Pitcher's Name	Xin (Tracy) Qu	**FoR category**	Financial Accounting	**Date Completed**	15 June 2015
(A) Working Title	Can the design of equity-based compensation limit investment-related agency problems?				
(B) Basic Research Question	To investigate the association between managerial investment behaviour and CEO incentives derived from equity-based compensation contracts				
(C) Key paper(s)	Cadman, B. D., T. O. Rusticus, and J. Sunder, 2013, Stock option grant vesting terms: Economic and financial reporting determinants, Review of Accounting Studies 18, 1159-1190. Bettis, C., J. Bizjak, J. Coles, and S. Kalpathy, 2010, Stock and option grants with performance-based vesting provisions, Review of Financial Studies, 60. Bushman, R. M., A. J. Smith, and F. Zhang, 2011, Investment cash flow sensitivities really reflect related investment decisions, Available at SSRN 842085.				
(D) Motivation/Puzzle	Shareholders must find ways to alleviate investment-related agency problems that may reduce firm value. Particularly, equity-based compensation could help to reduce the interest conflicts by directly linking managers' personal benefits to firm value maximisation. Three main equity incentives are addressed: the level of equity granted that provides overall effort incentive; time-vesting provision that provides significant horizon incentives which impose restrictions on the length of the service period and it is widely used to retain and attract valued executives; and performance-vesting provision that makes equity-based pay vest conditionally on the achievement of performance targets. While there is an agreement that equity-based compensation influences managerial investment decisions, it is less clear how and to which extent such a link should be established.				
THREE	**Three** core aspects of any empirical research project i.e. the "**ID**io**T**s" guide				
(E) Idea?	Hypotheses are proposed to address the question of whether well-designed CEO equity-based compensation is associated with more efficient investment decisions. H1 to H6: The sensitivity of investment to cash flow is lower when firms grant more equity-based compensation, longer time-vesting equity-based compensation, graded-vesting equity-based compensation, performance-vesting equity-based compensation, equity grants with stock-market based performance hurdles to their CEOs. Investment expenditure (capital expenditure) is the dependent variable and cash flow is the independent variable. The influence of equity design variables are tested through interactions terms (the product between equity variables and cash flow, e.g., EQUITY*CF) on the standard investment-cash flow model. The equity design variables include the level of equity grants, vesting duration, early vesting, graded vesting, performance hurdle, long-term hurdle, stock hurdle and accounting hurdle. Control variables of firm characteristics are also included in the analysis.				
(F) Data?	The sample consists of the largest two hundred companies listed on the Australian Securities Exchange across a five-year period from 2010 to 2014. The compensation data are handed-collected from the director's report or in any of the notes to the financial statements. The financial information and firm characteristics are extracted from databases. This is a panel dataset of firm-year observations.				
(G) Tools?	The base regression model (excluding control variables) shows the initial effect of various design features of CEO equity-based compensation on the standard investment-cash flow model. The extended regression model is developed to take into account the other influential factors in regard to the firm characteristics, financial variables, and corporate governance variables. The regression is estimated				

	with fixed industry and year effects and standard errors adjusted for heteroskedasticity. The study also allows for clustering of standard errors within firms. The study predicts that the interaction variables between compensation design variables and cash flow have a negative influence on the sensitivity of investment to cash flow.
TWO	**Two** key questions
(H) What's New?	This study is among the first to empirically investigate the impact of equity pay design features on managerial decision making. Previous studies have examined the influence of the level of equity granted and investment decisions, taking a further step, this study analyses the design of vesting patterns of CEO equity to isolate the dimension of contracting incentives that influences managerial behaviour.
(I) So What?	The amount of equity compensation and the vesting provisions play two different but related roles. While the level of equity pay influences overall effort incentives, vesting provisions have particular influence on the decision-making horizon and financial objectives. The empirical results are expected to indicate that a considered design of vesting provisions can be exercised to overcome agency conflicts resulting from the separation of ownership and control. The study will provide insights into the effect of CEO horizon incentives and performance incentives on investment behaviour, and contribute to the understanding of the role of managerial incentives in a firm's policy-making.
ONE	**One** bottom line
(J) Contribution?	The study complements the growing literature that examines the impact of managerial compensation on firm investing behaviour in a principal-agent framework. This study provides extended evidence to support the agency cost explanation of the efficiency of investment, providing implications that firms strategically grant equity-based compensation to prevent investment inefficiencies. The study contributes to the corporate governance literature in a way that reveals the importance of governance mechanisms in setting optimal incentive contracts regarding firm investment decisions. Compared to the UK and US, Australia has different corporate governance settings in important respects. This study extends prior research on testing investment-compensation relation in a unique corporate governance framework. This study adopts the most recently available data collected by hand, and investigates a test period after an exogenous institutional change in the accounting benefits of equity-based compensation. The adoption of IFRS 2 Share-based Payment in 2005 and Employee Share Schemes in 2009 have raised the costs of executive equity-based compensation, and significantly affected the weight and design in total compensation.
(K) Other Considerations	Some additional research directions could be addressed in my future study. The first is to consider the component of equity-based compensation. Future research could test whether restricted stock or stock option dominates the effect on investment efficiency. Second, over-investment and under-investment agency problems have distinct characteristics, and future research could deliver clearer implications on these two behaviours. Third, this study has been focused on the capital expenditure in the past, and future research could be directed to examine the efficiency of Research & Development expenditure for future investment opportunities.