Audit Fees and Accounting Quality: Inferences from Single-Period versus Multi-Period Perspectives

Jeff Coulton
Australian School of Business
University of New South Wales

Gilad Livne
Cass Business School
City University of London

Angela Pettinicchio
Bocconi University

Stephen Taylor
UTS Business School
University of Technology-Sydney

Motivation

- Rapid increase in the number of studies which link audit fees and the quality of financial reporting (in part driven by availability of US audit fee data since 2000)

- Even to the extent where audit fees are suggested as a proxy for accounting quality (Hribar et al. 2010)

- Basic link: financial reporting is a joint product of management representation and audit process (quality)

- But HOW do fees, or more specifically unusual fees, capture audit quality (and hence, carry implications for accounting quality)?

Interpreting abnormal fees – mixed evidence

High fees are bad – higher level of economic bonding

- Audit fees: earnings quality declines as abnormal fees increase (Gul et al 2003; Asthana & Boone 2012; Hribar et al 2010)
- NAS fees: market perception of impaired auditor independence via ERCs (Francis and Ke 2006)
- Total fees: concern expressed by Levitt, regulators (SEC), associated with higher accruals (Srinidhi and Gul 2007)

High fees are good (or at least not bad)

- Audit fees: reflect increased audit effort – negative association with restatements (Blankley et al 2012)
- NAS fees: negative association with accruals (Larcker and Richardson 2004) & no association with reduced conservatism (Ruddock et al 2006), or restatements (Kinney et al 2004):
- Total fees: no association with accruals (Ashbaugh et al 2003); larger clients more likely to receive GCOs, have lower accruals & more conservative (Reynolds and Francis 2001)

Interpreting abnormal fees

Low fees are bad – auditor more likely to take short cuts to avoid loss-making

- Audit fees: lowballing (DeAngelo 1981)
- Audit hours: low audit effort increases extent to which managers can manage earnings up (Caramanis and Lennox 2008)

Low fees are good

- Audit fees: the audit went smoothly (i.e., no problems were encountered);
  - No association between unexpectedly low fees and unexpected accruals (Choi et al 2010)
- NAS fees: lower threat to auditor independence

- Would increased fees represent effort reflective of high quality contemporaneous accounting or not (is the problem simply "detected" or is it "fixed")?

Our perspective (multi-period)

- Annual audit fees (or unexpected fees) are not temporally independent. Audit fees are sticky (Ferguson et al, 2011)
- If abnormal fee in year *t* >0 → abnormal fee *t+1* >0 (and vice versa).
- Audit fees could reflect a deliberate investment in the quality of financial reporting (consistent with Ball et al. 2012)
- Key point is importance of recognising that “abnormal” annual fee may not be so over longer windows, and therefore short-term implications differ from longer-term ones
- **Research Question:** When the relative magnitude of fees is measured over (single) multiple periods is there a positive relation between fees and accounting quality?

What do we do?

1. Use Audit Analytics (US) data matched to Compustat over 2000-2009. Sample size ranges from 17,670 to 37,537 firm-years (depending on model estimated).
2. Estimate abnormal total fees using industry-year models.

$$LTF = \alpha + \beta_1 LTA + \beta_2 FOREIGN + \beta_3 ARINV + \beta_4 SEG + \beta_5 MA + \beta_6 LOSS + \beta_7 ROA + \beta_8 LEV + \beta_9 BIG + \beta_{10} SWITCH + \beta_{11} DEC + \varepsilon$$

3. Rank abnormal fee (the residual) into deciles (by industry-year) to obtain YRANK – measures whether fee is unusually high THIS year.
4. Then create a second measure (long term) by averaging YRANK over a rolling 5 year window – WRANK – measures whether fee is unusually high "consistently".
5. Regress various measures of accounting quality on single period and multi period fee measures, and controls.

Measures of (earnings-based) accounting quality

1. Unexpected working capital accruals as in Kothari et al. (2005).

2. Unexpected working capital accruals as in McNichols (2002) version of Dechow and Dichev (2002)

3. Total accruals

4. Earnings smoothing (standard deviation of income before extraordinaries/standard deviation of OCF)

- We test both absolute values (Table 4) and signed values (Table 5) of unexpected (total) accruals.
- Our accounting quality measures are, at this stage, single-year measures

Financial reporting outcomes – non-accrual

- Application to five external events consistent with variation in financial reporting quality
  1. Issuance of a comment letter by SEC (SEC_LET=1)
  2. Restatements owing to accounting problems (RES_ACC=1)
  3. Restatements owing to frauds (RES_FRAUD=1)
  4. Going concern audit opinion (GC=1)
  5. Disclosure of material weakness in internal control (MW=1)

- Results in Table 6

TABLE 3

Panel A: Descriptive statistics

Variable	N	Mean	Median	Std. Dev.	Q1	Q3
Accounting-based measures of reporting quality						
AREDCA	31039	0.091	0.047	0.125	0.021	0.104
ATACC	31216	0.122	0.072	0.175	0.035	0.137
ARESCFO	24314	0.082	0.044	0.112	0.019	0.095
REDCA	37306	-0.019	-0.015	0.157	-0.061	0.032
TACC	37537	-0.095	0.061	0.199	-0.128	0.017
RESCFO	29770	0.002	0.012	0.144	-0.032	0.055
SMOOTH	31461	1.777	1.004	4.799	0.606	1.702
External measures of reporting quality						
SEC_LET	25661	0.193	0	0.395	0	0
RES_ACC	25661	0.082	0	0.274	0	0
RES_FRAUD	25661	0.002	0	0.04	0	0
GC	25427	0.082	0	0.274	0	0
MW	25661	0.087	0	0.282	0	0
Fee measures						
WRANK	24608	5.578	5.6	2.376	3.667	7.4
YRANK	31039	5.65	6	2.793	3	8

Table 4: Regressions of accruals on fees + controls

Independent variables	Absolute abnormal accrual measures								
	AREDCA	*AREDCA*	*AREDCA*	*ATACC*	*ATACC*	*ATACC*	*ARESCFO*	*ARESCFO*	*ARESCFO*
YRANK	0.000		-0.001	-0.001		-0.003	0.000		-0.001
	(0.82)		(0.10)	(0.00)		(0.00)	(0.87)		(0.01)
WRANK		0.000	0.002		0.000	0.003		0.000	0.002
		(0.30)	(0.01)		(0.33)	(0.10)		(0.43)	(0.01)

- Using absolute values – estimate using single year fee measure, then multi-year, then both [control variables used in all models]

- When using both single and multi-period measures, the coefficient on YRANK is of opposite sign to that on WRANK. Suggests caution in drawing inferences based only on one year of abnormal fees

$$RQ\_A1 = \alpha + \gamma_1 YRANK + \gamma_2 WRANK + \gamma_3 BIG + \gamma_4 LCA + \gamma_5 SD\_CFO + \gamma_6 LNMVE + \gamma_7 MA + \gamma_8 CFF + \gamma_9 LEV + \gamma_{10} MB + \gamma_{11} LIT + \gamma_{12} LOSS + \gamma_{13} CFO + \varepsilon$$

Table 5: regressions of signed accruals on fee measures and controls

Independent variables	Signed accrual Measures											
	REDCA	*REDCA*	*REDCA*	*TACC*	*TACC*	*TACC*	*RESCFO*	*RESCFO*	*RESCFO*	*SMOOTH*	*SMOOTH*	*SMOOTH*
YRANK	0.002		0.004	0.001		0.004	0.001		0.002	0.025		-0.002
	(0.00)		(0.00)	(0.13)		(0.00)	(0.00)		(0.01)	(0.17)		(0.89)
WRANK		0.000	-0.004		-0.001	-0.004		0.000	-0.001		0.037	0.04
		(0.59)	(0.00)		(0.23)	(0.00)		(0.29)	(0.11)		(0.06)	(0.11)

- Single-year excess fees (YRANK) often negatively associated with measures of accounting quality (recall: higher accruals = more aggressive reporting)

- However, when also consistently high (or low) excess fees are included, we observe consistent evidence of a positive association between this measure and measures of accounting quality.

$$RQ\_A2 = \alpha + \gamma_1 YRANK + \gamma_2 WRANK + \gamma_3 BIG + \gamma_4 LCA + \gamma_5 LNMVE + \gamma_6 MA + \gamma_7 CFF + \gamma_8 LEV + \gamma_9 MB + \gamma_{10} LIT + \gamma_{11} LOSS + \gamma_{12} CFO + \varepsilon$$

Tests using non-accrual measures

TABLE 6

Determinants of SEC comment letters, earnings restatements, frauds, going concern opinions and material weakness disclosures

Independent variables	*SEC_LET*			*RES_ACC*			*RES_FRAUD*			*GC*			*MW*		
	(1)	(2)	(3)	(1)	(2)	(3	(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)
YRANK	0.004		0.005	0.030		0.051	0.052		0.135	0.026		0.050	0.113		0.146
	(0.26)		(0.40)	(0.00)		(0.00)	(0.00)		(0.00)	(0.00)		(0.00)	(0.00)		(0.00)
WRANK		0.003	-0.002		0.016	-0.034		-0.004	-0.131		0.012	-0.036		0.088	-0.050
		(0.46)	(0.82)		(0.00)	(0.00)		(0.85)	(0.00)		(0.18)	(0.01)		(0.00)	(0.00)

- High audit fees for a single period (after controlling for the extent to which fees are high over an extended period) are associated with a higher probability of events that are indicative of lower reporting quality. High single period fees are related to low quality reporting

- Long-term high audit fees are associated with a significantly lower probability of events typically associated with lower quality financial reporting. High abnormal fees measured long –term related to high quality reporting

Using audit fees (not total fees) & absolute value accrual measures

	AREDCA	*AREDCA*	*AREDCA*	*ATACC*	*ATACC*	*ATACC*	*ARESCFO*	*ARESCFO*	*ARESCFO*
YRANK	0.000		-0.001	-0.001		-0.002	0.000		-0.001
	(0.95)		(0.02)	(0.02)		(0.00)	(0.78)		(0.01)
WRANK		0.000	0.001		0.000	0.002		0.000	0.001
		(0.50)	(0.02)		(0.41)	(0.02)		(0.55)	(0.02)

- Using absolute values – estimate using single year fee measure, then multi-year, then both [control variables used in all models]

- When using both single and multi-period measures, the coefficient on YRANK is of opposite sign to that on WRANK. Again, caution in drawing inferences based only on one year of abnormal audit fees

Regressions of signed accruals on *audit fees* + controls

	Signed accrual Measures											
	REDCA	***REDCA***	***REDCA***	***TACC***	***TACC***	***TACC***	***RESCFO***	***RESCFO***	***RESCFO***	***SMOOTH***	***SMOOTH***	***SMOOTH***
YRANK	0.001		0.002	0.000		0.002	0.025		-0.017	0.001		0.001
	(0.00)		(0.00)	(0.86)		(0.04)	(0.19)		(0.29)	(0.05)		(0.16)
WRANK		0.001	-0.002		0.000	-0.002		0.040	0.058		0.001	0.000
		(0.19)	(0.03)		(0.37)	(0.04)		(0.07)	(0.03)		(0.13)	(0.78)

- Results very similar to those reported for total fees
- Single-year excess fees (YRANK) often negatively associated with measures of accounting quality (recall: high positive accruals = aggressive reporting)
- However, when also consistently high (or low) excess fees are measured, we observe consistent evidence of a positive association between this measure and measures of accounting quality.

Non-accrual measures and *audit fees*

Independent variables	SEC_LET			RES_ACC			RES_FRAUD			GC			MW		
	(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)
WRANK_AF	0.004	0.006		-0.030	0.015		-0.094	0.006		-0.033	0.019		-0.045	0.091	
	(0.571)	(0.201)		(0.001)	(0.006)		(0.008)	(0.800)		(0.015)	(0.044)		(0.000)	(0.000)	
YRANK_AF	0.002		0.005	0.046		0.027	0.103		0.047	0.054		0.033	0.143		0.115
	(0.755)		(0.223)	(0.000)		(0.000)	(0.000)		(0.003)	(0.000)		(0.000)	(0.000)		(0.000)

- High audit fees for a single period (after controlling for the extent to which fees are high over an extended period) are associated with a higher probability of events that are indicative of lower reporting quality. High single period fees related to low quality reporting

- Long-term high audit fees are associated with a significantly lower probability of events typically associated with lower quality financial reporting. High long - term fees related to high quality reporting outcomes.

Robustness tests

Our primary conclusions hold for the following:

- Extent of overlapping windows
  - Reduce maximum overlap from 4 years to 2 years (the best we can do given limited total years)
- Alternative accounting-based measures of reporting quality as an additional control variable in tests using external events.
- Estimate models on Big N / non-Big N separately
- Exclude financial institution observations

Conclusions

- As far as we know, this is the first study of multi-year perspective of fees and implications for accounting quality
- Single year excess fees often negatively associated with accounting (reporting) quality
- Multi-year excess fees typically positively associated with accounting (reporting) quality – so our results are more consistent with high fees being an investment in financial reporting verification than representing a threat to independence
- Results robust to a variety of LHS variables
- Implications for measurement of audit and accounting quality and independence literatures.