggregate financial structures within the groups is presented in table 1. The groups remain centered on the same dominant fund sources, and are very similar to the clusters identified by Gibson (2002). They have the advantage of being consistently determined for each year.

With five groups in each year, there were 125 possible paths that firms could follow in moving between groups over the three years. To simplify the tracking of the movement only eleven scenarios were developed. One category each was used for the five circumstances where a firm stayed in the same group for all three years. Another five categories were used for the circumstances where the firm stayed in the same group for two of the three years. Finally, one category was used for firms that moved into a different group every year. Table 2 summarizes data relating to these categories. The number of firms actually moving in and out of categories was surprising. Past research indicated that the specific financial structure that emerged in a firm was a consequence of extant influences on the firm. There was no suggestion that these influences would vary dramatically on a year by year basis. That only 54% of firms remained in the same group for each of the three years was a surprising result.

It is possible that the parameters used to define the groups were critical at the margin and that much of the movement was in response to very small shifts in funding. This potential limitation will be examined in subsequent analysis.

Finally membership of each movement pattern was analyzed against a range of variables posited to have a potential influence on financial structure. The variables used were selected on the basis of having been used in prior studies and that reasonable measures (or proxies) were readily available in the database. Accordingly analysis was restricted to: industry; age; size (measured by total sales and number of employees); profit measures (absolute annual profit and profit as a percent of sales); growth (in sales annually and across two or three years as the data allowed); and, asset structure (non-current assets as a proportion of total assets). This analysis was performed for the exploratory results that are reported in this paper on an unrelated variable basis. Industry and, for this study, age are categorical and accordingly were tested for differences by a non-parametric Chi square statistic. For the other continuous variables, parametric ANOVA tests were supplemented by non-parametric tests (Kruskal-Wallis

and median test) to confirm results were robust for the anticipated difficulty of assuming distribution comparability.

		<i>Trade credit debt</i>	<i>Bank debt</i>	<i>Related persons debt</i>	<i>Other debt</i>	<i>Working owner equity</i>
1998	n = 2552	349	418	191	118	1476
	<i>Proportion in each group</i>	13.68 %	16.38 %	7.48 %	4.62 %	57.84 %
<i>Debt</i>						
	Trade creditors	92.77	15.00	13.03	6.29	20.72
	Bank loans, bills and overdraft	4.82	76.82	11.09	3.69	14.13
	Loans from involved individuals	1.47	4.10	74.63	1.42	5.18
	All other debt	3.88	5.32	5.02	83.76	8.53
<i>Equity</i>						
	Working owners	-5.85	-2.52	-5.16	2.01	39.40
	All other equity	2.91	1.28	1.40	2.83	12.04
	Total*	100.00	100.00	100.00	100.00	100.00
1997	n = 2552	291	468	201	120	1472
	<i>Proportion in each group</i>	11.40 %	18.34 %	7.88 %	4.70 %	57.68 %
<i>Debt</i>						
	Trade creditors	85.25	14.22	10.53	5.39	19.71
	Bank loans, bills and overdraft	7.49	75.54	12.57	3.55	15.18
	Loans from involved individuals	2.10	4.40	79.37	0.60	5.70
	All other debt	3.84	4.49	3.37	85.43	9.68
<i>Equity</i>						
	Working owners	-1.54	0.30	-7.23	1.22	37.70
	All other equity	2.86	1.05	1.38	3.82	12.03
	Total*	100.00	100.00	100.00	100.00	100.00
1996	n = 2552	276	487	213	137	1439
	<i>Proportion in each group</i>	10.82 %	19.08 %	8.35 %	5.37 %	56.39 %
<i>Debt</i>						
	Trade creditors	83.91	15.06	10.69	5.42	19.71
	Bank loans, bills and overdraft	9.68	76.75	14.68	1.65	15.80
	Loans from involved individuals	2.83	4.42	75.79	1.32	6.46
	All other debt	3.56	3.91	4.27	87.40	8.26
<i>Equity</i>						
	Working owners	-2.04	-1.24	-6.02	-0.06	38.16
	All other equity	2.00	1.09	0.58	4.26	11.61
	Total*	99.95	100.00	100.00	100.00	100.00

\* Differences due to rounding

Table 1: Principal fund sources – means of allocated groups

	<i>Number</i>	<i>Sub total</i>	<i>Percentage sub total</i>	<i>Percentage total</i>
<i>In the same group all three years:</i>				
Trade credit debt	88			3.45 %
Bank loan debt	181			7.09 %
Related persons debt	63			2.47 %
Other debt	16			0.63 %
Working owner equity	1034	1382	54.15 %	40.52 %
<i>In the same group in any two years:</i>				
Trade credit debt	169			6.62 %
Bank loan debt	234			9.17 %
Related persons debt	110			4.31 %
Other debt	49			1.92 %
Working owner equity	427	989	38.75 %	16.73 %
<i>In a different group each year:</i>				
	181	181	7.09 %	7.09 %
<i>Total</i>	2 552	2 552	100.00 %	100.00 %

*Table 2: Categorized shifts in group membership – 1996, 1997, 1998*

Test statistic results for the categorical variables, industry sector and age, are presented in table 3 although the actual cross tabulations are not reproduced. There appears to be a statistically significant difference in category membership according to industry sector and age category. Perusal of the cross tabulations suggests a number of patterns contributing to these results.

	<i>Pearson Chi-Square</i>	<i>df</i>	<i>Asymp. Sig. (2 sided)</i>
Industry			
1998	192.391	80	.000
1997	197.827	80	.000
1996	196.426	80	.000
Age			
1998	115.976	30	.000
1997	140.984	40	.000
1996	133.144	40	.000

*Table 3: Categorical variables and category membership – association statistics*

From an industry perspective, the mining and manufacturing sector showed a tendency to be more highly represented in the categories involving at least two years in the working owner equity groups while in the construction, and in the wholesale, sector the association was toward the stable trade credit categories. The accommodation, cafes and restaurants sector was more highly represented in the 2 and 3 year other debt categories, while the property services sector seemed to be more closely associated with the related persons debt categories. There were other associations but these seemed to be the dominant ones relating to industry. These results support the industry effect with respect to financial structure reported by Cassar and Holmes (2001), Hall et al. (2000),

Lopez-Gracia and Aybar-Arias (2000), Romano et al. (2000), Michaelas et al. (1999) and Bennett and Donnelly (1993). The results from this study suggest these industry effects may remain consistent over time.

The nature of the database meant that the age variable was only available as a categorical variable. Also, because of the decision to use only firms that were active in all three years of the survey, the sample does age over time and consequently there is a shift from the younger to older categories. In fact by 1998 the first age category (less than 2 years) is empty. The most striking result that appears to contribute to the differences associated with age, is that the category for all 3 years being in the owner equity group is consistently under represented in the age groups up to 10 years. The same category is over represented in the over 20 age group, suggesting a shift to a greater preferred reliance on owner's equity funding as the firm matures. These results are supportive of the association reported by Berger and Udell (1998), Romano et al. (2000), Michaelas et al. (1999), and Chittenden et al. (1996).

Results capturing the continuous variables tested are included in table 4. The calculated association statistics are presented separately in table 5.

Both measures of size (sales and employment) were statistically significant over all three years for all three statistical tests. Smaller firms were associated with the categories based on continued presence in the related persons debt groups, while larger firms tended to be associated with continued presence in the trade credit debt group and in the category of at least two years in the other debt group. This association supported the results of many other studies indicating a strong association between size and capital structure (Lopez-Gracia, Aybar-Arias 2000, Romano et al. 2000, Bennett, Donnelly 1993).

The results for the two measures of profit were statistically significant when using both the non-parametric tests although the parametric test produced inconsistent results. It appears that firms that are in the working owner equity group for all three years report higher absolute profits. Lowest profits are associated with firms in the three-year, and at least two-year, bank loan debt groups. Profitability (profit as a percent of sales), however, is lower in the trade credit debt categories, which is consistent with the findings of other studies (Hall et al. 2000) that profit is negatively associated with short-term debt. Higher profitability is also associated with the working owner equity and related persons debt categories. This is consistent with the proposition that profitable firms have more internal funds reflected in equity and consequently lower external debt (Cassar, Holmes 2001, Michaelas et al. 1999, Chittenden et al. 1996, Bennett, Donnelly 1993).

Growth (measured by annual sales growth and determined for two and three year periods where possible) does not reveal any consistent statistically significant results. This reflects the confusion in prior results where some studies support an association between growth and greater debt levels (Michaelas et al. 1999, Cassar, Holmes 2001) while others do not (Jordan et al. 1998).

	In same group all three years:				In same group in any two years:				In different group each year:	Mean of total sample		
	Trade credit debt	Bank loan debt	Related persons debt	Other debt	Working owner equity	Trade credit debt	Bank loan debt	Related persons debt			Other debt	Working owner equity
Sales (\$'000)												
1998	9 864	4 064	1 036	1 965	4 954	5 317	3 543	2 244	11 009	4 474	4 040	4 694
1997	11 131	3 842	1 059	1 836	4 631	4 952	3 462	2 075	9 966	4 069	3 791	4 446
1996	9 137	3 531	1 119	1 821	4 436	4 486	3 412	1 996	8 526	3 910	3 739	4 181
Employment (number of employees)												
1998	27.8	17.0	9.7	13.4	27.3	23.5	17.8	13.8	21.2	23.0	17.6	22.9
1997	27.4	16.3	9.6	18.2	26.5	22.0	18.3	13.5	21.1	22.8	17.1	22.3
1996	26.4	16.1	10.3	15.9	26.2	21.7	17.7	13.5	19.4	22.3	17.8	22.0
Profit (\$'000)												
1998	164.8	62.2	121.7	154.2	376.1	80.4	76.8	97.3	239.0	216.7	86.1	230.0
1997	917.1	66.0	71.9	152.1	330.6	101.2	-36.9	139.9	330.7	210.2	56.6	227.8
1996	399.0	33.6	79.5	99.4	369.3	108.4	101.4	93.3	673.4	207.8	167.1	248.4
Profitability (%)												
1998	1.6	5.3	12.4	8.4	7.9	0.9	6.5	1.9	5.5	7.6	2.9	6.3
1997	2.0	4.7	11.3	8.0	9.4	2.2	7.0	11.9	6.5	5.4	6.2	7.3
1996	1.8	5.1	15.5	5.8	21.3	2.6	4.9	12.1	6.4	7.6	6.8	12.5
Sales growth (%)												
1998-97	3.4	9.0	8.1	0.9	7.8	11.1	17.1	5.4	8.4	15.2	6.9	9.9
1998-96	29.8	29.1	21.3	6.0	22.7	31.8	20.1	20.2	12.3	29.9	23.0	24.6
1998-95	39.0	29.6	67.5	5.4	102.6	53.9	17.3	27.1	103.2	119.7	34.6	78.4
1997-96	22.5	11.0	6.9	5.3	8.5	17.6	9.1	9.1	4.3	14.9	13.7	11.1
1997-95	33.3	18.9	57.7	3.5	73.6	49.2	12.7	22.5	87.7	80.1	26.7	56.7
1996-95	8.2	11.2	69.6	-2.2	60.1	13.7	10.1	19.4	70.9	48.1	14.0	40.7
Asset structure (%)												
1998	24.6	61.4	50.1	50.6	45.6	40.4	58.0	46.5	43.6	45.6	49.6	47.2
1997	25.3	63.7	53.5	49.7	46.3	39.5	59.5	45.3	48.8	45.5	48.2	47.8
1996	26.6	62.1	51.9	48.4	46.4	39.1	58.8	46.5	47.4	45.8	48.8	47.7

Table 4: Continuous variables and movement category membership – means for each category by each variable



	ANOVA		Kruskal-Wallis		Median test	
	F	p	Chi-square	p	Chi-square	p
Sales (\$'000)						
1998	3.040	.001	161.247	.000	128.909	.000
1997	3.457	.000	157.584	.000	136.594	.000
1996	2.866	.001	152.006	.000	131.860	.000
Employment (number of employees)						
1998	7.148	.000	114.951	.000	86.617	.000
1997	6.792	.000	115.795	.000	91.833	.000
1996	6.750	.000	102.559	.000	82.970	.000
Profit (\$'000)						
1998	1.562	.112	164.543	.000	141.061	.000
1997	2.323	.010	187.590	.000	157.782	.000
1996	2.357	.009	163.920	.000	119.843	.000
Profitability (%)						
1998	2.175	.017	102.207	.000	81.368	.000
1997	1.282	.235	89.988	.000	71.801	.000
1996	0.249	.991	97.799	.000	78.376	.000
Sales growth (%)						
1998–97	1.211	.278	7.943	.634	24.516	.006
1998–96	0.173	.998	10.463	.401	17.778	.059
1998–95	0.170	.998	18.752	.044	18.176	.052
1997–96	0.916	.517	7.654	.663	19.726	.032
1997–95	0.170	.998	17.202	.070	18.183	.052
1996–95	0.176	.998	20.272	.027	29.285	.001
Asset structure (%)						
1998	14.464	.000	135.562	.000	118.219	.000
1997	16.608	.000	153.772	.000	122.352	.000
1996	14.256	.000	132.205	.000	117.947	.000

Table 5: Continuous variables and category membership – association statistics

The asset structure (non-current assets as a proportion of total assets) was statistically significant for all three years and for all three tests used. As expected from prior study results (Cassar, Holmes 2001, Michaelas et al. 1999, Jordan et al. 1998, Chittenden et al. 1996, Bennet, Donnelly 1993), firms with higher asset structure measures (more tangible assets) were associated with the bank loan debt categories. The trade credit (short-term) debt categories were associated with the lowest asset structures supporting the assertion of Hall et al. (2000) that the association differs between long-term and short-term debt.

## Discussion

The analysis in this paper suggests that firms do not have a static financial structure, although there is a tendency for them to be reasonably stable. The *trade credit debt* categories reflect firms with a high reliance on short-term informal debt. Firms in these categories tend to have higher levels of sales but lower levels of profitability per sales dollar (although results with respect to absolute profits are inconsistent). They also have the lowest asset structure reflecting their likely reliance on high levels of current assets such as inventory. The *bank loan debt* categories are associated, as anticipated,

with high asset structure firms, but, perhaps because of the presence of interest expense, have the lowest absolute profits and relatively low profitability.

The *related persons debt* categories tends to have the highest profitability measures (although not in 1998), possibly because of low or non-existent interest paid on the “debt”. From a size perspective these categories also have lower average sales and total employment. These categories may represent firms with constrained or capped growth. The *other debt* categories do not reflect any strong associations. The *working owner equity* categories seem to be mostly associated with highest absolute profit and higher relative profits. Firms in these categories tend to have average sales but have some of the highest employment averages. The numbers in these categories and the high profits they generate indicate this is an important category in enhancing understanding of small firm financial structure outcomes. Finally, there appeared to be no dominant association for firms that were in the category of moving to a different group in each year.

There is probably not a great direct benefit from these results for the owners of small firms, other than the knowledge that they are probably not alone with respect to how they fund their business activities. From a public policy and research perspective the implications of the findings in this study are that borrowing needs are not completely static. To the extent that researchers, policy makers, and policy implementation agencies, seek to address problems in the finance sector they need to be aware of the different funding emphasis associated with different types of firms. It is also important for these groups to be aware that relationships vary between short-term and long-term funding sources.

There are of course limitations in the study. One is a survivorship bias because it is “possible managers in liquidated businesses have handled the need for resources differently from managers in surviving businesses” (Winborg, Landström, 2000, p.242) and liquidated business are not included in the sample used in this paper. There is also a problem associated with a self-reporting bias as in all survey-based research. A major potential problem is the likely confusion caused (especially between some bank debt and working owner equity and also related persons debt) by the lack of clarity in the interpretation and recording of bank loans secured by owner’s personal assets and contributions to the firm from owners. Finally, as mentioned earlier, it is possible that the parameters used to define the groups were critical at the margin and that much of the movement was in response to very small shifts in funding.

## Conclusions

This paper presents an analysis of movement in debt and equity structure relationships. It is clear that there are distinct categories based around certain dominant funding sources. These are trade credit debt, bank loan debt, related persons debt, other debt, and working owner equity. Continued firm membership on these categories is associated with several financial variables. There are strong associations with profit levels, asset structure and sales but no clear association with growth. Some of these results could be influenced by poor specification of the variables used in the study. Conse-

quently, the true underlying relationship may not necessarily be reflected in the results which paves the way for more detailed study. Notwithstanding these possible limitations, the results clearly identify different finance structures in small firms and support the general nature of theoretical explanations for those differences.

## References

- BATES, J.: *The Financing Of Small Business*. London: Sweet and Maxwell, 1971.
- BENNETT, M., DONNELLY, R.: The Determinants Of Capital Structure: Some UK Evidence, in: *British Accounting Review*. 25. 1993, pp.43–59.
- BERGER, A.N., UDELL, G.F.: The Economics Of Small Business Finance: The Roles Of Private Equity And Debt Markets In The Financial Growth Cycle, in: *Journal of Banking and Finance*. 22. 1998, pp.613–673.
- CASSAR, G. HOLMES, S.: *Capital Structure and Financing of SMEs: Australian Evidence*. Working paper, Department of Accounting and Finance. The University of Newcastle 2001.
- CHITTENDEN, F., HALL, G., HUTCHINSON, P.: Small Firm Growth, Access To Capital Markets And Financial Structure: Review Of Issues And An Empirical Investigation, in: *Small Business Economics*. 8. 1996, pp.59–67.
- GIBSON, B.: The Alternative to Assuming ‘Rational’ Use of Financial Information Within Small Firms, in: *The Journal of Small Business Finance*. 2(2). 1993, pp.163–174.
- GIBSON, B.: *Financial Structure in Australian Small Firms*. Proceedings of the SEAANZ Annual Conference, Wellington, NZ, September 2001.
- GIBSON, B.: *An International Comparison of Small Firm Financial Structure*. Proceedings of the 47th ICSB World Conference, San Juan, Puerto Rico, June 2002 (forthcoming).
- GIBSON, B., CASSAR, G.: Planning Behaviour Associations In Small Firms, in: *Journal of Small Business Management*. 40, 3. 2002, pp.171–186.
- HALL, G., HUTCHINSON, P., MICHAELAS, N.: Industry Effects on the Determinants of Unquoted SMEs’ Capital Structure, in: *International Journal of the Economics of Business*. 7(3). 2000, pp.297–312.
- JORDAN, J., LOWE, J., TAYLOR, P.: Strategy And Financial Policy In UK Small Firms, in: *Journal of Business Finance & Accounting*. 25(1). 1998, pp.1–27.
- KOTEY, B.: Debt Financing And Factors Internal To The Business, in: *International Small Business Journal*. 17(3). 1999, pp.11–29.
- LOPEZ-GRACIA, J., AYBAR-ARIAS, C.: An Empirical Approach To The Financial Behaviour Of Small And Medium Sized Companies, in: *Small Business Economics*. 14. 2000, pp.55–63.
- MacMillan Committee. *Report of the Committee on Finance and Industry*. Cmnd 3897, HMSO, London 1931.
- McMAHON, R.: Deriving an Empirical development Taxonomy for Manufacturing SMEs Using Data from Australia’s Business Longitudinal Survey, in: *Small Business Economics*. 17. 2001, pp.197–212.

- MICHAELAS, N., CHITTENDEN, F., POUTZIOURIS, P.: Financial Policy And Capital Structure Choice In U.K. SMEs: Empirical Evidence From Company Panel Data, in: *Small Business Economics*. 12. 1999, pp.113–130.
- MILLIGAN, G.: Clustering Validation: Results and Implications for Applied Analyses, in: ARABIE, P., HUBERT, L.J., DE SOETE, G. (Eds.): *Clustering and Classification*. World Scientific, NJ 1996.
- MODIGLIANI, F., MILLER, M.: Taxes And The Cost Of Capital: A Correction, in: *American Economic Review*. 53(3). 1963, pp.433–443.
- MODIGLIANI, F., MILLER, M.: The Cost Of Capital, Corporation Finance And The Theory Of Investment, in: *American Economic Review*. 48. 1958, pp.261–297.
- MYERS, S.C.: The Capital Structure Puzzle, in: *Journal of Finance*. 34(3). 1984, pp.575–592.
- REID, G.C.: Financial Structure and the Growing Small Firm: Theoretical Underpinning and Current Evidence, in: *Small Business Economics*. 8. 1996, pp. 1–7.
- ROMANO, C., TANEWSKI, G.A., SMYRNIOS, K.X.: Capital Structure Decision Making: A Model For Family Business, in: *Journal of Business Venturing*. 16. 2000, pp.285–310.
- VICKERS, D.: The Cost of Capital and the Structure of the Firm, in: *Journal of Finance*. 25. 1970, pp.35–46.
- WINBORG, J., LANDSTRÖM, H.: Financial Bootstrapping In Small Businesses: Examining Small Business Managers' Resource Acquisition Behaviors, in: *Journal of Business Venturing*. 16. 2000, pp.235–254.