

# 國家科學委員會補助專題研究計畫 成果報告

## 公司治理於台灣與美國的相關研究：計量方法改進與新研究 議題

計畫類別： 個別型計畫       整合型計畫  
計畫編號：NSC 96-2416 -H -009 -028-MY3  
執行期間：96 年 8 月      日至 99 年 7 月      日

計畫主持人：鍾惠民  
共同主持人：林建榮  
計畫參與人員：陳德峰 陳清河 劉志良

成果報告類型(依經費核定清單規定繳交)： 精簡報告       完整報告

本成果報告包括以下應繳交之附件：

- 赴國外出差或研習心得報告一份
- 赴大陸地區出差或研習心得報告一份
- 出席國際學術會議心得報告及發表之論文各一份
- 國際合作研究計畫國外研究報告書一份

處理方式：除產學合作研究計畫、提升產業技術及人才培育研究計畫、  
列管計畫及下列情形者外，得立即公開查詢

涉及專利或其他智慧財產權， 一年 二年後可公開查詢

執行單位：國立交通大學財金所

中 華 民 國 99 年 10 月 30 日

## 報告內容

### **Introduction and main results**

Following a string of corporate scandals, Enron, Tyco, and WorldCom etc., it is of great importance to understand how major corporate governance mechanisms affect shareholder wealth or firm valuation in economic issue. We set out in this study to explore the impact of external financing needs on firm value and corporate governance, arguing that such a need for external financing has extremely important impacts on corporate governance, essentially because external financing can prove to be very costly, largely as a result of asymmetric information. The results suggest that firms with a need for outside equity could lower their costs of such financing by seeking out improvements in their overall corporate governance practices. Most of the empirical literature examines the functional relationship between firm performance and corporate governance, namely, the market for corporate control (Gompers, Ishii, and Metrick, 2003; Bebchuk, Cohen, and Ferrell, 2005; Bebchuk and Cohen, 2005; Core, Guay, and Rusticus, 2006). They document that firms with better governance (widely open to the market for the control) have higher firm value or higher shareholder right than firms with bad governance. Moreover, Masulis, Wang, and Xie (2006) and Dittmar and Mahrt-Smith (2007) suggest that weak corporate governance quality would destruct shareholder value by having inefficient investment decisions or wasting the value of cash resources. In other words, firms have good corporate governance can mitigate the conflict of interests between shareholders and managers or alleviate shareholder-manager agency costs.

This research project currently conducted related studies to the GIM corporate governance index. The research methods cover many important econometric methods such as the three stage least square method, self-selection model, mean-variance portfolio spanning test and event study

method. First, this research sets out to investigate the effects of anti-takeover provision on sentiment beta of firms. The study is to investigate the association between corporate governance and the individual sentiment beta, the sensitivity of stock returns to market investor sentiment. The empirical evidence shows that the individual sentiment beta is inversely associated with G index, suggesting that when the antitakeover provisions are less taken by a firm, it signals openness to the market and attracts the merger arbitraging institutions to provide more informative trading. The irrational trading behaviors are also active correspondingly. Therefore, the sentiment sensitivities are further affected by the level of G index.

Second, this research project conducts an analysis of the relationship among external financing need, corporate governance and firm value. While it is well known that better corporate governance is related to firm value, the external driven forces of firms' adoption of corporate governance practice are seldom discussed. We extend the current understanding by linking external forces and governance value. The external forces include the competition in product market and investment opportunities and external financing needs. This research focuses on how governance practices changes in response to the needs for external financing needs and how corporate governance and the need for external finance interact to influence firm value. We particularly emphasize the impact of external financing needs because it is directly related to outside shareholders. After controlling for firm's characteristics and instrumental variables, the results reveal that governance practices is affected by firm valuation, not vice versa. Firms' corporate governance practices are affected by external forces including product market competition, investment opportunities, and external financing needs. In addition, external finance needs appear to strengthen the influence of corporate governance quality on firm value. The results are consistent with our hypothesis that better corporate governance would be associated with higher valuation and the external financial needs provide incentives for firms' corporate governance practices.

Although a growing body of work exists on firm-level governance correlates with valuation, it is unclear whether this relationship is causal. Demsetz and Lehn (1985) suggest that firms may endogenously choose different governance practices. Thus, firms play dual role in governance practices: passive and actively, firms not only affected by firm's governance practices, but also actively improve governance practices, to have higher valuation (Himmelberg, Hubbard, and Palia, 1999; Palia, 2001; Durnev and Kim, 2005; Black, Jang, and Kim, 2006). The relationship between governance and value might be determined endogenously. On the governance value issue, it is necessary to concern the endogeneity problem. We, thus, adopt the simultaneous equations approach using 3SLS and GMM estimation methods in this study to take into account the potential endogeneity. Accordingly, the first hypothesis in this study is: there is a reverse causality between governance quality and firm performance.

Durnev and Kim (2005) argue that firms with profitable investment opportunities have better corporate governance. However, profitable firms have more internally generated funds, and hence rely less on external financing (Demirgüç-Kunt and Maksimovic, 1998). In order to isolate the impact of external financing from that of the profitability of investment opportunities, we follow Durnev and Kim's assumptions that investment is given and external financing is bounded from above by a minimum level of cash flow rights necessary to maintain the control and that new investors rationally anticipate diversion. Under the assumptions, we could reasonably conjecture that if profitable investment opportunities lead to more external financing, firms with greater external financing are likely to have better corporate governance.

Moreover, Myers and Majluf (1984) suggest that financial slack is valuable for firms with positive investment opportunities that face costs of external finance and point out external financing is costly due to information asymmetry. Chung (2006) show that companies good governance quality would reduce information asymmetry and have better equity liquidity. Chen,

Chen, and Wei (2003) show that both disclosure and non-disclosure corporate governance mechanisms have a significantly negative effect on the cost of equity capital. Anderson, Mansi, and Reeb (2004) suggest that board independence and board size are associated with a significantly lower cost of debt financing. According those findings, firms with better governance might have lower the cost of equity or cost of debt. Thus, governance practices would have influences on external financing since it might reduce the cost of equity or cost of debt.

The determined components of firm valuation are the expected cash flows and the cost of financing. Better corporate governance could improve firm value by affecting expected cash flows through efficient investment decision. Reducing the cost of financing also could enhance firm value. External financing needs would affected by cost of financing, governance quality would reduce cost of external financing by improve information asymmetry. Thus, firms which have external financing needs may have incentives to practice higher-quality governance and have higher firm value by possessing lower cost of external financing. Accordingly, the second hypothesis in this study is: external financing needs has positive effect on corporate governance quality and would strengthen the relationship between governance and firm value.

Most literature has focused corporate governance on the association of firm characteristics. However, the environmental factors may play an important role in the choices of firm's decision regarding their governance practices. Gillan, Hartzell, and Starks (2003) argue that industry factors contribute most of the explainable variation in overall governance structure and appear to dominate firm factors.

Leibenstein (1966) and Hart (1983) argue that product market competition has a disciplinary effect on managerial behavior. Shleifer and Vishny (1997) suggest that product market competition is perhaps the most effective mechanism to eliminate managerial inefficiency. Managers of firms operating in more competitive industries are less likely to shirk or put valuable

corporate resources into inefficient uses, since the margin for error is thin and any missteps can be quickly exploited by competitors. Those evidences support that market competition acts as an important governance mechanism that would discourage management from wasting corporate resources. Smith and Watts (1992) suggest that the investment opportunity set and industry factors play a significant role in determining financial and governance policies. Such findings indicate that different aspects of governance, notably the market for corporate control appear to be influenced by the environmental factors. Accordingly, the third hypothesis in this study is: external environments are associated with governance practices. The results show that the need of external finance strengthens the influence of corporate governance on firm value. The results thus provide important implications for corporate governance practices for firms with strong needs of outside equity. The paper could be downloaded in the following website:

<http://onlinelibrary.wiley.com/doi/10.1111/j.1467-8683.2010.00801.x/abstract>.

The third paper explores the association between firm value and different transparency level of compensation disclosure with the data on all Taiwanese listed companies during a time characterized by the gradual enforcement of the disclosure policy reforms. The evidence shows that firms with voluntary disclosure of comprehensive information on director and/or executive compensation determined by higher independence of the board will receive a higher market evaluation, particularly for those with relatively weak governance mechanism. However, the medium/minimal information and the disclosure provided by firms using large proportion of reserve bonus are of little help for the market value creation. This paper was accepted for publication in an important journal and can be downloaded from the following website:

[http://onlinelibrary.wiley.com/journal/10.1111/\(ISSN\)1468-5957/earlyview](http://onlinelibrary.wiley.com/journal/10.1111/(ISSN)1468-5957/earlyview) .

The fourth paper aims to examine whether stocks with good corporate governance provide better portfolio diversification benefits. We investigate the effects of the mean-variance frontiers before and after adding stocks of well-governed/badly governed firms to a set of benchmark assets sorted by the American Depository Receipts (ADRs) of 12 countries. During the sub-sample period from 1990 to 1999, stocks of strong governance firms can significantly improve the investment opportunity set more than that of stocks of weak governance firms. We find that in the full sample period from 1990 to 2005, stocks with good corporate governance do not provide more diversification benefits than stocks of firms with poor protection of shareholders.

The fifth paper investigates the wealth effects on firms resulting from the bankruptcy announcements of competing firms, examining the relationship between corporate governance and the stock price performance of surviving firms when a firm within the same industry files for bankruptcy. We posit that firms with good corporate governance structures will benefit from higher abnormal returns when industry rivals go bankrupt. We also examine whether, for bankruptcy announcements after the promulgation of the Sarbanes-Oxley (SOX) Act, the stock market imposes greater discipline on the valuation of survival firms within the same industry. Consistent with our hypothesis, the regression analyses reveal that firms with good corporate governance structures have higher abnormal returns in the post-SOX Act period. Furthermore, the sensitivity of governance on abnormal returns is found to be lower in less competitive industries. We consider a unique laboratory setting of a specific type of external shock – the bankruptcy of rival firms – as the means of testing the effects of governance structure on firm value. Given that many of the recent studies in this area reveal significant changes in corporate governance effects following the implementation of the Sarbanes-Oxley (SOX) Act, we further explore whether a more significant governance effect is found to exist on the wealth effects of surviving firms within the same industry as a result of bankruptcy announcements in the post-SOX Act period. The

definition of bankruptcy adopted for this study follows the US Bankruptcy Code Chapter 11, with all of the bankruptcy events under the US Bankruptcy Code Chapter 7 being excluded from our analysis. The primary reasons for such exclusion of Chapter 7 filings are: (i) the data restrictions; and (ii) the individual-level bankruptcy events that are included in Chapter 7 which could quite easily dilute the overall bankruptcy announcement effect. Thus, we consider only the bankruptcy effects reported by Chapter 11 in order to maintain our focus on the effects contributed purely by firm-level bankruptcy announcements. The list of bankruptcy filing firms is obtained from the 'Securities Data Company' (SDC) platinum database, whilst data on the returns are obtained from the 'Center for Research in Security Prices' (CRSP) database. The data on firm characteristics are obtained from the Compustat database, whilst the data on the GIM index is downloaded from the Metricks website. Given that data on the GIM index is only available up until 2006, we adopt the period from January 1990 to December 2006 as our sample period. The SDC database reveals that the original number of bankruptcy events occurring between January 1990 and December 2006 was 2,245. After deleting all of those observations for which there were no other firms within the same 'Standard Industrial Classification' (SIC) code industry, we were left with a total of 2,145 bankruptcy filings covering the period from January 1990 to December 2006.

Our results from the external financing paper reveal that external financing needs are associated with corporate governance practices and that such needs strengthen the influence of governance practices on firm value. The finding of external financing needs developing indirect reverse causality between corporate governance and firm value complements the results of Lehn, et al. (2007), who argue that it is firm value which affects corporate governance, and not the reverse. Since our results have important implications for corporate governance practices in those firms with strong growth opportunities, we re-examine the results for samples of firms in

different industries; these results reveal that the effects of external financing needs on the sensitivity of firm value to governance practices seem to be stronger for high-tech firms than for firms in other industries.

The results from the study of wealth effects on firms resulting from the bankruptcy announcements of competing firms show that firms with good corporate governance structures will benefit from higher abnormal returns when industry rivals go bankrupt. The regression analyses reveal that firms with good corporate governance structures have higher abnormal returns in the post-SOX Act period. Furthermore, the sensitivity of governance on abnormal returns is found to be lower in less competitive industries. The results provide important implications for the economic costs of poor corporate governance.

The paper on the market value of comprehensive disclosure of information on compensation highlights the significantly positive effect of comprehensive disclosure on the market value of a firm, particularly for those firms with relatively weak governance mechanisms. The paper contributes to the related research by providing a much broader understanding of compensation disclosure. The main findings suggesting that comprehensive disclosure of information on compensation provides a signal that the firm has fewer agency problems and a better governance structure, whilst non-comprehensive disclosure is perceived as signaling the camouflaging of excess compensation and bargaining behavior. Furthermore, the significant effects of disclosure on the compensation received by directors indicate that investors are concerned not only with executive compensation, but also with whether the compensation paid to directors provides

appropriate incentives capable of enhancing the functions of the board. Taken together, the evidence provides general support for the suggestion within the extant literature on corporate governance of the need for overall improvements in compensation disclosure. Our evidence may have several applications for other emerging markets. Since most firms seem to prefer partial disclosure, and since those firms with better governance structures are more likely to voluntarily provide comprehensive disclosure, this provides the authorities in other emerging markets with strong motivation to allow firms some discretion in their voluntary reporting of disclosure information. Our sub-sample analysis reveals poor current levels of disclosure on specific compensation information provided by firms, particularly information which investors need to take into account; thus, the market value of compensation disclosure is no longer apparent. The disclosure requirement should therefore be enhanced by enlarging the disclosure items, or the narrative discussion, and by developing more effective enforcement policies. The results of our selection model indicate that the adoption of comprehensive disclosure is non-random. Therefore, improving board independence and overall governance mechanisms can help to increase the willingness amongst firms to provide voluntary disclosure. Whilst voluntary disclosure is desirable, comprehensive disclosure is more likely to be effectively provided under sound disclosure practices, with the application of gradual pressure.

## REFERENCES

- Ambrose, B., Megginson, W., 1992. The role of asset structure, ownership structure and takeover defenses in determining acquisition likelihood. *Journal of Financial and Quantitative Analysis* 25, 575–589.
- Almeida, H. & Wolfenzon, D. 2005. The effect of external finance on the equilibrium allocation of capital. *Journal of Financial Economics*, 75: 133-164.
- Amihud, Y., Mendelson, H., 1986. Asset pricing and the bid-ask spread. *Journal of Financial Economics* 17, 223-249.
- Anderson, D., Francis, J.R. & Stokes D.J. 1993. Auditing directorship and the demand for monitoring. *Journal of Accounting and Public Policy*, 12: 353-375.
- Anderson, R.C. & Reeb, D.M. 2003. Founding family ownership and firm performance: Evidence from the S&P 500. *Journal of Finance*, 58: 1301-1328.
- Anderson, R.C., Mansi, S.A. & Reeb, D.M. 2004. Board characteristics, accounting report integrity and the cost of debt. *Journal of Accounting and Economics*, 37: 315-342.
- Baker, M., Wurgler, J., 2000. The equity share in new issues and aggregate stock returns. *Journal of Finance* 5, 2219-2258.
- Bebchuk, L.A. & Cohen, A. 2005. The costs of entrenched boards. *Journal of Financial Economics*, 78: 409-433.
- Bebchuk, L.A., Cohen, A. & Ferrell, A. 2009. What matters in corporate governance? *Review of Financial Studies*, 22: 783-827.
- Berger, P.G. & Ofek, E. 1995. Diversification effects on firm value. *Journal of Financial Economics*, 37: 39-65.
- Black, B.S., Jang, H. & Kim, W. 2006. Does corporate governance predict firms market values? Evidence from Korea. *Journal of Law, Economics and Organization*, 22: 366-413.

- Bradbury, M. 1992. Voluntary disclosure of financial segment data: New Zealand evidence. *Accounting and Finance*, 32: 15-27.
- Brockman, P. & Chung, D. 2003. Investor protection and firm liquidity. *Journal of Finance*, 58: 921-937.
- Brown, S. & Hillegeist, S.A. 2006. How disclosure quality affects the long-run level of information asymmetry. Working paper, Atlanta: Emory University.
- Bushman, R.M., Indjejikian, R.J. & Smith, A. 1996. CEO compensation: The role of individual performance evaluation. *Journal of Accounting and Economics*, 21: 161-193.
- Chen, K.C.W., Chen, Z. & Wei, K.C.J. 2003. Disclosure, corporate governance and the cost of equity capital: Evidence from Asia's emerging markets. Working paper, Hong Kong University of Science and Technology.
- Chen, W.-P., Chung, H., Lee, C.-F. & Liao, W.-L. 2007. Corporate governance and equity liquidity: Analysis of S&P transparency and disclosure rankings. *Corporate Governance: An International Review*, 15: 644-660.
- Chung, H. 2006. Investor protection and liquidity of cross-listed securities: Evidence from the ADR market. *Journal of Banking and Finance*, 30: 1485-1505.
- Collins, M.C., Blackwell, D.W. & Sinkey, J.F. Jr. 1995. The relationship between corporate compensation policies and investment opportunities: Empirical evidence on large bank holding companies. *Financial Management*, 24: 40-53.
- Core, J.E., Guay, W.R. & Rusticus, T.O. 2006. Does weak governance cause weak stock returns? An examination of firm operating performance and analysts' expectations. *Journal of Finance*, 61: 655-687.
- Cremers, K.J.M. & Nair, V.B. 2005. Governance mechanisms and equity prices. *Journal of Finance*, 60: 2859-2894.

- Daines, R. 2001. Does Delaware law improve firm value? *Journal of Financial Economics*, 62: 559-571.
- Demirgüç-Kunt, A. & Maksimovic, V. 1998. Law, finance and firm growth. *Journal of Finance*, 53: 2107-2137.
- Demsetz, H. & Lehn, K. 1985. The structure of corporate ownership: Causes and consequences. *Journal of Political Economy*, 93: 1155-1177.
- Dittmar, A. & Mahrt-Smith, J. 2007. Corporate governance and the value of cash holdings. *Journal of Financial Economics*, 83: 599-634.
- Doidge, C., Karolyi, G. & Stulz, R.M. 2004. Why are foreign firms listed in the US worth more? *Journal of Financial Economics*, 71: 205-238.
- Durnev, A. & Kim, E.H. 2005. To steal or not to steal: Firm attributes, legal environment and valuation. *Journal of Finance*, 60: 1461-1493.
- Fama, E.F. & French, K.R. 1997. Industry costs of equity. *Journal of Financial Economics*, 43: 153-194.
- Garay, U. & González, M. 2008. Corporate governance and firm value: The case of Venezuela. *Corporate Governance: An International Review*, 16: 194-209.
- Garvey, G.T. & Hanka, G. 1999. Capital structure and corporate control: The effect of state anti-takeover laws on firm leverage. *Journal of Finance*, 54: 519-546.
- Gaver, J. & Gaver, K. 1993. Additional evidence on the association between the investment opportunity set and corporate financing, dividend and compensation policies. *Journal of Accounting and Economics*, 16: 125-160.
- Gillan, S.L., Hartzell, J.C. & Starks, L.T. 2003. Explaining corporate governance: Boards, bylaws and charter provisions. Working paper, University of Delaware and University of Texas.
- Gillan, S.L., Hartzell, J.C. & Starks, L.T. 2006. Tradeoffs in corporate governance: Evidence from

board structures and charter provisions. Working paper, University of Texas.

Goldberger, A. 1991. *A Course in Econometrics*. Cambridge, MA: Harvard University Press.

Gompers, P.A., Ishii, J.L. & Metrick, A. 2003. Corporate governance and equity prices, *Quarterly Journal of Economics*, 118: 107-155.

Hart, O.D. 1983. The market mechanism as an incentive scheme. *Bell Journal of Economics*, 14: 366-382.

Heflin, F.L., Shaw, K.W. & Wild, J.J. 2005. Disclosure policy and market liquidity: Impact of depth quotes and order sizes. *Contemporary Accounting Research*, 22: 829-865.

Himmelberg, C.P., Hubbard, R.G. & Palia, D. 1999. Understanding the determinants of managerial ownership and the links between ownership and firm performance. *Journal of Financial Economics*, 53: 353-384.

Hutchinson, M. & Gul, F.A. 2004. Investment opportunity set, corporate governance practices and firm performance. *Journal of Corporate Finance*, 10: 595-614.

Karuna, C. 2007. Industry product market competition and managerial incentives. *Journal of Accounting and Economics*, 43: 275-297.

Khanchel El Mehdi, I. 2007. Empirical evidence on corporate governance and corporate performance in Tunisia. *Corporate Governance: An International Review*, 15: 1429-1441.

Klein P., Shapiro, D. & Young, J. 2005. Corporate governance, family ownership and firm value: The Canadian evidence. *Corporate Governance: An International Review*, 13: 769-784.

La Porta, R., Lopez-de-Silanes, F., Shleifer, A. & Vishny, R.W. 2002. Investor protection and corporate valuation. *Journal of Finance*, 57: 1147-1170.

Lehn, K., Patro, S. & Zhao, M. 2007. Governance indexes and valuation: Which causes which? *Journal of Corporate Finance*, 13: 907-928.

Leibenstein, H. 1966. Allocative efficiency vs. X-efficiency. *American Economic Review*, 56:

392-415.

- Masulis, R.W., Wang, C. & Xie, F. 2007. Corporate governance and acquirer returns. *Journal of Finance*, 62: 1851-1889.
- McConnell, J.J. & Servaes, H.1990. Additional evidence on equity ownership and corporate value. *Journal of Financial Economics*, 27: 595-612.
- Mørck, R. & Yang, F. 2001. The mysterious growing value of the S&P 500 membership. NBER Working Paper, No. 8654.
- Mørck, R., Shleifer, A. & Vishny, R.W. 1988. Management ownership and market valuation: An empirical analysis. *Journal of Financial Economics*, 20: 293-315.
- Myers, S.C. & Majluf, N.S. 1984. Corporate financing and investment decisions when firms have information that investors do not have. *Journal of Financial Economics*, 13: 63-94.
- Novaes, W. 2003. Capital structure choice when managers are in control: Entrenchment versus efficiency. *Journal of Business*, 76: 49-81.
- Palia, D. 2001. The endogeneity of managerial compensation in firm valuation: A solution. *Review of Financial Studies*, 14: 735-764.
- Roe, M.J. 2004. The institutions of corporate governance. Harvard Law School Discussion Paper, 488: 1-27.
- Shleifer, A. & Vishny, R.W. 1997. A survey of corporate governance. *Journal of Finance*, 52: 737-783.
- Shleifer, A., Vishny, R.W., 1997. The limits of arbitrage. *Journal of Finance* 52, 35-55.
- Skinner, D. 1993. The investment opportunity set and accounting procedure choice. *Journal of Accounting and Economics*, 16: 407-445.
- Smith, C.W. Jr. & Watts, R.L. 1992. The investment opportunity set and corporate financing, dividend and compensation policies. *Journal of Financial Economics*, 32: 263-292.

- Stulz, R.M. 1990. Managerial discretion and optimal financing policies. *Journal of Financial Economics*, 26: 3-27.
- Titman, S. & Wessels, R. 1988. The determinants of capital structure choice. *Journal of Finance*, 43: 1-19.
- Welch, I. 2004. Capital structure and stock returns. *Journal of Political Economy*, 112: 106-131.
- Zweibel, J. 1996. Dynamic capital structure under managerial entrenchment. *American Economic Review*, 86: 1197-1215.