# D I S S E R T A T I O N   D E F E N S E

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## Essays on Earnings Management, Investment Efficiency, and Managerial Incentives

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In response to accounting scandals, market control systems (e.g. regulations related to internal control systems) have become more stringent in order to restore investors' confidence in capital markets. Tightening control systems has triggered a fierce debate on its effect on both capital markets and the real economy. My dissertation studies how mitigating earnings management by tightening control systems can affect managerial incentives and a firm's investment decisions.

Why are CEOs rarely fired? I develop a dynamic agency model to show that costly earnings management can act as an alternative punishment for poor performance and substitute for managerial turnover. The principal can design a contract such that it is incentive compatible for the agent to engage in costly earnings management to avoid being fired when poor performance is realized. Since earnings management can impose a cost on the agent that cannot be replicated by compensation, it can effectively relax the agent's bankruptcy constraint and, thus, the agent experiences a negative payoff when her performance is poor. Therefore, the principal can not only improve the agent's *ex ante* effort incentives but also reduce the use of the threat of turnover (Incentive alignment benefit). The principal, however, may need to pay more to compensate for the cost of earnings management (Wealth transfer cost). Therefore, the trade-off between the incentive alignment benefit and the wealth transfer cost determines whether earnings management is beneficial or harmful to shareholders.

In the second chapter, titled "Earnings Management, Investment, and Managerial Turnover in a Dynamic Agency Model," I develop a model to investigate how the internal control system influences a firm's investment decisions. Contrary to the view that a strong internal control system mitigates CEOs' incentives to manage earnings and increases investment efficiency, I find that a moderate internal control system, that allows appropriate reporting discretion to CEOs, can improve a firm's investment decisions when past performance is poor. The essential mechanism is that, in the optimal contract, costly earnings management can act as an alternative punishment for poor performance and, thus, substitute for the threat of turnover. Because the possibility of turnover leads to an underinvestment problem (e.g. because a new CEO needs to learn about the ongoing projects and there are costs associated with searching for a new CEO.), a moderate internal control system can effectively improve investment efficiency. Also, an infinite-horizon dynamic model shows a positive relationship between investment and the level of earnings management for a given internal control system and an inverted U-shape relationship between investment and the internal control system. Finally, calibration results

suggest that shareholders' value under the current level of the internal control systems in the market is 0.4% higher than that under the counterfactual strongest internal control system.

In the third chapter, titled “Accounting Conservatism, Earnings Management, and Investment,” we develop a dynamic model to analyze how accounting conservatism interacts with earnings management to mitigate agency problems and improve investment efficiency. In the presence of CEO turnover, accounting conservatism, which gives more precise but less frequent high signals, can result in more frequent CEO turnover, leading to an underinvestment problem. Costly earnings management helps the firm to maintain a conservative accounting system because it can work as an alternative punishment for poor performance and substitute for the threat of turnover. We find that accounting conservatism, combined with earnings management, can improve contract efficiency by increasing the expected punishment for poor performance in two ways. First, a conservative accounting system increases the probability of CEOs being penalized for poor performance through earnings management. Second, a conservative accounting system enhances the incentive spillback effect and, thus, can penalize CEOs with more negative payoff by further relaxing CEOs' bankruptcy constraint. Finally, in the extension in which the effect of the accounting system on the cost of earnings management is introduced, we show that accounting conservatism helps earnings management to be costly enough to provide *ex ante* effort incentives.