

2018-2019 AFAANZ Grant Report

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

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(2) Project Title

The Volatility of Fair Value Measurement Inputs and Audit Fees in the U.S. Banking Industry

(3) Updated Project Summary (500 words) including any variations between the project undertaken and the original application

The main objective of the study is to investigate if the level of estimation uncertainty in fair value measurements (operationalized as during the GFC period and when the volatility of fair value measurement inputs is high) have an impact on the relation between the proportion of fair-valued assets (levels 1 to 3 to total assets) and audit fees. This study also empirically investigates whether and how the pricing strategy of involving banking industry specialists is influenced by these settings when auditing different levels of fair-valued assets.

Based on data downloaded directly from Bank Regulatory, CRSP, Compustat, Bloomberg and Audit Analytics, this study adopts the models from Ettredge et al. (2014) to include audit fees as the dependent variable and the proportion of total/three levels of fair-valued assets (to total assets) and a set of control variables as independent variables. The coefficient(s) on the proportion of total (levels) of fair-valued assets variable(s) captures the effect of it (them) on audit fees. In addition, to test how this effect is influenced by the GFC period and by various measures of the volatility of fair value measurement inputs, an interaction term(s) between the proportion of fair-valued assets and the GFC (or volatility measures) is added.

To further test how auditor industry specialization plays a role in the relationship, two additional tests are performed. One is to add a three-way interaction between the proportion of fair-valued assets, the GFC (or volatility measures) and the industry specialization variable. Given the

difficulty of interpreting results of three-way interaction terms, a second test will be conducted by partitioning the sample based on the level of industry specialization and see whether and how the results are different between groups.

The funding has supported this project to collect additional data on the specific types of assets constituting the total fair-valued assets using levels 1, 2 and 3 inputs. This is important because presumably, fair-valued assets using different levels of inputs are subject to different risks. For example, U.S. treasury rate is more applicable for money market securities, which are considered level 1 where as prime interest rate is more relevant for interest rate swap or mortgage-backed securities, which could be either levels 2 and 3. The data on the types of assets also allow us to distinguish between market-based input (such as U.S. treasury rate, prime interest rate, TED spreads, etc.) and equity/firm-based input (such as stock price for employee stock options).

The amount of fair value assets being transferred in and out of level 3 from levels 1 and 2 has not been fully collected at this stage. But the idea is that the discretionary nature of level 3 fair value measurement allows the managers to convey private information (Barth and Taylor 2010) but at the same time raise concerns for the reliability of the information (Fargher 2001, Cullinan and Zheng 2013). It is still unknown how auditors perceive this signal from the managers.

(4) Funds Granted

AUD\$7,179 plus GST

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

UNSW

Hourly rate: $\text{AUD\$}56.5 + 15\% \text{ on-cost} = \text{AUD\$}65.0$

Total Expenditure = $\text{AUD\$}65.0/\text{hour} * 20 \text{ hours} = \text{AUD\$}1,300$

University of Sydney

Hourly rate: $\text{AUD\$}57.4 + 12.5\% \text{ on-cost} = \text{AUD\$}64.62$

Total Expenditure = $\text{AUD\$}64.62/\text{hour} * 90 \text{ hours} = \text{AUD\$}5,815.8$

(6) Outcomes, for example, working papers, presentations and publications (give full details, including abstracts)

Working Paper

A working paper based on the new data collected is being developed. Below is the abstract of the working paper:

This paper investigates the heterogeneity underlying the association between audit fees and fair-valued assets for a sample of public U.S. bank holding companies. We predict that the association between audit fees and fair-valued assets is more pronounced when the estimation uncertainty in fair value estimates is high. We identify two factors to study this effect, including the GFC period and the volatility of the fair value measurement inputs. Our results show that despite the overall audit fee cut during the GFC period, auditors charge higher audit fees during the GFC period for auditing the same proportion of fair-valued assets as comparing to post the GFC period. When looking at the proportion of fair-valued assets using the three levels of measurement inputs, the results show that the significant fee increase with respect to fair-valued assets during the GFC period is mainly driven by the proportion of fair-valued assets measured using Level 1 inputs, suggesting that the high estimation uncertainty already embedded in fair-valued assets measured using Levels 2 and 3 inputs is not associated with shifts in audit fees (unless there is a specialist auditor). In addition, the results suggest that banking industry specialists charge higher audit fees for bank holding companies holding fair-valued assets when the volatility of market-based inputs is high, but they charge lower audit fees when the volatility of firm-based inputs is high.

Presentation

30 January Research Workshop at the University of Sydney Discipline of Accounting

(7) Future Intentions for this Project (give full details)

a. Conference submissions

I plan to submit the paper to the European Accounting Association (EAA) 2020 Annual Congress

b. Journal submissions

I plan to submit the paper to the AJPT by the end of 2020

c. Grant applications

I plan to apply for the University of Sydney Business School Early Career Research Fund in 2020

d. Projects

N/A

(8) Summary of Outcomes and Benefits

The funding assists the project to collect a substantial amount of data. All the annual reports have now been downloaded for the bank holding companies in the sample. The additional analyses being conducted will help to refine the measures on the volatility of inputs. The downloaded annual report will also be used to collect any further data on the transfer of levels 1 and 2 fair-valued assets in or out of level 3 fair-valued assets. In terms of outcomes, the additional data collected will help to further develop the project into a working paper. A preliminary draft of the working paper has been presented at a seminar at the University of Sydney in January 2019.