

AN APPLIED RESEARCH ON THE MODELING OF OBJECTIVE CASH BALANCE MANAGEMENT--USING STOCK-LISTED ELECTRONIC COMPANIES IN TAI

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ABSTRACT

During late 2000, Taiwan encountered governmental instability, stock crash and quick turndown of economic indexes. Some companies had serious financial problems due to net cash outflows, which included Kuo Feng Co., Yang Iron Works Co., Royal Information Electronics Co., Ornatube Enterprise Co., Kuei Hung Industrial Co., Maxm International Development Co., Hsin Nan Contruction Co., Corner Co., Imperial Hotel Co., Ace Union Foods Co., Taiwan Industrial Development Co., Choungsim Co., Acer Laboratories Co. ..., etc. . Therefore, it reflected the importance of cash balance management. Cash flow mainly comes from business activities, investment activities and financial management activities. Either shortage of business income or failure of investment activities will cause net cash outflows; hence, it will raise serious financial problems for companies either directly or indirectly. If we can control the uncertainty of cash flow volatility and the trend of cash balance, we may prevent those companies from serious financial problems. To offer the business a practical cash balance management model to keep away form financial problem, this research integrates an inventory control model under the conditions of un-fixed demand and fixed lead-time with Miller-Orr cash balance model to construct a new model. Then, we test the model with financial data of 42 stock-listed electronic companies and 10 troubled companies separately, which includes the data form the first quarter of 1995 to the second quarter of 2000. From this experiment, we will understand the pragmatism of the proposed model and establish a preventive signal system for those troubled companies. Finally, it tests the distinguished capability of the proposed model on the shortage of current cash balance with the Spearman rank correlation coefficient.

Keywords : Inventory Control Model ; Miller-Orr Cash Balance Model ; Cash Flow ; Cash Balance ; Spearman Rank Correlation Coefficient

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REFERENCES

- 一、 中文部份: 1.方世榮(1998年4月), 統計學導論(三版), 華泰書局, PP.106-107, 541-549. 2.李立行(1987), 「運用現金流量預測企業財務危機之研究-以上市公司紡織業為例」, 私立淡江大學 管理科學研究所未出版碩士論文。 3.李祖培 (1998), 財務報表分析, 增訂初版, 台北市:三民, PP.356-358. 4.林惠玲、陳正倉 (1999), 統計學, 下冊, 雙葉書廊有限公司, PP.342~344. 5.邱志榮(1991), 「公司營運危機之預測:財務比率與現金流量比率之比較」, 國立成功大學工業管理研究所未出版碩士論文。 6.洪惠玲(1987), 「營運現金流量對企業失敗預測能力之研究」, 國立政治大學會計研究所未出版碩士論文。 7.陳超塵(1991年9月), 統計學, 台灣商務印書館, P377. 8.黃瓊華 (1995), 「現金流量與傳統財務比率預測企業失敗之研究」, 私立中華工學院工業工程管理研究所未出版碩士論文。 9.路奎琛 (1989), 「以淨營運現金流量預測企業失敗之實證研究」, 國立交通大學管理科學研究所 未出版碩士論文。 10.賴士葆 (1995), 生產/作業管理---理論與實務, 台北市:華泰文化, PP.602-604. 11.謝劍平 (1997), 財務管理:新觀念與本土化, 初版, 台北市:智勝文化, PP.500-508. 12.----- (1998年10月), 現代投資學---分析與管理, 初版三刷, 智勝文化, PP.133-563. 13.顏月珠(1994年11月), 無母數統計方法, 萬達打字印刷有限公司, 再版, PP.40-43. 14.----- (1996年11月), 實用統計學方法, 初版, 陳昭明發行, PP.333-336.
- 二、 英文部份: 15.ALTMAN, E. I., R. G. HALDMAN, AND P. NARAYANAN, (1997), "ZETA ANALYSIS: A NEW MODEL TO IDENTIFY BANKRUPTCY RISK OF CORPORATIONS," JOURNAL OF BANKING AND FINANCE, PP.29-54. 16.BAUMOL, W. J., (NOVEMBER 1952), "THE TRANSACTIONS DEMAND FOR CASH: AN INVENTORY THEORET -IC APPROACH," QUARTERLY JOURNAL OF ECONOMICS, PP.545-556. 17.BEAVER, W. H., (1966), "FINANCIAL RATIO AS PREDICTORS OF FAILURE," "EMPIRICAL RESEARCH IN ACCOUNTING: SELECTED STUDY, SUPPLEMENT TO JOURNAL OF ACCOUNTING RESEARCH,

PP. 71-111. 18.DEAKIN, E. B., (1972), "A DISCRIMINANT ANALYSIS OF PREDICTORS OF BUSINESS FAILURE, " JO -URNAL OF ACCOUNTING RESEARCH, PP.167-179. 19.LARGAY, J. A., AND C. P. STICKNEY, (JULY/AUGUST 1980), "CASH FLOWS, RATIO ANALYSIS AND W. T. GRANT BANKRUPTCY, " FINANCIAL ANALYSTS JOURNAL, PP.50-54. 20.MILLER, M. H., AND D. ORR (AUGUST 1966), "A MODEL OF THE DEMAND FOR MONEY BY FIRMS, " Q -UARTERLY JOURNAL OF ECONOMICS, PP. 413-435. 21.SHARMA, S. AND V. MAHAUAN, (1980), "EARLY WARNING INDICATOR OF BUSINESS FAILURE, " JOURN -AL OF BUSINESS FINANCE AND ACCOUNTING, PP.56-85. 22.WARD, T. J., (1994), "CASH FLOW INFORMATION AND THE PREDICTION OF FINANCIAL DISTRESSED MINING, OIL AND GAS FIRMS: A COMPARATIVE STUDY, "JOURNAL OF APPLIED BUSINESS RESEARCH, PP.78-86. 23.ZELLER, T. L. AND R. E. FIGLEWICZ, (WINTER 1990), "NEW INVESTING AND FINANCING ACTIVITY -RATIOS FROM THE STATEMENT OF CASH FLOWS ENHANCE TRADITIONAL RAITO ANALYSIS IN ASSESSING FUTURE CASH FLOWS, "THE MID-ATLANTIC JOURNAL OF BUSINESS, PP. 49-59.