# Financial determinants of the accounting choice to capitalize expenses: The case of start-up and interest costs

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**ABSTRACT:** The main objective of this study is to explore the impact of financial distress on the managerial choice of accounting methods with a primary focus on the detection of the financial determinants of the accounting choice to capitalize expenses. The research design employs multivariate discriminant analysis (MDA) and logit analysis to construct a model for the prediction of the managerial decision to capitalize expenses. The results of this study provide evidence in support of the contracting cost literature since the managerial decision to capitalize expenses is mainly guided by financial determinants such as earnings growth, corporate dividend policy and financial distress. The contribution of this paper is the detection of the financial determinants of the prediction of a model for the prediction of the financial determinants such as earnings growth, corporate dividend policy and financial distress. The contribution of this paper is the detection of the financial determinants of the accounting choice to capitalize expenses and the provision of a model for the prediction of the pre

Keywords: Accounting choice, bankruptcy, capitalization, interest costs

# I. INTRODUCTION

The choice of accounting methods and techniques is an important managerial decision and a matter of dispute among researchers and academics during the last four decades. As a result, different and sometimes contradicting theories have been developed concerning the determinants of such decisions. Moreover, the application of such decisions affects a plethora of corporate stakeholders as well as users of the reported financial statements.

The main objective of this study is to extend the prior work of DeAngelo et al. (1994) to explore the impact of financial distress on the managerial choice of accounting methods with a primary focus on the detection of the financial determinants of the accounting choice to capitalize expenses. Particularly, the case of start-up and interest costs is thoroughly explored. After the detection of these determinants, we will attempt to construct a model for the prediction of the managerial decision to capitalize expenses. The results of our study will be viewed from two different perspectives concerning Positive Accounting Theory and Contracting Cost Theory.

The structure of this paper is organised as follows: The second section presents an extensive literature review concerning the choice of accounting methods and in particular the capitalization of expenses. Our research methodology including sample and variable selection processes as well as the incorporated statistical methods is provided in the third section of this paper. The fourth section exhibits the empirical results of our study concerning the variable selection, model construction and model validation. The discussion of the empirical results and the practical implications of our study are embedded in the fifth section. Finally, our conclusions are reported in the last section of this paper.

# II. LITERATURE REVIEW

In the accounting literature, Jensen and Meckling (1976) were the pioneers who provided a contracting cost framework to explain the conflict of interests between principals and agents. In this context, when the choice of accounting methods has its origins on opportunistic managerial incentives, it leads to enhanced agency costs (Whittred and Zimmer, 1992). On the other hand, Watts and Zimmerman (1986; 1990) are considered as founders of Positive Accounting Theory who supported that the objective of accounting theory is to explain and predict accounting practice and not to prescribe it. Consequently, when managers have a spectrum of various accounting choices, they can make decisions in order to maximize company value. The provision of this spectrum of accounting choices leads to efficient contracting.

The managerial choice of accounting methods is an integral part of the overall strategy of a company. There is evidence to support that high market concentration and firm size are associated with income decreasing accounting methods while the existence of management compensation plans and high leverage are associated with income increasing accounting methods (Zmijewski and Hagerman, 1981). Moreover, changes in bonus schemes of the managers affect their decisions on the choice of accounting methods concerning inventory

valuation, depreciation of assets, other expenses, revenue recognition and consolidation (Healy, 1985). Particularly, the accounting choice to capitalize interest costs is affected by debt covenant constraints such as pay-out policy, interest coverage and leverage (Bowen et al., 1981).

The impact of financial distress on the managerial choice of accounting methods was explored for the first time by DeAngelo et al. (1994). They found that managers' accounting choices primarily reflect their companies' financial difficulties, rather than attempts to inflate income. On the contrary, Sharma and Stevenson (1997) claimed that management of failing firms tend to adopt a greater number of favorable discretionary accounting policy changes than management of non-failing firms, including changes in expense recognition method and changes in classification of expenses. Kosmidis et al. (2013) witnessed non-failed corporations to capitalize their start up costs including interest expenses while failed ones tend to do the exact opposite. Although their results do not seem to provide support in favor of the opportunistic managerial choice of accounting methods, it appears that managers of companies facing imminent bankruptcy may not engage in income-increasing behavior for fear of consequential penalties such as ex post settling up costs (Houghton et al., 1993). However, this is not always the case due to firms and particularly financially distressed firms have the incentive to engage in aggressive accounting choices (e.g. corporate tax avoidance) when the marginal benefits exceed the marginal costs (Richardson et al., 2015).

# III. METHODOLOGY

#### 3.1 Statistical methods

The present study employs MDA and logit analysis for the construction of a prognosis model for the detection of the financial determinants of the accounting choice to capitalize expenses. The dependent variable of the accounting choice follows a binomial distribution in accordance with the managerial decision to capitalize expenses or not. In the financial literature MDA was originally adopted by Altman (1968) in order to discriminate the financially distressed from the financially viable corporations and since then it has become popular among researchers for classification problems where the dependent variable is categorical.

In this study, the dependent variable has two mutually exclusive categories (capitalizers versus non-capitalizers) and thus there is only one discriminant function (the number of discriminant functions equals to the number of categories of the dependent variable minus one). The discriminant function is a linear function of the following form:

 $D_i = c + b_1 x_1 + b_2 x_2 + b_3 x_3 \dots + b_m x_m$ 

where  $D_i$  represents the multiple discriminant score for category i, c represents a constant term,  $x_i$ s represent m discriminant variables and  $b_i$ s represent m discriminant coefficients. A fundamental issue for MDA is that the categories of the dependent variable are predetermined (in this study capitalizer and non-capitalizer corporations) and the main objective is to identify the financial determinants (independent variables) best discriminating corporations. Logit analysis is the logistic transformation of the ordinary regression model used for predicting the probability  $\pi$  of success (accounting policy decision) when the dependent variable is binary. The logistic regression model has the following form:

logit ( $\pi$ ) = log [ $\pi$  / (1- $\pi$ )] = a + b<sub>1</sub>x<sub>1</sub> + b<sub>2</sub>x<sub>2</sub> + b<sub>3</sub>x<sub>3</sub> ..... + b<sub>n</sub>x<sub>n</sub> = Z

where  $\pi/(1-\pi)$  is the odds ratio, a represents the intercept, x<sub>i</sub>s represent n independent variables and b<sub>i</sub>s represent n regression coefficients. The formula expressing the logistic regression model directly in terms of  $\pi$  is  $\pi = e^{\frac{\pi}{2}} / (1 + e^{\frac{\pi}{2}}) = 1 / (1 + e^{\frac{\pi}{2}})$ 

 $\pi = e^{z} / (1 + e^{z}) = 1 / (1 + e^{-z})$ 

where the probability  $\pi$  of success (accounting policy decision) lies between zero and one when the value of Z ranges from  $-\infty$  to  $+\infty$  for all  $x_n$  values (Agresti and Finlay, 1997). The relationship between the dependent variable and the independent variables is a non-linear sigmoid relationship. In decision making literature where the dependent variable is categorical, as in our study, the logistic regression is favored over ordinary linear regression because the binomial distribution describes better than the normal distribution the distribution of prediction errors while the latter is more difficult to interpret especially in cases where Z takes values above one and less than zero.

# **3.2 Sample selection process**

In order to serve the main objective of this study concerned with the impact of financial distress on the managerial choice of accounting methods and especially with the capitalization of expenses, the following prerequisites are considered as imperative:

- a) Evidence on financially distressed corporations was collected from the two major urban regions of Central and Northern Greece.
- b) The sample comprises corporations complying with the definition of micro, small and medium-sized enterprises provided by the Commission of the European Union (2003).

- c) The sample contains only corporations with limited liability (Ltd) and societe anonyme (s.a.) corporations in order to overcome the scarcity of publicly available information since the preceding legal entities are obliged to disclose financial statements such as balance sheets and the income statements in accordance with the Greek Financial Reporting Standards.
- d) Corporations engaged exclusively in retail and services were excluded from the sample. In fact, it is mainly consisted of manufacturing corporations.
- e) The study incorporates information collected from financial statements published from 2003 to 2009; a period before the outbreak of the crisis when Greek economy constantly witnessed positive growth rates.
- f) Failed corporations are considered those having been bankrupt or dissolved or discontinued operations.

The sample contains 61 failed corporations meeting the preceding six criteria; observations with missing values are deleted. On the other hand, 61 non-failed corporations from corresponding sectors are selected. Subsequently, the final sample of 122 corporations is consistent with the stratified sampling method. The financial statements of these corporations are provided by the ICAP database. Although over-sampling of failing corporations may lead to a non-random sample, the great majority of existing models embody this compromise due to the low frequency rate of failing corporations (Balcaen and Ooghe, 2006). However, this compromise is an acceptable methodological design in order to detect possible effects of financial distress on the accounting choice of interest capitalization.

#### **3.3 Variable selection process**

The selection of the variables is a two stage process. The selection and computation of 39 financial ratios takes place in the first stage. The definition of these financial ratios is based on the current literature and it is embedded in the Appendix. In fact, the descriptive statistics and T-test results of 8 liquidity ratios, 12 activity ratios, 10 profitability ratios, 7 viability ratios and 2 investment ratios are reported in the corresponding Tables 1-5. At the second stage, two tail t-test is conducted for all these 39 financial ratios, the null hypothesis being that there is no significant difference in the mean values of these ratios between capitalizer and non-capitalizer corporations while the alternative hypothesis indicates significant difference in the mean values of these ratios. Finally, the financial ratios that exhibit significant difference in the mean values between the two groups are considered as financial determinants of the accounting policy decision and also eligible for the construction of the prediction model.

# IV. EMPIRICAL RESULTS

The descriptive statistics and the T-test results of the liquidity ratios are reported in Table 1. As we can see, the liquidity does not seem to have significant impact on the managerial decision to capitalize expenses since there is no significant difference in the mean values of liquidity ratios between capitalizer and non-capitalizer corporations. Nevertheless, we keep our reservations concerning FR5 because we detect minor difference in the mean values although not a significant one.

RATIOS	STATUS	MEAN	SD	T-values	Sign.
FR1	Сар	1.65	2.01	0.45	0.655
	Non-Cap	1.48	1.72		
FR2	Сар	1.24	1.91	1.13	0.261
	Non-Cap	0.97	0.79		
FR3	Сар	305	338	-0.41	0.686
	Non-Cap	352	611		
FR4	Сар	2.36	0.31	1.10	0.278
	Non-Cap	2.26	0.47		
FR5	Сар	227644	1337992	1.46	0.151
	Non-Cap	-243744	1591702		
FR6	Сар	2.44	4.77	1.31	0.196
	Non-Cap	1.13	4.76		
FR7	Сар	0.05	0.65	0.80	0.425
	Non-Cap	-0.06	0.64		
FR8	Сар	0.02	0.51	0.44	0.665
	Non-Cap	-0.04	0.63		

 Table 1 Descriptive statistics and T test results of liquidity ratios

Note: Significant difference at the \* 0.1, \*\*0.05 and \*\*\*0.01 significance level.

The descriptive statistics and the T-test results of the activity ratios are presented in Table 2. As we can see, the activity ratios that influence the accounting choice to capitalize expenses are the fixed assets turnover ratio (FR18) and subsequently the total assets turnover ratio (FR19). This is not unexpected since the managerial decision to capitalize expenses affects not only the accounts of expenses but also the accounts of fixed assets and total assets. Especially FR18 is considered as the most important activity ratio and a financial determinant of the accounting choice to capitalize expenses.

RATIOS	STATUS	MEAN	SD	<b>T-values</b>	Sign.
R9	Сар	164	174	-1.00	0.324
	Non-Cap	1059	4878		
FR10	Сар	1.98	0.54	0.08	0.938
	Non-Cap	1.96	0.73		
FR11	Сар	268	454	-0.91	0.369
	Non-Cap	1403	6807		
FR12	Сар	2.27	0.36	1.14	0.262
	Non-Cap	2.13	0.62		
FR13	Сар	199	187	-0.98	0.335
	Non-Cap	782	3258		
FR14	Сар	2.15	0.40	-0.08	0.933
	Non-Cap	2.16	0.56		
FR15	Сар	234	410	-0.94	0.357
	Non-Cap	1675	8425		
FR16	Сар	1.92	1.15	1.67	0.104
	Non-Cap	1.35	1.77		
FR17	Сар	6.12	9.08	-0.62	0.538
	Non-Cap	7.20	8.07		
FR18	Сар	11.90	14.80	-1.83	0.078
	Non-Cap	55.00	129.00		
FR19	Сар	0.98	0.60	-1.75	0.089
	Non-Cap	1.42	1.34		
FR20	Сар	0.15	0.67	-0.02	0.982
	Non-Cap	0.16	1.40		

 Table 2 Descriptive statistics and T test results of activity ratios

Note: Significant difference at the \* 0.1, \*\*0.05 and \*\*\*0.01 significance level.

In Table 3, the descriptive statistics and the T-test results of the profitability ratios are presented. As we witness, the net earnings growth ratio (FR30) is the only profitability ratio that affects the accounting choice to capitalize expenses. As it is mentioned earlier, the managerial decision to capitalize expenses affects the accounts of expenses and subsequently the profitability of the corporation. In particular, FR30 exhibits the most discriminative power among all financial ratios.

RATIOS	STATUS	MEAN	SD	<b>T</b> -values	Sign.
FR21	Сар	0.26	0.14	1.06	0.296
	Non-Cap	0.22	0.18		
FR22	Сар	-0.02	0.25	0.94	0.356
	Non-Cap	-1.80	10.40		
FR23	Сар	0.03	0.17	0.31	0.755
	Non-Cap	0.02	0.16		
FR24	Сар	0.01	1.83	0.16	0.872
	Non-Cap	-0.04	1.24		
FR25	Сар	0.01	0.17	0.09	0.926
	Non-Cap	0.00	0.15		
FR26	Сар	1.00	28.00	-0.62	0.537
	Non-Cap	3.02	7.28		
FR27	Сар	4.00	102.00	-0.87	0.390
	Non-Cap	27.00	130.00		

**Table 3** Descriptive statistics and T test results of profitability ratios

FR28	Cap	0.17	0.69	-0.06	0.953
	Non-Cap	0.18	1.46		
FR29	Сар	0.12	1.11	0.28	0.777
	Non-Cap	0.04	1.49		
FR30	Cap	-0.38	2.17	-1.99	0.054
	Non-Cap	0.93	3.39		

Note: Significant difference at the \* 0.1, \*\*0.05 and \*\*\*0.01 significance level.

The descriptive statistics and the T-test results of the viability ratios are reported in Table 4. As we can see, the viability does not seem to have significant impact on the managerial decision to capitalize expenses since there is no significant difference in the mean values of these ratios between capitalizer and non-capitalizer corporations. The results can be considered as unexpected since the capitalization of expenses affects total assets and hence, viability since total assets is the denominator of many viability ratios. Nevertheless, we keep our reservations concerning long term debt to equity ratio (FR33) because we detect minor difference in the mean values although not a significant one.

RATIOS	STÂTUS	MEAN	SD	<b>T-values</b>	Sign.
FR31	Сар	0.77	0.63	-0.51	0.612
	Non-Cap	0.82	0.44		
FR32	Сар	5.01	9.70	0.27	0.786
	Non-Cap	4.64	5.08		
FR33	Сар	0.41	1.82	1.60	0.112
	Non-Cap	0.09	0.37		
FR34	Сар	0.71	1.23	-0.22	0.829
	Non-Cap	0.80	1.97		
FR35	Сар	0.22	0.18	0.93	0.359
	Non-Cap	0.19	0.19		
FR36	Сар	3.72	8.45	-0.52	0.607
	Non-Cap	5.00	12.60		
FR37	Сар	0.44	0.60	-0.87	0.387
	Non-Cap	0.59	0.87		

**Table 4** Descriptive statistics and T test results of viability ratios

Note: Significant difference at the \* 0.1, \*\*0.05 and \*\*\*0.01 significance level.

Table 5 exhibits the descriptive statistics and the T-test results of the investment ratios. The results are not very promising because there is no significant difference in the mean values of these ratios between capitalizer and non-capitalizer corporations. Thus, these ratios do not seem to have significant impact on the managerial decision to capitalize expenses. Nevertheless, we keep our reservations concerning payout ratio (FR38) because we detect minor difference in the mean values although not a significant one due to high standard deviation values.

Table 5 Descriptive statistics and 1 test results of investment ratios					
RATIOS	STATUS	MEAN	SD	<b>T-values</b>	Sign.
FR38	Сар	0.19	0.26	-1.30	0.203
	Non-Cap	0.42	0.97		
FR39	Сар	0.13	0.77	0.31	0.761
	Non-Cap	0.11	0.21		

**Table 5** Descriptive statistics and T test results of investment ratios

Note: Significant difference at the \* 0.1, \*\*0.05 and \*\*\*0.01 significance level.

In conclusion, only three financial ratios exhibit statistically significant differences between capitalizer and noncapitalizer corporations. However, not all ratios are considered eligible for model construction due to multicollinearity problems. To avoid these problems, only one variable from each category is eligible; that is the variable with the highest discriminative power. To control the impact of financial distress, we introduced the dummy variable of bankruptcy which takes value 1 for bankrupt corporations and 0 for non bankrupt corporations. The results of the two discriminant models and the coefficients of Fisher's discriminant functions are displayed in Table 6. The accuracy of the discriminant model DM1 is mitigated in the prediction of non-capitalizer corporations to a 43.3% of correct classifications, while the model outperforms in the prediction of capitalizer corporations with 85.9% accuracy rate. This discrepancy is witnessed due to the smaller (larger) training sample of non-capitalizer (capitalizer) corporations and vice versa. Although the number of bankrupt and non-bankrupt corporations is identical (prior probability of 50%), the number of non-capitalizer corporations is thirty (25%), leading to ninety two (75%) capitalizer corporations. The overall accuracy of this prediction model DM1 is 75.4% which is satisfactory for in sample accounting policy prediction. Moreover, the Wilk's Lambda (A) statistic is sufficient to reject the null hypothesis that the mean values of the preceding classification functions are equal between capitalizer and non- capitalizer corporations.

	]	DM1	]	DM2	
Variables	Cap	Non-Cap	Cap	Non-Cap	
Intercept	-0.779	-1.450	-1.232	-2.716	
FR18	0.003	0.013	0.002	0.013	
FR30	-0.054	0.173	-0.032	0.210	
FR38	0.653 1.472		0.981	2.020	
Bankrupt			1.975	3.302	
Wilks' Lambda	0.848		0.796		
$X^2$	19.602		26.994		
Sign.	(	0.000		0.000	
Accuracy					
Within groups	0.859	0.433	0.848	0.467	
Overall	(	0.754	(	0.754	
Type I error		0.567		0.533	
Type II error	0.141		0.152		

When we control the impact of financial distress with the introduction of the dummy variable of bankruptcy, the accuracy of the discriminant model DM2 is enhanced in the prediction of non-capitalizer corporations to a 46.7% of correct classifications, while the model continues to outperform in the prediction of capitalizer corporations with 84.8% accuracy rate. Consequently, Type I error decreases from 56.7% to 53.3% and Type II error increases from 14.1% to 15.2%. The assumption of equal impact - cost between Type I and II errors is made although not always valid, particularly in financial statement analysis. In addition, the Wilk's A statistic is sufficient to reject the null hypothesis that the mean values of the preceding classification functions are equal between capitalizer and non- capitalizer corporations. The coefficients and the results of the two Logit models are reported in Table 7. The overall accuracy of the Logit model LM1 is 81.1%, much higher than the DM1 rate (75.4%). However, the same discrepancy between Type I and Type II errors is witnessed. The Hosmer-Lemeshow (2000) statistic is sufficient (0.797) to accept the null hypothesis that the logit model LM1 adequately describes the data. When we control the impact of financial distress in LM2, the accuracy of the Hosmer-Lemeshow (2000) statistic is sufficient (0.753) to accept the null hypothesis that the logit model LM2 adequately describes the data. The preceding analysis is based on a cut-off value 0.50.

	LM	[1	LM	[2
Variables	Coeff.	Sign.	Coeff.	Sign.
Intercept	-1.748	0.000	-1.270	0.000
FR18	0.020	0.034	0.025	0.016
FR30	0.200	0.027	0.230	0.025
FR38	0.697	0.169	1.503	0.068
Bankrupt			-1.686	0.004
Nagelkerke R <sup>2</sup>	0.220		0.318	
H-L Test	4.622		5.039	
Sign.	0.797		0.753	
Overall Accuracy	0.811		0.820	
Type I error	0.700		0.667	
Type II error	0.022		0.022	

 Table 7 Results of the Logit Models

Although multicollinearity is irrelevant in the MDA models (Eisenbeis, 1977), Logit models are more sensitive to multicollinearity (Balcaen and Ooghe, 2006). In order to test the robustness of the preceding four models (DM1,2 & LM1,2), it is imperative to verify the absence of extreme correlation values among the financial determinants (independent variables) of these models. The results of these correlations are embedded in Table 8. The Pearson correlation values are reported below the diagonal while the corresponding p values are reported above the diagonal. Both of them provide sufficient evidence to support the independence of the financial determinants (FR18, FR30 and FR38) and consequently, the robustness of the proposed models.

Table 8 Pearson Correlation Matrix				
	FR18	FR30	FR38	
FR18	1	0.994	0.437	
FR30	-0.001	1	0.742	
FR38	0.071	0.03	1	

# V. DISCUSSION

The empirical results of our research imply that liquidity and viability ratios have no significant effect on the managerial decision concerning the accounting policy to capitalize expenses. That was anticipated for liquidity ratios because the capitalization of expenses affects the values of net earnings and total assets but it does not affect current liabilities. However, that was not expected for viability ratios since the majority of these ratios incorporate total assets usually as a denominator.

Vis-à-vis activity ratios, we witness a positive significant relationship between fixed assets turnover ratio and the probability not to capitalize expenses. Non-capitalizer corporations exhibit much higher values in fixed assets turnover ratio than the capitalizer corporations. We consider our results consistent with DeAngelo et al. (1994) because managers' accounting choices primarily reflect their companies' financial difficulties, rather than attempts to inflate income. In this case, the majority of non-capitalizer corporations are financially distressed and their accounting policy is prescribed by their incompetence to invest in new fixed assets.

In addition, we found evidence that managerial decision to capitalize expenses is affected by the profitability of the corporation and particularly by its growth. Corporations with negative (positive) net earnings growth ratio tend to (not) capitalize expenses and vice versa. This is consistent with the proposals of the current contracting cost literature (Jensen and Meckling, 1976; Zmijewski and Hagerman, 1981; Bowen et al., 1981; Kosmidis et al., 2013) since the choice of accounting methods (capitalization of expenses) has its origins on opportunistic managerial incentives to manipulate (increase) income.

Although our study indicates that corporate dividend policy does not have a significant impact on the managerial choice of accounting methods concerning the capitalization of expenses, we witness non-capitalizer corporations to have double payout ratio than the capitalizer corporations. This difference is mitigated by the high value of standard deviation which implies that there are a substantial number of non-capitalizer corporations which do not pay any dividends at all due to heavy losses (low outliers) but there are also many financially distressed non-capitalizer corporations that exhibit high payout ratios (high outliers) in accordance with the contracting cots literature (Bowen et al., 1981). This indication is verified by all the preceding four models where payout ratio proved to be a significant financial determinant of the accounting choice to capitalize expenses.

In our study, financial distress proves to be an important factor that influences managerial decision to capitalize expenses or not. This impact becomes obvious particularly in the Logit model in terms of the overall accuracy rate and Type I error. This impact appears less significant in the Discriminant model where we witness mitigation only of the Type I error. Nevertheless, our results provide evidence in support of the contracting cost literature since the managerial decision to capitalize expenses is primarily guided by financial determinants such as earnings growth, corporate dividend policy and financial distress.

In addition, the empirical results of our study provide evidence to support the prior work of Kosmidis and Terzidis (2011) who suggested that different accounting methods or even creative accounting techniques can be employed for the manipulation of an Internal Ratings Based model when managerial action is driven by opportunistic incentives. Moreover, we provide sufficient evidence for regulatory authorities to take into consideration possible misuses of the current accounting policy framework and to take action in the direction of the enhancement of the current regulatory framework.

# VI. CONCLUSIONS

The managerial choice of accounting methods is only a part of the overall corporate strategy (Zmijewski and Hagerman, 1981) and hence, the accounting policy to capitalize expenses can be conceived as managerial tool for the achievement of corporate goals. The main objective of this study is to explore the impact of financial distress on the managerial choice of accounting methods with a primary focus on the detection of the financial determinants of the accounting choice to capitalize expenses. In particular, the case of start-up and interest costs is primarily investigated. The results of our study are viewed from two different perspectives concerning Positive Accounting Theory and Contracting Cost Theory.

We provide evidence in support of the contracting cost literature since the managerial decision to capitalize expenses is primarily guided by financial determinants such as earnings growth, corporate dividend policy and financial distress. After the detection of these determinants, we constructed a model for the prediction of the managerial decision to capitalize expenses with the employment of multivariate discriminant analysis and logit analysis. Although both models proved to be robust, the results of the logit model outperform in compare with the discriminant model in terms of the overall accuracy rate.

Despite the scarcity of publicly available data concerning the choice of accounting methods, especially for the financially distressed corporations, our findings can help regulatory authorities to reconsider the current accounting policy framework. Further research is necessary to explore the financial determinants of other accounting policy decisions.

RATIOS		DEFINITION
FR1	CR	Current assets to current liabilities
FR2	QR	Current assets minus inventory to current liabilities
FR3	DIR	Current assets minus inventory to daily operating expenses
FR4	LDIR	Natural logarithm of DIR
FR5	CFR	Distributable earnings minus reserves and directors' reimbursement plus
FR6	LCFR	Natural logarithm of CFR
FR7	CFCL	CFR to current liabilities
FR8	CFTLR	CFR to total liabilities
FR9	ITR	Inventory to Cost of goods sold multiplied by 360 days
FR10	LITR	Natural logarithm of ITR
FR11	RTR	Receivables to annual sales multiplied by 360 days
FR12	LRTR	Natural logarithm of RTR
FR13	TCTR	Trade Creditors to Cost of goods sold minus depreciation multiplied by 360
FR14	LTCT	Natural logarithm of TCTR
FR15	CCR	ITR plus RTR minus TCTR
FR16	LCCR	Natural logarithm of CCR
FR17	ETR	Annual sales to equity
FR18	FATR	Annual sales to fixed assets
FR19	TATR	Annual sales to total assets
FR20	TGR	Annual sales t minus annual sales t-1 to annual sales t-1
FR21	GMR	Gross profit to annual sales
FR22	NMR	Earnings before taxes to annual sales
FR23	ROCE	Earnings before taxes plus interest paid to capital employed
FR24	ROE	Earnings before taxes to equity
FR25	ROA	Earnings before taxes to total assets
FR26	FLR	ROE to ROCE
FR27	TIE	Earnins before taxes to interest paid
FR28	COGS	CoGS t minus CoGS t-1 to CoGS t-1
FR29	GPGR	Gross profit t minus gross profit t-1 to gross profit t-1
FR30	NEGR	Earnings before taxes t minus earnings before taxes t-1 to earnings before taxes
FR31	SR	Total liabilities to total assets
FR32	DER	Total liabilities to equity
FR33	LTDE	Non-current liabilities to equity

#### APPENDIX

FR34	EDR	Equity to total liabilities	
FR35	FATA	Fixed assets to total assets	
FR36	LTCFA	Equity plus non-current liabilities to fixed assets	
FR37	RSCR	Reserves to share capital	
FR38	POR	Dividends to earnings before taxes	
FR39	DY	Dividends to equity	

#### REFERENCES

- [1]. H. DeAngelo, L. DeAngelo, and D.J. Skinner, Accounting choice in troubled companies, *Journal of Accounting and Economics*, *17*, 1994, 113-143.
- [2]. M. Jensen, and W. Meckling, Theory of the firm: Managerial behaviour, agency costs and ownership structure, *Journal of Financial Economics*, *3*, 1976, 305-360.
- [3]. G. Whittred, and I. Zimmer, *Financial Accounting: Incentive Effects and Economic Consequences* (Harcourt Brace Jovanovich, 3rd edition, 1992).
- [4]. R.L. Watts, and J.L. Zimmerman, Positive Accounting Theory (Englewood Cliffs, New Jersey: Prentice Hall, 1986).
- [5]. R.L. Watts, and J.L. Zimmerman, Positive Accounting Theory: A ten year perspective, *The Accounting Review*, 65(1), 1990, 131-156.
- [6]. M. Zmijewski, and R. Hagerman, An income strategy approach to the positive theory of accounting standard setting/choice, *Journal of Accounting and Economics*, *3*, 1981, 129-149.
- [7]. P. Healy, The effect of bonus schemes on accounting decisions, Journal of Accounting and Economics, 7, 1985, 85-107.
- [8]. R.M. Bowen, E.W. Noreen, and J.M. Lacey, Determinant of the corporate decision to capitalize interest, *Journal of Accounting and Economics*, *3*, 1981, 151-179.
- [9]. D. Sharma, and P.A. Stevenson, The impact of impending corporate failure on the incidence and magnitude of discretionary accounting policy changes, *British Accounting Review*, 29, 1997, 129-153.
- [10]. K. Kosmidis, A. Stavropoulos, and K. Terzidis, Accounting agility and the prediction of corporate failure, Proc. 6th Annual Conf. of the EuroMed Academy of Business, Estoril Higher Institute for Tourism and Hotel Studies, Portugal, 2013, 1272-1288.
- [11]. K. Houghton, J. Kestel, P. Robinson, M. Smith, and S. Taylor, Imminent corporate failure: its effect on accounting income increasing policy choice, *Paper presented at the AAANZ Conference*, Darwin, 1993.
- [12]. G. Richardson, G. Taylor, and R. Lanis, The impact of financial distress on corporate tax avoidance spanning the global financial crisis: Evidence from Australia, *Economic Modelling*, 44, 2015, 44-53.
- [13]. E. Altman, Financial ratios, discriminant analysis and the prediction of corporate bankruptcy, *Journal of Finance*, 23(4), 1968, 589-609.
- [14]. A. Agresti, and B. Finlay, *Statistical methods for the social sciences* (New Jersey: Prentice Hall International Inc., Third Edition, 1997).
- [15]. Commission of the European Union, Commission Recommendation of 6 May 2003 concerning the definition of micro, small and medium-sized enterprises, *Official Journal of the European Union, L 124, 2003, 36-41.*
- [16]. S. Balcaen, and H. Ooghe, 35 years of studies on business failure: an overview of the classic statistical methodologies and their related problems, *The British Accounting Review*, 38, 2006, 63-93.
- [17]. D. Hosmer, and S. Lemeshow, Applied Logistic Regression (New York: Wiley, 2000).
- [18]. R.A. Eisenbeis, Pitfalls in the application of discriminant analysis in business, Journal of Finance, 32(3), 1977, 875-900.
- [19]. K. Kosmidis, and K. Terzidis, Manipulating an IRB model: Considerations about the Basel II framework, *EuroMed Journal of Business*, 6(2), 2011, 174-191.