

FINAL REPORT

AFAANZ 2017-2018 Research Grant

Grant Category: Mid Career Researcher

(1) Name, Position, Contact Details for each applicant

Chief Investigator: Dr Clara Qing Zhou

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Co-Chief Investigator: Dr Kelvin Tan

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(2) Project Title: Can business shocks explain the failure of empirical tests of capital structure theories?

(3) Updated Project Summary

This project examines how unexpected economic shocks affects the corporate leverage dynamics. We argue that the observed leverage deviation over-estimates the true leverage deviation. The

inflated leverage deviation is because of the incorrectly calibrated corporate target leverage. The “puzzling” slow corporate capital structure adjustment can be rationalized under our analytical framework.

The project has led to one working paper “Business Model Shocks and Corporate Leverage Dynamics”. The paper analytically shows that even if capital structure theories are correct in terms of capturing firms’ decision rules for firm financing ex ante, because of ex post unexpected shocks to firms’ fundamentals that lead to adjustments in firms’ underlying target leverage, the observed or estimated leverage deviation can over- or under-estimate the real leverage deviation and thus affect related inferences about firms’ dynamic leverage adjustments. Our empirical tests show that (1) the unexplained leverage ratio is positively related to a firm’s idiosyncratic business model shocks and its peer industry firms’ shocks. Interestingly, the effect is more evident as the change in the unexplained leverage becomes higher; (2) a firm’s relative leverage ratio ranking in the cross-section changes over time and is positively related to the firm’s business model shocks. Industry shocks have greater impacts on firms whose profit has higher sensitivity to fundamental changes in the industry. Hence, although an industry shock is common to all firms in the industry, because the shock affects firms in different ways, the industry shock intensifies heterogeneities; (3) the large (i.e., top 10%) idiosyncratic business model and industry shock over firms’ life cycles accumulate for many years and lead to increasingly higher dispersions of firms’ leverage ratios in cross-sections. In addition, the accumulated large industry shocks are also more evident in industries with lower economic rent persistence.

(4) Funds Granted: AU\$ \$6,000.00

(5) Detailed Report on Expenditure of Funds against Budget Items, with variations explained

We applied for \$ 7263 for Research Assistance (RA) work (150 hours, UQ Academic Casual Staff Salaries Category 50 is \$48.42 per hour). We have been granted a total amount of \$6,000, and the total granted amount of \$6,000 have been spent on hiring RA for data collection.

6) Outcomes, for example, working papers, presentations and publications

The grant has led to one working paper and one conference presentation.

Working Paper 1

Title: Business Model Shocks and Corporate Leverage Dynamics

Abstract: This paper examines the impact of idiosyncratic business model shocks on firms' underlying fundamentals and capital structure dynamics. The evolutionary economic theory suggests that "creative destruction" forces firms to modify their business strategies in response to both entry and to adjustments of business models by competitors. There are disruptive changes incorporate strategic decisions that reshape firms' value creation process and thus trigger dis-continuities in firms' observed financial leverage. In this setting, our empirical results show that idiosyncratic business model shocks can account for a large proportion of the unexplained leverage deviation, which causes the failure of empirical tests of capital structure theories. Further, the paper provides economic explanations for the two puzzles that are documented in DeAngelo and Roll (2015): (1) migration of the relative position of cross-sectional firms' leverage and (2) the evaporation of cross-sectional leverage similarities.

This paper has been presented at 2017 Asian FA conference.

(7) Future Intentions for this Project

We will present paper at both domestic and international conferences to collect feedbacks for improve the paper. After polishing the paper, we aim to submit the paper to highly ranked international journals, such as Journal of Financial Economics, for potential publication.

finance settings. The project leads to a better understanding of the estimation and model uncertainty in the area and provides a new way to construct an optimal expected return proxy.