

The Relationship between Corporate Governance and Initial Public Offerings - Comparison between Two Different Forecasting

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ABSTRACT

This study includes samples of the public initial offerings(IPOs)in Taiwan Stock Exchange during 1999 and 2008. Firstly, the study discussed the relationship between corporate governance mechanism and under-pricing level of IPOs. The result indicated that only the number of independent supervisors and manger holder are in negative relation with the under-pricing level of IPOs. Secondly, this study discussed the comparison between a model of corporate governance added and a model without corporate governance. The empirical result showed that the model with corporate governance addition has a rather smaller under-pricing level, which confirmed that corporate governance mechanism is able to reduce situations of under-pricing. Lastly, this study compared accuracy of Ordinary Least Squares (OLS) model and Artificial Neural Networks (ANN) model for predicting offer prices of IPOs. The empirical result indicated that the ANN model is able to perform with more predictive accuracy than the OLS model.

Keywords : corporate governance、initial public offerings、ordinary least squares、artificial neural networks

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REFERENCES

一、中文部份 林象山(1995), 承銷商信譽對新上市股票之影響, 中國財務學刊, 3(1), 119-143。 林象山, 霍熾榮, 王郁雯(1998), 銀行貸款與新股折價與公司價值的關係, 管理學報, 15(2), 271-293。 金成隆, 林修葳, 洪郁珊(2003), 無形資產、新股折價與內部人持股關係之研究, 會計評論, 36, 25-53。 邱垂昌, 黃文燕(2006), 自願設立獨立董事、公司資訊明度、審計品質與公司績效關聯性之研究:代理問題vs.訊號發射理論, 2006台灣財務金融學會年會暨財務金融保險不動產學術研討會(pp.25), 台北:私立世新大學。 邱垂昌, 莊清醜(付梓中), 獨立董監事、公司資訊透明度與公司價值之關聯性, 中山管理評論。 邱垂昌, 張裕任, 郭麗雪(2007), 強制設置獨立董監事與新股折價關聯性之研究, 會計評論, 45, 97-134。 邱垂昌, 黃怡婷(2007), 公司治理機制與初次上市櫃公司承銷價低估關聯性之研究, 商管科技季刊, 8(3), 369-391。 邱垂昌, 王森威(2010), 公司治理機制與初次公開發行股票訂價之關聯性 - 不同方法比較, 第二屆海峽兩岸會計學術研討會暨第三屆中國會計與財務國際論壇之論文(pp.117), 台北:國立政治大學。 施光訓, 蔡明春, 陸仲華(2005), IPO議價因素之探討 - 承銷商觀點, 會計與公司治理, 2(2), 79-108。 徐燕山, 徐政義(2004), Information content of investors' bids in IPO auctions: Evidence from Taiwan, 財務金融學刊, 12(1), 26-52。 馬黛, 胡德中(2003), 承銷配售機制之決定及其對IPO折價之影響:競價拍賣、詢價圈購與公開申購, 財務金融學刊, 11(1), 1-40。 葉銀華, 何幸芳(2003), 獨立董監的趨勢、疑慮與實地調查, 會計研究月刊, 213, 86-93。 葉怡成(2003), 類神經網路模式應用與實作(8版), 台北:儒林書局。 張斐章, 張麗秋, 黃浩倫(2003), 類神經網路理論與實務, 台北:東華書局。 陳慶隆, 武季蔚(2007), 應用貝氏類神經網路於初次公開發行時折價幅度之預測, 朝陽商管評論, 6(2), 1-28。

二、英文部份 Allen, F., & Faulhaber, G. R. (1989). Signaling by under-pricing in the IPO Market. *Journal of Financial Economic*, 23(2), 203-323.

Andres, P. D., Azofra, V., & Lopez, F. (2005). Corporate boards in OECD countries: Size, composition, functioning and effectiveness. *Corporate Government: An Interna Review*, 13(2), 197-210.

Baron, D. P., & Holmstrom, B. (1980). The investment banking contract for new issues under asymmetric information: Deregulation and the incentive problem. *Journal of Finance*, 35(4), 1115-1138.

Baron, D. P. (1982). A model of the demand for investment banking advising and distribution. *Journal of Financial Economics*, 37(4), 995-976.

Barnea, A., R. A. Haugen, & Senbet, L. W. (1980). A rationale for debt maturity structure and call provisions in the agency theoretical framework. *Journal of Finance*, 35(4), 1223-1234.

Beatty, R. P., & Ritter, J. R. (1986). Investment banking, reputation, and the underpricing of initial public offerings. *Journal of Financial Economics*, 15(1), 213-232.

Beatty, R. P. (1989). Auditor reputation and the pricing of initial public offering. *The Accounting Review*, 64(2), 693-709.

Beasley, M. S. (1996). An empirical analysis of the relation between the board of director composition and financial statement fraud. *The Accounting Review*, 71(4), 443-465.

Berle, A., & Means, G. (1932). *The modern corporation and private property*. New York: Micllan.

Biais, B., & Faugeron-Crouzet, A. M. (2002). IPO auctions: English, Dutch, French, and internet. *Journal of Financial Intermediation*, 11(1), 9-36.

Bowen, J. E. (1994). A neural network project roadmap. *Neuro Vest Journal*, 2(5), 7-11.

Bridcley, J. A., Lease, R. C., & Smith, C. W. (1998). Ownership structure and voting on antitakeover amendments. *Journal of Financial Economics*, 20(1), 267-292.

Byrd, J., & Hickman, K. (1992). Do outside directors monitor managers? Evidence from tender offer bids. *Journal of Financial Economics*, 32(2), 195-221.

Carcello, J. V., & Neal, T. L. (2000). Audit committee characteristics and auditor reporting. *The Accounting Review*, 75(4), 453-467.

Carter, R. B., & Manaster, S. (1990). Initial public offerings and the underwriter reputation. *Journal of Financial Economics*, 45(4), 1045-1067.

Certo, T. S., Covin, J. G., Daily, C. M., & Dalton, D. R. (2001). Wealth and the effects of founder management among IPO-stage new ventures. *Strategic Management Journal, Special Issue* 22(6), 641-658.

Chemmanur, T. J. (1993). The pricing of initial public offering: A dynamic model with information production. *Journal of Finance*, 48(1), 285-304.

Chemmanur, T. J., & Fulghieri, P. (1994). Reputation, renegotiation and the choice between bank loans and publicly traded debt. *The Review of Financial Studies*, 7(3), 475-506.

Chemmanur, T. J., & Paeglis, I. (2005). Management quality, certification, and initial public offerings. *Journal of Financial Economics*, 76(2), 331-368.

Chiou, C. C. & Wang, S. W. (2010, July 28-31). A study on the relationship between corporate governance and pricing for initial public offerings: the application of artificial neural networks. Paper present at the 2nd International Symposium on Intelligent Decision Technologies in conjunction with Intelligent and Interactive Multimedia: Systems and Services, KES IDT 2010, Baltimore, USA

Cho, M. H. (1998). Ownership structure, investment and the corporate value: An empirical analysis. *Journal of Financial Economics*, 47(1), 103-121.

Chua, L. (1995). A re-examination of the costs of firm commitment and best efforts IPOs. *Financial Review*, 30(2), 337-365.

Claessens, S., Djankov, S., Fan, J., & Lang, H. P. (2002). Disentangling the incentive and entrenchment effects of large shareholdings. *The Journal of Finance*, 57(6), 2741-2771.

Dutta, S., & Shekhar, S. (1988). A non-conservative application of neural network. *IEEE International Conference on Neural Network*, 2, 443-450.

Fama, E. F., & Jensen, M. C. (1983). Separation of ownership and control. *Journal of Law and Economics*, 26(2), 301-325.

Fama, E. F. (1980). Agency problem and the theory of the firm. *Journal of Political Economy*, 88(2), 288-307.

Filatotchev, I., & Bishop, K. (2002). Board composition, share ownership, and ‘ underpricing ’ of U.K. IPO firms. *Strategic Management Journal*, 23(10), 941-955.

Fletcher, D., & Goss, E. (1993). Forecasting with neural network: An application using bankruptcy data. *Information and Management*, 24(3), 159-167.

Gilson, S. C. (1990). Bankruptcy, boards, banks, and blockholders: Evidence on changes in corporate ownership and control when firm default. *Journal of Financial Economics*, 27(2), 355-387.

Gregory, M., & Renneboog, L. (2000). Insider Control by large investor groups and managerial disciplining in listed Belgian companies. *Managerial Finance*, 26(2), 22-41.

Grinblatt, M., & Hwang, C. Y. (1989). Signaling and the pricing of new issues. *Journal of Finance*, 44(2), 393-420.

Haefke, C., & Helmenstein, C. (1996). Forecasting Austrian IPOs: An application of linear and neural network error correction model. *Journal of Forecasting*, 15(3), 237-251.

Hagan, M. T., & Menhaj, M. B. (1994). Training feedforward networks with the marquardt algorithm. *IEEE Transactions on Neural Network*, 5, 989-993.

Higgins, M. C., & Gulati, R. (1999). Getting off to a start: The effects of upper echelon affiliations on prestige of investment bank and IPO success. Unpublished manuscript, Harvard Business School.

Hornik, K., Stinchcombe, M., & White, H. (1989). Multilayer feedforward networks are universal approximators. *Neural Network*, 2(5), 359-366.

Holthausen, R. W., & Larcker, D. F. (1994). The financial performance of reverse leveraged buyouts. *Journal of Financial Economics*, 42(3), 293-332.

Ibboston, R. G. (1975). Price performance of common stock new issues. *Journal of Finance Economics*, 2(3), 235-272.

Ibboston, R. G., Sindelar, J. L., & Ritter, J. R. (1988). Initial public offerings. *Journal of Applied Corporate Finance*, 1(1), 37-45.

Jain, B. (1994). The underpricing of “ Unit ” initial public offerings. *Quarterly Review of Economics and Finance*, 34(3), 309-325.

Jain, B. A., & Nag, B. N. (1995). Artificial neural network models for pricing initial public offerings. *Decision Science*, 26(3), 283-302.

Jain, B. A., & Nag, B. N. (1998). A neural network model to predict long-run operating performance of new ventures. *Annals of Operations Research*, 78(1), 83-110.

James, C. (1992). Relationship-specific assets and the pricing of underwriter services. *Journal of Finance*, 47(5), 1865-1885.

James, C., & Wier, P. (1990). Borrowing relationship, intermediation, and the cost of issuing public securities. *Journal of Financial Economics*, 28(1), 149-171.

Jensen, M. C. (1993). The modern industrial revolution, exit and the failure of internal control system. *Journal of Finance*, 44(4), 393-421.

Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: managerial behavior, agency costs and ownership structure. *Journal of Financial Economics*, 3(4), 305-360.

Jog, V. (Ed.). (1997). *The climate for Canadian initial public offerings*. Canada: University of Calgary Press.

Kamijo, k., & Tanigawa, T. (1992). Stock price pattern recognition: A recurrent neural network approach. *Proceedings of the International Joint conference on Neural Networks*, 1, 215-221.

Leland, H. E., & Pyle, D. H. (1977). Information asymmetries, financial structure and financial intermediation. *Journal of Finance*, 32(2), 371-387.

Lin, J., & Smith, R. (1998). Insider reputation and selling decision: The unwilling of venture capital investment during equity IPO. *Journal of Corporate Finance*, 4(3), 241-263.

Lin,

T. H. (2006). Underpricing and corporate governance evidence from Taiwan securities market. *Corporate ownership and control*, 4(2), 69-73. Lin, T. H., & Fok, R. C. W. (1997). The information content of IPO price adjustment. *International Journal of Finance*, 52, 650-667. Logue, D. (1973). On the pricing of unseasoned equity issues. *Journal of Financial and Quantitative Analysis*, 8(1), 91-103. Nanda, V., & Yun, Y. (1997). Reputation and financial intermediation: An empirical investigate of the impact of IPO mispricing on underwriter market value. *Journal of Financial Intermediation*, 6(1), 39-63. Maug, E. (1997). Boards of directors and capital structure: Alternative forms of corporate restructuring. *Journal of Corporate Finance*, 3(2), 113-139. McBain, M. L., & Krause, D. S. (1989). Going public: The impact of insider ' s holdings on the price of initial public offering. *Journal of Business Venturing*, 4(6), 419-428. Menon, K., & Williams, D. D. (1991). Auditor credibility and initial public offerings. *The Accounting Review*, 66(2), 313-332. Mok, H. M. K., & Hui, Y. V. (1998). Under-pricing and aftermarket performance of IPOs in Shanghai, China. *Pacific-Basin Finance Journal*, 6(5), 453-474. Oswald, S. L., & Jahera, J. R. (1991). The influence of ownership on performance: An empirical study. *Strategic Management Journal*, 12(4), 321-326. Reber, P., Berry, B., & Toms, S. (2005). Predicting mispricing of initial public offerings. *Intelligent System in Accounting, Finance and Management*, 13(1), 41-59. Reishus, D. (1990). Outside directorships and corporate performance. *Journal of Financial Economics*, 27(2), 237-265. Ritter, J. R. (1984). The " hot issue " market of 1980. *The Journal of Business*, 57(2), 789-822. Ritter, J. R. (1987). The costs of going public. *Journal of Financial Economics*, 19(2), 269-281. Ritter, J. R. (1998). Initial public offerings. *Contemporary Finance Digest*, 2(1), 5-30. Roberston, S. J., Golden, B. L., Runger, G. C., & Wasil, E. A. (1998). Neural network models for initial public offerings. *Neurocomputing*, 18(1), 165-182. Rock, K. 1986. Why new issues are underpriced. *Journal of Financial Economics*, 5(1), 187-212. Rosenstein, S., & Wyatt, J. (1990). Outside directors, board independence and shareholder wealth. *Journal of Financial Economics*, 26(2), 175-191. Salchenberger, L. M., Cinar, E. M., & Lash, N. A. (1992). Neural network: A new tool for predicting thrift failures. *Decision Science*, 23(4), 899-916. Shleifer, A., & Vishny, R. W. (1986). Large shareholders and Corporate Control. *Journal of Political Economics*, 94(3), 461-488. Slovin, M. B., & Young, J. E. (1990). Banking lending and initial public offerings. *Journal of Banking and Finance*, 14(4), 729-740. Titman, S., & Trueman, B. (1986). Information quality and the valuation of new issues. *Journal of Accounting and Economics*, 8(2), 159-172. Walsh, J. P., & Seward, J. K. (1990). On the efficiency of internal and external corporate control mechanisms. *Academy of Management Review*, 15(3), 421-458. Wang, D. (1993). Pattern recognition: Neural network in perspective. *IEEE Expert*, 8, 52-60. Welch, I. (1989). Seasoned offering, imitation cost, and the underpricing of initial public offering. *Journal of Finance*, 44(2), 421-449. White, H (1986). A heteroskedasticity-consistent covariance matrix estimator and a direct test for heteroskedasticity. *Econometrica*, 48(4), 817-838 Wooldridge, J. M. (2009). *Introductory econometrics a modern approach* (4th ed.). Canada: South-Western Yeh, Y. H., Lee, T. S., & Woidtke, T. (2001). Family control and corporate governance: Evidence for Taiwan. *International Review of Finance*, 2(1), 21-48. Yoon, Y., Swales, G., & Margavio, T. M. (1993). A comparison of discriminant analysis versus artificial neural networks. *Journal of Operational Research Society*, 44(1), 51-60.