Peer Review Report

ROUND 1

Reviewer 1 report

Reviewer: Verônica Santana
Date review returned: February 05, 2021
Recommendation: Major revision

Comments to the authors

The paper deals with an interesting and important research problem and develops it with a comprehensive analysis. However, there are two main problems that need to be revised, beside a few other minor issues.

First, regarding the authors' arguments developing the Introduction. In the Introduction, the authors explain why is important to study insurance companies but do not explain why is it important to specifically study their earnings persistence and ERC. The authors only say it is insipient, but only after stating the results. It would also do good to explain in the Introduction what were the

expected results (or hypotheses). I suggest to modify the Introduction structucture to better guide the reader on the research problem importance and justification. I would also suggest to reorganize the hypotheses development. There are too many hypotheses, so that the reader is confused. My suggestions is to state only a few main hypotheses and state the details not as separate hypotheses but rather as specific analyses. They are too specific to be considered hypotheses.

Second, there are some problems with the models estimations that are causing potential harmful biases in the results.

In Equation (3) the authors must also include all the variables in the interactions alone, otherwise the interaction parameters will be biased. Instead of including countries and industries fixed effects you could add a full set of firms' fixed effects along with the time fixed effects (countries and industries dummies may be used as instruments, see the comment about the GMM dynamic model below).

However, since the model in Equation (3) is an autoregressive one, it cannot be estimated by panel fixed effects or OLS, since the coefficients will be biased. The authors must estimated the model using the GMM approach for dynamic models, assuming sequential exogeneity (see, Wooldridge (2010), Chapter 11).

Equation 6 and 7 also need to be reestimated including all variables in the interactions separately. I also suggest to estimate them using firms' fixed effects along with the time dummies. Since these models do not present a autorregressive component it is not applicable to use the GMM dynamic estimator.

Further, there are also some observations the authors should consider regarding the data and models.

a) Why only 851 firms were selected from a total of 75,316? Why limiting the sample to G20 plus Europe countries?

b) How do you measure earnings standard deviations? Did you estimate the standard deviation for each year considering the quarterly returns? If it was so, the estimate is very biased due to using only for observations. A GARCH model would be better for estimating earnings volatility.

c) In equation (1), beta is not a proxy for earnings persistence, it is its measure. Persistence is a statistical concept.

Finally, the paper needs a thoroughly text review. There are several writing and grammar mistakes. I list some of the them:

a) Where is written "The market reaction accounting information is not homogeneous across all firms, industries, countries and accounting standards" should be "The market reaction to accounting information is not homogeneous across all firms, industries, countries, and accounting standards".

b) Where is written "since insurance industry is strongly regulated activity across the world" should be "since the insurance industry is a strongly regulated activity across the world".

c) Where is written "has was exacerbated during the 2008's financial crisis" should be "was exacerbated during the 2008 financial crisis".

d) Where is written "regardless of whether accruals are managed to produce a desired level of earnings, are less persistent then cash flow components" should be "regardless of whether accruals are managed to produce a desired level of earnings or not, are less persistent then the cash flow components".

e) Abbreviations should be first stated as "International Financial Reporting Standards (IFRS)" and then only IFRS.

f) There are two consecutive commas at lines 27 and 29.

g) Where is written "methodology, the Equation 1 was" should be "methodology, Equation (1) was".

Additional Questions:

Does the manuscript contain new and significant information to justify publication?: Yes

Does the Abstract (Summary) clearly and accurately describe the content of the article?: Yes

Is the problem significant and concisely stated?: No

Are the methods described comprehensively?: Yes

Are the interpretations and conclusions justified by the results?: Yes

Is adequate reference made to other work in the field?: Yes

Is the language acceptable?: Yes

Does the article have data and / or materials that could be made publicly available by the authors?: Not applicable

Please state any conflict(s) of interest that you have in relation to the review of this paper (state "none" if this is not applicable).: None.

Rating:
Interest: 2. Good
Quality: 3. Average
Originality: 3. Average
Overall: 2. Good

Reviewer 2 report

Reviewer: Bianca Checon
Date review returned: February 07, 2021
Recommendation: Major revision

Comments to the authors

I understand that the paper addresses a gap in the earnings persistence research concerning financial institutions, which is extremely important in the accounting literature since it is not well explored so far. In this manner, all my comments below aim to help the authors to improve the quality of the article.

(a) In a broader sense, the paper is well-written, and I did not have trouble understanding the ideas conveyed in the text. Nevertheless, there are some sentences or paragraphs that could improve clarity by having a text revision by a native English speaker.

(b) The paper does not state clearly what is the problem to be addressed. On page 5, line 44 (and page 6, lines 15-17), the authors say that the research aims to reduce the literature gap in earning persistence and market reaction considering insurance companies. Notwithstanding, it is necessary to explain further why investigating this topic is important, what is the innovative contribution that the research will bring to the earnings persistence literature when it analyzes the insurance companies set.

(c) In paragraph 3, the authors indicate that one of the advantages of the research is exploring a setting that has insurance accounting standards varying across countries. It is not clear how this is an advantage when comparing companies from different regulatory backgrounds in the study, nor how the researchers have solved this problem of comparability.

(d) I suggest the authors exclude paragraph 3 on page 7. It seems to me that it would be more adequate to include it in the concluding session of the paper.

(e) I suggest you revise the introduction length and structure. On average, paper introductions in accounting papers have between 1,5 and 2 pages. Also, try to present the introduction section following the rationale of the research goal – justificative – method – main results – contribution – paper organization.

(f) On page 10, second paragraph, line 30, the authors name four frameworks from the Wagner and Zemp (2012) work, but it is not clear the argument behind the paragraph itself since the frameworks were not stated. Also, it seems that that paragraph is disconnect from the previous and the next ones.

(g) Regarding H2, since insurance companies have a higher proportion of financial instruments, and those can suffer variations arising from fair value measures, this might mean that the accrual component of earnings is higher than the operating cash flow.

(h) H3 is too broad "earnings persistence is significantly affected by specific earnings processes/patterns". What are those processes and patterns? The hypothesis needs to be concise and clear.

(i) On H4 and H5, that is no need to state that the coefficient needs to be statistically significant (it is implicitly expected from the hypotheses formulation).

(j) H6 says that the "earnings response coefficient is affected by companies and market risk patterns". It is necessary to indicate if the earnings response will be positively or negatively affected.

(h) Equations 3 and 7 need to include all the variables that were interacted outside the interaction. Otherwise, the models have an endogeneity problem of omitted variables, and the reported coefficients are wrongly specified.

Additional Questions:

Does the manuscript contain new and significant information to justify publication?: Yes

Does the Abstract (Summary) clearly and accurately describe the content of the article?: Yes

Is the problem significant and concisely stated?: No

Are the methods described comprehensively?: Yes

Are the interpretations and conclusions justified by the results?: No

Is adequate reference made to other work in the field?: Yes

Is the language acceptable?: Yes

Does the article have data and / or materials that could be made publicly available by the authors?: Yes

Please state any conflict(s) of interest that you have in relation to the review of this paper (state "none" if this is not applicable).: None.

Rating:

Interest: 3. Average

Quality: 2. Good

Originality: 2. Good

Overall: 2. Good

Authors' Responses

Dear editor,

We appreciate the opportunity to review our article submitted to RAC - Revista de Administração Contemporânea and the constructive comments of the reviewers, which, we believe, gave us the possibility to make improvements in the work. We made several changes, including paragraphs, references and tables according to indications, suggestions and requests. We proceeded to respond to the comments of the reviewers in all aspects that supported the research questions and hypotheses already presented.

We are sending three files: The first contains the comments and actions taken, taking into account the suggestions and recommendations of the reviewers, and which is in the sequence of this file. The second contains the original article with revision marks. The third contains the modified article without revision marks.

We renew our gratitude for the opportunity to continue the evaluation process.

Academic greetings,

The author

08-Feb-2021

Associate Editor

Comments to the Author:

Dear Author, we received two reviews of your article. Both reviewers agree in the same aspects: the application is important and interesting, the article has a robust theoretical background, but it needs to be better positioned. I agree with them.

I read the article with great interest and I think the manuscript has many merits, but some effort still needs to be undertaken to be at the expected level for publication.

We hope you address all considerations made by the reviewers and incorporate them into the work.

Answer/Action: We appreciate the opportunity to review our article submitted to RAC - Revista de Administração Contemporânea and the constructive comments of the reviewers, which, we believe, gave us the possibility to make improvements in the work. We made several changes, including paragraphs, references and tables according to indications, suggestions and requests.

Reviewer: 1

Recommendation: Major Revision

Comments:

The paper deals with an interesting and important research problem and develops it with a comprehensive analysis. However, there are two main problems that need to be revised, beside a few other minor issues.

Answer/Action: Thank you very much for the valuable comments and recommendations. All topics indicated were addressed as follow:

First, regarding the authors' arguments developing the Introduction. In the Introduction, the authors explain why is important to study insurance companies but do not explain **why is it important to specifically study their earnings** persistence and ERC. The authors only say it is insipient, but only after stating the results. It would also do good to **explain in the Introduction what were the expected results** (or hypotheses). I suggest to modify the Introduction structucture to better guide the reader on the **research problem importance and justification**.

Answer/Action: Thank you for the comment. The introduction was significantly changed in order to incorporate the suggestions of both reviewers and to address the specific points mentioned (why EP and ERC are important and a better guide to the problem).

I would also suggest to reorganize the hypotheses development. There are too many hypotheses, so that the reader is confused. My suggestions is to state **only a few main hypotheses** and state the details not as separate hypotheses but rather as specific analyses. They are too specific to be considered hypotheses.

Answer/Action: Thank you for the comment. Since no previous paper analysed the relations proposed in the current paper, the approach was to include most analysis as possible (and test most variables), in order to provide base-line empirical evidence, in a certain exploratory level. In this sense, the number of hypothesis was wittingly high compared to similar papers in non-insurance industries. Although, a reduction is possible, Reviewer 2, suggested increasing the number of hypothesis (with more specificities), what make hard to accommodate the two suggestions.

Second, there are some problems with the models estimations that are causing potential harmful biases in the results. In Equation (3) the authors must also include all the variables in the interactions alone, otherwise the interaction parameters will be biased.

Answer/Action: As required, the regressions (Eq. 3) were re-estimated with all variables in the interactions alone with imposition of additional treatment for heteroscedasticity and the results, indeed, changed. However, due to the paper length restriction, we follow Chen (2013, p. 555, Contemporary Accounting Research) and Frankel and Litov (2009, p. 185, Journal of Accounting and Economics) who, for brevity, did not report the coefficient estimates of the factors' main effects (i.e. the intercepts for interacted term component) in the paper. Here the cluster-robust estimate outputs are fully displayed:

	Full Sample		Property and Casualty Insurance		Multi-line Insurance		Life and Health Insurance		Reinsurance	
Const.	-0.005		-0.025		0.045		0.006		0.046	
	-0.46		-1.44		1.03		0.67		1.39	
X_{t-1}	1.392	***	0.884	***	0.740	**	1.379	***	-2.328	
	6.12		2.82		2.03		2.59		-1.27	
$X_{t-1} * earnvol_{t-1}$	-0.615	*	0.257		-0.490		-1.572	***	0.309	
	-1.67		0.92		-1.58		-2.60		0.25	
$X_{t-1} * dbigearn_{t-1}$	0.008		-0.137		-0.079		0.652	**	-1.365	
	0.04		-1.29		-0.69		1.73		-1.72	
$X_{t-1} * decrearn_{t-1}$	-0.236		-0.488	**	0.050		0.582		4.637	**
	-1.16		-2.07		0.17		0.79		2.26	
$X_{t-1} * accr_{t-1}$	0.222		1.085	**	0.916	**	-0.261		1.814	
	0.77		2.37		1.99		-1.34		1.25	
$X_{t-1} * nlef_{t-1}$	-0.398		-0.505		0.072		-0.016		5.063	**
	-1.60		-1.51		0.17		-0.02		2.11	

$X_{t-1} * ifrs_t$	0.015		0.248	**	0.238		-0.213		-1.291	**
	0.13		2.03		1.30		-1.02		-1.95	
$earn_{t-1} * usgaap_t$	-0.001		0.135		0.009		-0.181		-1.744	**
	-0.01		1.09		0.04		-0.91		-2.14	
$earnvol_{t-1}$	0.00		-0.01		0.00		0.01		-0.01	
	0.130		-0.780		-0.170		0.550		-0.250	
$dbigearn_{t-1}$	0.00		0.00		0.00		-0.01		0.03	
	-0.270		0.400		-0.730		-1.090		1.000	
$decrearn_{t-1}$	0.00		0.01		0.00		-0.01		-0.08	**
	0.090		1.440		-0.300		-1.290		-2.290	
$accr_{t-1}$	-0.12	***	-0.14	***	-0.13	**	-0.06		-0.14	
	-4.180		-5.040		-2.370		-1.540		-1.210	
$nlef_{t-1}$	0.00		0.01		0.00		-0.02		-0.08	**
	-0.050		1.010		-0.230		-1.280		-2.000	
$ifrs_t$	0.00		0.00		-0.01		0.00		0.05	**
	-0.080		0.890		-1.240		-0.210		1.980	
$usgaap_t$	0.01		0.03	*	-0.03		0.00		0.06	**
	1.490		1.820		-0.830		1.430		2.150	
Year controls	yes		yes		yes		yes		yes	
Coutry/region controls	yes		yes		yes		yes		yes	
Sub-industry controls	yes									
Observations	3,364		1,246		1,082		862		174	
R²	0.347		0.435		0.341		0.534		0.728	
F	35.16	***	18.56	***	310.31	***	15.41	***	124.73	***

Instead of including countries and industries fixed effects you could add a full set of firms' fixed effects along with the time fixed effects (countries and industries dummies may be used as instruments, see the comment about the GMM dynamic model below). However, since the model in Equation (3) is an autoregressive one, it **cannot** be estimated by panel fixed effects or OLS, since the coefficients will be biased. The authors **must estimated the model using the GMM approach for dynamic models**, assuming sequential exogeneity (see, Wooldridge (2010), Chapter 11).

Answer/Action: Thank you for the indication and the opportunity to consider an additional estimation approach. We actually performed the firm' fixed effect as an additional estimation approach and results, overall, were qualitative the same (results not displayed in the text). However, based on previous literature, "financial figures and risk of life and non-life insurance companies and risk vary significantly between them (Polonchek & Miller, 1999 ; Abdallah et al., 2018)" and also between countries. We believe that taking into consideration these differences explicitly allows us to make rational and economic interpretations.

We recognize that non-biased statistic inferences should be the target of any study. However, based on the alternative estimation conducted in the paper and previous literature, we consider our inferences highly conservative. Specifically, we searched for empirical support to the GMM approach for this specific research question and designing; however, we were not able to find it.

Fairly recent and relevant studies that implement these kind of empirical analysis, such as Lewellen and Resutek (2019, Journal of Accounting and Economics), Hui, Nelson and Yeung (2016, Journal of Accounting and Economics), Agarwal et al. (2016, Accounting and Business Research), Chen (2013, Contemporary Accounting Research) apply the OLS approach, especially by using "the average slopes and R² from annual cross-sectional regressions". This is the standard approach in the literature. Under this approach (average of cross-sectional regressios), the results (coefficients) of the present paper would be higher, more significant and stable, than the current ones presented. In this regard, we believe that the estimations and conclusions are conservative. Additionally, Barth and Clinch (2009, Journal of Business

Finance & Accounting) test several specifications of the basic value relevance models used in the literature and find that unweighted OLS regressions produce robust inferences.

In light of the mentioned above, an application of GMM to the research question would suggest estimation superiority in relation to previous literature, however, to fairly produce this innovation a completely new and time-consuming research should be conducted.

Equation 6 and 7 also need to be reestimated including all variables in the interactions separately. I also suggest to estimate them using firms' fixed effects along with the time dummies. Since these models do not present a autorregressive component it is not applicable to use the GMM dynamic estimator.

Answer/Action: As required, the regressions for Eqs. 6 and 7 were re-estimated with all variables in the interactions alone. Note that seminar papers such as

Once again, following previous literature, in Equation 7, for brevity and due to the larg number of variables, the coefficient estimates of the factors' main effects (i.e. the intercepts for interacted term component) are not reported in the paper. In both, Eq 6 and 7, the qualitative interpretation remains the same with or without the inclusion of interacted variables alone.

Here the cluster-robust estimate outputs are fully displayed (Eq. 7):

	Positive Unexpected Earnings (good news)		Negative Unexpected Earnings (bad news)		Entire Sample - Integrative Dummy	
Const.	0.047		0.053		0.056	
	(0.55)		(0.46)		(0.82)	
UX	0.367	***	0.955	***	0.374	***
	(2.58)		(5.17)		(2.56)	
*UX * decrearn*					0.571	***
					(2.47)	
decrearn					-0.05	***
					(2.99)	
Year controls	yes		yes		yes	
Coutry/region controls	yes		yes		yes	
GAAP controls	yes		yes		yes	
Sub-industry controls	yes		yes		yes	
Observations	1,768		1,253		3,021	
R^2	0.073		0.135		0.117	
F	3.62	***	4.56	***	7.10	***

Here the cluster-robust estimate outputs are fully displayed (Eq. 7):

	Full Sample		Property and Casualty Insurance		Multi-line Insurance		Life and Health Insurance		Reinsurance	
Const.	-0.074		-0.213		0.133		0.142		0.174	
	-0.86		-1.58		1.27		1.33		0.70	
UX	0.721	**	0.475		0.419		0.730		-1.805	
	2.41		1.05		0.78		1.19		-0.80	
*UX * OCFPer*	-25.969	***	-35.916	***	-10.858		-18.077		-1591.1	**
	-2.66		-2.88		-0.45		-0.32		-2.43	
*UX * ACCPer*	29.970	***	23.485	**	34.645		35.274		2449.2	***

	3.22		2.24		1.42		0.93		2.53	
UX * NLEF	-0.785	***	-0.466		-1.093	**	-0.243		-0.711	
	-2.97		-1.27		-2.30		-0.44		-0.52	
UX * SRISK	0.278	**	0.262	**	0.699	***	-0.424		6.906	***
	2.07		2.05		2.61		-1.51		2.75	
UX * INSLIAB	-0.058		0.160		0.210		0.612		-2.356	
	-0.15		0.24		0.33		0.85		-1.62	
OCFPer	2.656		5.211	*	0.012		6.932		-12.147	
	1.35		1.66		0.00		1.23		-0.29	
ACCPer	-1.642		-8.528	***	0.732		-4.230		87.536	
	-0.71		-2.53		0.19		-0.69		1.60	
NLEF	0.145	***	0.243	***	0.130		0.017		-0.046	
	3.01		2.98		1.54		0.23		-0.21	
SRISK	-0.018		0.002		-0.052		-0.068	**	-0.357	*
	-0.80		0.04		-1.44		-2.21		-1.64	
INSLIAB	-0.025		-0.087		-0.007		-0.094		0.043	
	-0.68		-0.97		-0.11		-1.24		0.28	
Year controls	yes		yes		yes		yes		yes	
Coutry/region controls	yes		yes		yes		yes		yes	
GAAP controls	yes		yes		yes		yes		yes	
Sub-industry controls	yes									
Observations	2,355		738		800		682		135	
R^2	0.134		0.163		0.175		0.187		0.222	
F	6.46	***	7.19	***	4.28	***	3.45	***	2.16	***

Further, there are also some observations the authors should consider regarding the data and models.

a) Why only 851 firms were selected from a total of 75,316? Why limiting the sample to G20 plus Europe countries?

Answer/Action: As mentioned in "Sample definition", (p.23) the "sample is composed by public companies classified in insurance industry in the G20 countries, …, with minimum financial and market information available". Hence, from the 75,316 insurance companies, only 851 are public/listed. From the 851 public, we have a country restriction (366 not located in G20 countries), insurance brokers restriction (74 companied, due to its commercial and service provider nature) and restriction for firms without available data (104 companies). Yielding a final sample of 307 companies.

We highlight that the restriction to public company is fundamental to the research problem, since it demand market price information, which is not available for private firms but only for public companies. We made this clear in the text. Thank you for the observation.

b) How do you measure earnings standard deviations? Did you estimate the standard deviation for each year considering the quarterly returns? If it was so, the estimate is very biased due to using only for observations. A GARCH model would be better for estimating earnings volatility.

Answer/Action: we follow Frankel & Litov, 2009 and Dichev & Tang (2009, Journal of Accounting and Economics) and Clubb and Wu (2014, Journal of Business Finance & Accounting) in defining earnings volatility as standard deviation of earnings. Specifically, as mentioned in p.16, our paper ranked the standard deviation of the deflated earnings during the period available. Thus, after the earnings

volatility is calculated, the rank transformation is applied as , , where is the rank of deflated earnings volatility of firm i with N being the number of insures in the sample. Therefore, earnvol is time-invariant and equal to zero for the firm with the smallest earnings volatility and is equal to one for the firm with the highest. The ranked volatility is used to divide firms in quartiles that cluster insurers with high, mean-high, mean-low and low earnings volatility. We adjusted the text to make it clear.

c) In equation (1), beta is not a proxy for earnings persistence, it is its measure. Persistence is a statistical concept.

Answer/Action: Thank you for the comment. Adjustment was done.

Finally, the paper needs a thoroughly text review. There are several writing and grammar mistakes. I list some of the them:

a) Where is written "The market reaction accounting information is not homogeneous across all firms, industries, countries and accounting standards" should be "The market reaction to accounting information is not homogeneous across all firms, industries, countries, and accounting standards".

Answer/Action: Thank you. Correction was done.

b) Where is written "since insurance industry is strongly regulated activity across the world" should be "since the insurance industry is a strongly regulated activity across the world".

Answer/Action: Thank you. Correction was done.

c) Where is written "has was exacerbated during the 2008's financial crisis" should be "was exacerbated during the 2008 financial crisis".

Answer/Action: Thank you. Correction was done.

d) Where is written "regardless of whether accruals are managed to produce a desired level of earnings, are less persistent then cash flow components" should be "regardless of whether accruals are managed to produce a desired level of earnings or not, are less persistent then the cash flow components".

Answer/Action: Thank you. Correction was done.

e) Abbreviations should be first stated as "International Financial Reporting Standards (IFRS)" and then only IFRS.

Answer/Action: Thank you. Correction was done.

f) There are two consecutive commas at lines 27 and 29.

Answer/Action: Thank you. Correction was done.

g) Where is written "methodology, the Equation 1 was" should be "methodology, Equation (1) was".

Answer/Action: Thank you. Correction was done.

Reviewer: 2

Recommendation: Major Revision

Comments:

I understand that the paper addresses a gap in the earnings persistence research concerning financial institutions, which is extremely important in the accounting literature since it is not well explored so far. In this manner, all my comments below aim to help the authors to improve the quality of the article.

Answer/Action: Thank you very much for the valuable comments and recommendations. All topics indicated were addressed as follow:

(a) In a broader sense, the paper is well-written, and I did not have trouble understanding the ideas conveyed in the text. Nevertheless, there are some sentences or paragraphs that could improve clarity by having a text revision by a native English speaker.

Answer/Action: A completely new review was conducted in the entire paper.

(b) The paper does not state clearly what is the problem to be addressed. On page 5, line 44 (and page 6, lines 15-17), the authors say that the research aims to reduce the literature gap in earning persistence and market reaction considering insurance companies. Notwithstanding, it is necessary to explain further why investigating this topic is important, what is the innovative contribution that the research will bring to the earnings persistence literature when it analyzes the insurance companies set.

Answer/Action: Thank you for the comment. The introduction was significantly changed in order to incorporate the suggestions of both reviewers and better explain why EP and ERC are important in the insurance companies set.

(c) In paragraph 3, the authors indicate that one of the advantages of the research is exploring a setting that has insurance accounting standards varying across countries. It is not clear how this is an advantage when comparing companies from different regulatory backgrounds in the study, nor how the researchers have solved this problem of comparability.

Answer/Action: Indeed, the early version of the paper didn't make clear the advantages and approach to solve the problem. This was cited in the introduction and developed along the paper.

(d) I suggest the authors exclude paragraph 3 on page 7. It seems to me that it would be more adequate to include it in the concluding session of the paper.

Answer/Action: The suggestion was implemented, in fact, it is much more adequate. Thank you.

(e) I suggest you revise the introduction length and structure. On average, paper introductions in accounting papers have between 1,5 and 2 pages. Also, try to present the introduction section following the rationale of the research goal – justificative – method – main results – contribution – paper organization.

Answer/Action: We tried to follow the steps suggested and, at the same time, developing the item "b" and "c", mentioned earlier. Hence, the introduction was structured as:

Paragraph 1 – contextualization of accounting and insurance industry relevance

Paragraph 2 – implication of the study and justification (for practitioners and for the literature)

Paragraph 3 – objective/goal and broad method

Paragraph 4 – justification for the cross-country and cross-insurance sub-segment methods

Paragraph 5 – main results

Paragraph 6 – contribution

Paragraph 7 – paper organization

(f) On page 10, second paragraph, line 30, the authors name four frameworks from the Wagner and Zemp (2012) work, but it is not clear the argument behind the paragraph itself since the frameworks were not stated. Also, it seems that that paragraph is disconnect from the previous and the next ones.

Answer/Action: Thank you for the indication, there was disconnection and the paragraph was not relevant to the context.

(g) Regarding H2, since insurance companies have a higher proportion of financial instruments, and those can suffer variations arising from fair value measures, this might mean that the accrual component of earnings is higher than the operating cash flow.

Answer/Action: Indeed, variations arising from fair value measures can increase the variability of accruals. Thus, accruals should be more volatile and (even) less persistent than operating cash flows, as hypothesized. A note on that was provided in the paper.

(h) H3 is too broad ◊ "earnings persistence is significantly affected by specific earnings processes/patterns". What are those processes and patterns? The hypothesis needs to be concise and clear.

Answer/Action: The paragraph presenting the hypothesis mentioned that it is wittingly broad and mentioned the determinants (earnings processes/patterns). One alternative is to provide a specific hypothesis to each expected relationship. However, this action conflicts strongly with Reviewer 1, who asks for a reduction (junction) in the hypothesis.

(i) On H4 and H5, that is no need to state that the coefficient needs to be statistically significant (it is implicitly expected from the hypotheses formulation).

Answer/Action: Thank you. The correction was done.

(j) H6 says that the "earnings response coefficient is affected by companies and market risk patterns". It is necessary to indicate if the earnings response will be positively or negatively affected.

Answer/Action: Thank you. The correction was done.

(h) Equations 3 and 7 need to **include all the variables that were interacted outside the interaction**. Otherwise, the models have an endogeneity problem of omitted variables, and the reported coefficients are wrongly specified.

Answer/Action: As required, the regressions (Eq. 3, 6 and 7) were re-estimated with all variables in the interactions alone.

ROUND 2

Reviewer 1 report

Reviewer: Verônica Santana
Date review returned: April 29, 2021
Recommendation: Minor revision

Comments to the authors

The authors have made significant improvements in the paper, however, some important problems regarding the estimation methods remain.

First, using firm fixed effects does account for the country and industry differences, since a specific firm does not change its country and industry over the years. Therefore, when accounting for firms' fixed effects you automatically accounts for all firms' characteristics that are constant over time. Unless the authors specifically want to see the coefficient values for the country and industry dummies (which does not seem to be the case) there is no reason to use them instead of a full set of fixed effects. The phrase "While fixed effects provide controls for firm-specific time-invariant aspects, the estimations presented in this paper controls form several aspects related to the environment in which insurance companies are inserted, which are lost unaccounted for in the fixed effect analysis" is, therefore, mistaken.

Second, regarding the GMM estimations. The papers you cite to justify the use of OLS do not estimate dynamic models, that is, models in which the lagged y variable is among the explanatory variable. You only need to use GMM in models of the like $y \sim lag(y) + X + e$ (this is equivalent to a model of the form $lead(y) \sim y$). Agarwal et al (2015) study investor relations variables contemporaneously with financial analysts and other variables. Hui, Nelson, and Yeung (2016) evaluated earnings persistence but their models only include lagged earnings decomposed between other variables, in the form: $y \sim lag(x1) + lag(x2)$, onde $y = X1 + x2$. A model in this form does not suffer from the same problem as the model in the form $y \sim lag(y)$. The problem is with the autocorrelation coefficients. Chen (2013) estimates value relevance models, which also do not present autoregressive components. Lewellen and Resutek (2019) do not explain their estimation methods, but they use both types of model specifications.

Earnings persistence is measured by the earnings' autoregressive coefficient. The proper way to estimate it is via time series AR or VAR models. However, researchers often rely on panel data due to the lack of a long enough earnings time series. If using data in the panel format, estimating a pooling OLS model or a fixed-effect model yields biased estimations. Wooldridge (2010, p. 290) explains: In addition, $y_{i, t-1}$ and c_i are necessarily correlated (since at time t-1, $y_{i, t-1}$ is the left-hand-side variable). Not only must strict exogeneity fail in this model, but the exogeneity assumption required for pooled OLS estimation of model (10.18) is also violated. We will study estimation of such models in Chapter 11." Chapter 11 is when the author explains dynamic GMM models.

However, if you estimate a dynamic GMM model you get rid of the bias problem, but you get another problem: you no longer estimate earnings persistence. This happens because dynamic GMM uses first-difference to deal with fixed-effects so that you would be estimating the persistence of earnings' variation, which would be a different concept.

In short, I suggest you do the following: do not estimate the models in Equations (1) and (3), which are the ones in the format of $y \sim lag(y)$. Focus on the models of the type $Earn \sim CFO + Accruals$, which do not violate the exogeneity assumption.

If you insist, show the estimation results for the $y \sim lag(y)$ model, but emphasize in the text that they are biased.

To illustrate the importance of my insistence on this topic, I estimated a simple earnings persistence model of the type $Earn \sim lag(Earn) + Size + lag(Earn)*Size$ using OLS, linear panel fixed effects with the within (demeaning) transformation and with the first-difference transformation, and then using the dynamic GMM model.

When using OLS, the autoregressive coefficient was 0.926 (significant at the 1% level). When using fixed effects with the within transformation the autoregressive coefficient dropped to 0.264 (significant at the 1% level). When using first difference panel estimation, the coefficient is no longer significant at any accepted level (-0.092) and the same occurs with panel GMM. This happens because these two latter models are not estimating earnings persistence, since they first-differenced the data.

Besides these two main considerations about the estimation' methods, I only suggest stating in the regression tables that you included all the interaction terms but omitted them for the sake of space.

Additional Questions:

Does the manuscript contain new and significant information to justify publication?: Yes

Does the Abstract (Summary) clearly and accurately describe the content of the article?: Yes

Is the problem significant and concisely stated?: Yes

Are the methods described comprehensively?: Yes

Are the interpretations and conclusions justified by the results?: Yes

Is adequate reference made to other work in the field?: Yes

Is the language acceptable?: Yes

Does the article have data and / or materials that could be made publicly available by the authors?: Not applicable

Please state any conflict(s) of interest that you have in relation to the review of this paper (state "none" if this is not applicable).: None.

Rating:

Interest: 2. Good

Quality: 2. Good

Originality: 2. Good

Overall: 2. Good

Reviewer 2 report

Reviewer: Bianca Checon

Date review returned: July 29, 2021

Recommendation: Minor revision

<u>**Comments to the authors**</u>

First, I would like to state that I appreciate the efforts you have made to address all the comments I have made in the previous evaluation round.

About the latest version of the paper, my comments are disclosed below:

(a) On lines 20 and 21, page 3, there is a direct citation that I recommend you transform into an indirect one. It does not appear to me that is strictly necessary to include that passage in a direct manner, and it reduces the reading flow quality.

(b) In the introduction, it is necessary to state which is the statistical technique you have used to analyze your data. The same comment is valid for the abstract description of the method used.

(c) There is still room for improvement when stating the paper's contribution. Highlight what the paper has contributed to the academic literature on the field in a clearer manner.

(d) First paragraph on item 2.1 (page 5) sounds like it is not in the right place in the literature review section. I suggest you review its location in the text (perhaps it would be better to place it in the method section).

(e) It seems to me that the last paragraph of page 6 would be better if placed in the introduction. Also, include at the beginning of that paragraph conjunction to stress the opposing idea from the previous paragraph (such as "however").

(f) Line 44, page 7 says that there are "(…) implications to managers, auditors, regulators, and investors". I suggest you be more specific about the implications (what are those?).

(g) When presenting H2, you present evidence from non-financial companies to develop your hypothesis. Nevertheless, I question if the operating nature of insurance companies follows the same rationale as non-financial ones. My main concern here is how the insurance provisions recognition will impact the persistence of accruals versus the persistence of net operating cash flows

In other words, it is important to acknowledge how the insurance companies realize technical provisions into cash, thinking about cash persistence. Otherwise, investors are correct when preferring to put more attention to accruals persistence than in operating cash persistence.

(h) H3 has broad words; clearly that what does "specific earnings processes/patterns" mean. The same comment is valid to H5 and H6 (in this case, "companies' and market risk patterns").

(i) Concerning the paragraph stated before H5, it sounds to me that its content is not aligned with the following hypothesis. I suggest you review it.

(j) Equation 2 is lacking the label (eq. 2)

(k) On page 15, the second paragraph is too long. I suggest you review it and break it into two paragraphs, at least.

(l) It is not clear to me the reason why the authors have chosen to run a pooled OLS regression instead of a GLM fixed-effect model. I indicate to the authors to re-run the regressions in this manner and check if the results are robust to this change.

(m) As a minor adjustment, officially Hong Kong is not a country, but a Chinese territory.

Additional Questions:

Does the manuscript contain new and significant information to justify publication?: Yes

Does the Abstract (Summary) clearly and accurately describe the content of the article?: Yes

Is the problem significant and concisely stated?: Yes

Are the methods described comprehensively?: No

Are the interpretations and conclusions justified by the results?: Yes

Is adequate reference made to other work in the field?: Yes

Is the language acceptable?: Yes

Does the article have data and / or materials that could be made publicly available by the authors?: Yes

Please state any conflict(s) of interest that you have in relation to the review of this paper (state "none" if this is not applicable).: None.

Rating:

Interest: 1. Excellent

Quality: 2. Good

Originality: 1. Excellent

Overall: 2. Good

Authors' Responses

29-Ago-2021

Dear editor,

Prof. Dr. Marcelo Bispo,

We appreciate the opportunity to review again our article submitted to RAC - Revista de Administração Contemporânea and the constructive comments of the reviewers, which, we believe, gave us the possibility to make improvements in the work.

Although the overall review indicated "minor revision" several changes were made due to reviewers' requests. Hence, hypotheses were excluded, and new estimations were performed. Additionally, paragraphs, references and tables were included (or excluded) according to indications, suggestions and demands. We proceeded to respond to the comments of the reviewers in all aspects.

We are sending three files: The first contains the comments and actions taken, considering the suggestions and recommendations of the reviewers, and which is in the sequence of this file. The second contains the original article with revision marks. The third contains the modified article without revision marks.

We renew our gratitude for the opportunity to continue the evaluation process.

Academic greetings,

The author

Reviewer: 1

Recommendation: Minor Revision

Comments:

The authors have made significant improvements in the paper, however, some important problems regarding the estimation methods remain.

Answer/Action: Indeed, estimation approach is an issue, and several actions were taken in order to reduce eventual bias in estimation and/or make them clearer in the paper. It seems that the topic was now better addressed.

First, using firm fixed effects does account for the country and industry differences, since a specific firm does not change its country and industry over the years. Therefore, when accounting for firms' fixed effects you automatically accounts for all firms' characteristics that are constant over time. Unless the authors specifically want to see the coefficient values for the country and industry dummies (which does not seem to be the case) there is no reason to use them instead of a full set of fixed effects. The phrase "While fixed effects provide controls for firm-specific time-invariant aspects, the estimations presented in this paper controls form several aspects related to the environment in which insurance companies are inserted, which are lost unaccounted for in the fixed effect analysis" is, therefore, mistaken.

Answer/Action: The reason of POLS presentation was the impossibility to reject the hypothesis that the observed and unobserved fixed effects, ui, are equal to zero could not be rejected (they are equal across units) on the basis of poolability F-test. The tests diagnostic statistics of poolability F-test, Hausman and Breusch and Pagan tests are presented and additional discussion on the estimation approach was included. A new section was created comparing estimation approaches.

The indicated phrase was really mistaken. The idea was that in the impossibility of fixed effect, the additional controls could reduce eventual bias. Now this aspect was made clearer in the paper.

Second, regarding the GMM estimations. The papers you cite to justify the use of OLS do not estimate dynamic models, that is, models in which the lagged y variable is among the explanatory variable. You only need to use GMM in models of the like $y \sim lag(y) + X + e$ (this is equivalent to a model of the form $lead(y) \sim y$). Agarwal et al (2015) study investor relations variables contemporaneously with financial analysts and other variables. Hui, Nelson, and Yeung (2016) evaluated earnings persistence but their models only include lagged earnings decomposed between other variables, in the form: $y \sim lag(x1) + lag(x2)$, onde $y = X1 + x2$. A model in this form does not suffer from the same problem as the model in the form $y \sim lag(y)$. The problem is with the autocorrelation coefficients. Chen (2013) estimates value relevance models, which also do not present autoregressive components. Lewellen and Resutek (2019) do not explain their estimation methods, but they use both types of model specifications.

Earnings persistence is measured by the earnings' autoregressive coefficient. The proper way to estimate it is via time series AR or VAR models. However, researchers often rely on panel data due to the lack of a long enough earnings time series. If using data in the panel format, estimating a pooling OLS model or a fixed-effect model yields biased estimations. Wooldridge (2010, p. 290) explains: In addition, $y_{i, t-1}$ and c_i are necessarily correlated (since at time t-1, $y_{i, t-1}$ is the left-hand-side variable). Not only must strict exogeneity fail in this model, but the exogeneity assumption required for pooled OLS estimation of model (10.18) is also violated. We will study estimation of such models in Chapter 11." Chapter 11 is when the author explains dynamic GMM models.

However, if you estimate a dynamic GMM model you get rid of the bias problem, but you get another problem: you no longer estimate earnings persistence. This happens because dynamic GMM uses first-difference to deal with fixed-effects so that you would be estimating the persistence of earnings' variation, which would be a different concept.

In short, I suggest you do the following: do not estimate the models in Equations (1) and (3), which are the ones in the format of $y \sim lag(y)$. Focus on the models of the type Earn $\sim$ CFO + Accruals, which do not violate the exogeneity assumption.

If you insist, show the estimation results for the $y \sim lag(y)$ model, but emphasize in the text that they are biased.

To illustrate the importance of my insistence on this topic, I estimated a simple earnings persistence model of the type Earn $\sim$ lag(Earn) + Size + lag(Earn)*Size using OLS, linear panel fixed effects with the within (demeaning) transformation and with the first-difference transformation, and then using the dynamic GMM model.

When using OLS, the autoregressive coefficient was 0.926 (significant at the 1% level). When using fixed effects with the within transformation the autoregressive coefficient dropped to 0.264 (significant at the 1% level). When using first difference panel estimation, the coefficient is no longer significant at any accepted level (-0.092) and the same occurs with panel GMM. This happens because these two

latter models are not estimating earnings persistence, since they first-differenced the data.

Answer/Action: Thank you for the comments, concern and careful explanations. As suggested, the estimations of Equations (1) and (3) were not estimated and excluded from the study. With this change, the two hypotheses associated to them were removed and the paper, now, focus on the decomposition of earnings persistence, as suggested.

In this case (decomposition of earnings persistence), the fixed effect was applied and the magnitudes, indeed, were reduced for both cash flows and accruals, however, the results, in terms of components comparison, are still consistent: cash flow is more persistent than accruals. More attention was given to that analysis, since, at the same time the exclusion reduced the number of analyses performed, it allowed a deeper assessment of the remaining hypothesis and empirical models.

In fact, to the best of authors' knowledge, there's no paper analysing earnings persistence by using GMM approach. In terms of magnitudes of OLS coefficients, as mentioned, the parameter estimated for the entire sample was 0.573 (significant at 1% level), which is in line with those (and even lower) in Frankel and Litov, 2009 (Journal of Accounting and Economics) of 0,652, in Dichev and Tang, 2009 (Journal of Accounting and Economics) of 1,41 and Clubb and Wu 2014 (Journal of Business Finance & Accounting) of 0.893 to 0.462, among others.

Besides these two main considerations about the estimation' methods, I only suggest stating in the regression tables that you included all the interaction terms but omitted them for the sake of space.

Answer/Action: Correction/inclusion was done.

Reviewer: 2

Recommendation: Minor Revision

Comments:

First, I would like to state that I appreciate the efforts you have made to address all the comments I have made in the previous evaluation round.

About the latest version of the paper, my comments are disclosed below:

Answer/Action: Thank you again for the new insightful comments. They provided additional reflections and contributions on the topics you mentioned and several adjust were provided.

(a) On lines 20 and 21, page 3, there is a direct citation that I recommend you transform into an indirect one. It does not appear to me that is strictly necessary to include that passage in a direct manner, and it reduces the reading flow quality.

Answer/Action: The direct citation at this point is motivated by the polemic statement in terms of lack of empirical evidence that "the perceived risk of holding insurance company securities was low and the perceived quality of insurance company assets was high". This seems to be true among market agents, but demand additional evidence. The direct citation is to reinforce that this is the view of the cited authors, and, thus, has a support in the literature.

(b) In the introduction, it is necessary to state which is the statistical technique you have used to analyze your data. The same comment is valid for the abstract description of the method used.

Answer/Action: The information was provided in the introduction and abstract as required.

(c) There is still room for improvement when stating the paper's contribution. Highlight what the paper has contributed to the academic literature on the field in a clearer manner.

Answer/Action: Adjusts were provided, now in the introduction we have the following implicit structure: (1) why accounting and market-reacting to accounting in insurance company are important; (2) which is the gap filled by the paper in the literature; (3) why the cross-country analysis is relevant; (4) why the control for and specific analysis for insurance sub-segments are important; (5) what are the main results documented in the paper; and (6) why the results are important to the literature and practitioners.

(d) First paragraph on item 2.1 (page 5) sounds like it is not in the right place in the literature review section. I suggest you review its location in the text (perhaps it would be better to place it in the method section).

Answer/Action: Agree. This paragraph was included in the introduction in order to justify the contribution and importance of cross-country analysis in the insurance market literature.

(e) It seems to me that the last paragraph of page 6 would be better if placed in the introduction. Also, include at the beginning of that paragraph conjunction to stress the opposing idea from the previous paragraph (such as "however").

Answer/Action: The adjust was done as suggested.

(f) Line 44, page 7 says that there are "(…) implications to managers, auditors, regulators, and investors". I suggest you be more specific about the implications (what are those?).

Answer/Action: An explanation was provided.

(g) When presenting H2, you present evidence from non-financial companies to develop your hypothesis. Nevertheless, I question if the operating nature of insurance companies follows the same rationale as non-financial ones. My main concern here is how the insurance provisions recognition will impact the persistence of accruals versus the persistence of net operating cash flows

In other words, it is important to acknowledge how the insurance companies realize technical provisions into cash, thinking about cash persistence. Otherwise, investors are correct when preferring to put more attention to accruals persistence than in operating cash persistence.

Answer/Action: Additional explanations were provided in this topic, including new aspects presented in the literature. Specifically, further considerations on fair value accounting and loss reserves were presented, including specific literature dealing with this subject.

(h) H3 has broad words; clearly that what does "specific earnings processes/patterns" mean. The same comment is valid to H5 and H6 (in this case, "companies' and market risk patterns").

Answer/Action: Analyses related to H3 were removed as required in the reviewing process. H5 and H6 (now H3 and H4 in the current version) were adjusted.

(i) Concerning the paragraph stated before H5, it sounds to me that its content is not aligned with the following hypothesis. I suggest you review it.

Answer/Action: An adjust was done in order to better explain and subsidise the hypothesis and the subject.

(j) Equation 2 is lacking the label (eq. 2)

Answer/Action: Corrected.

(k) On page 15, the second paragraph is too long. I suggest you review it and break it into two paragraphs, at least.

Answer/Action: Due to reviewer's requirement, the hypothesis was excluded and so this paragraph.

(l) It is not clear to me the reason why the authors have chosen to run a pooled OLS regression instead of a GLM fixed-effect model. I indicate to the authors to re-run the regressions in this manner and check if the results are robust to this change.

Answer/Action: The regressions were re-run under GLM framework. Results' interpretation did not change from OLS to GLM model, and this fact is also reported in the paper in a new table included in the 'limitations and additional tests'.

The reason of POLS presentation was the impossibility to reject the hypothesis that the observed and unobserved fixed effects, ui, are equal to zero could not be rejected (they are equal across units) on the basis of poolability F-test. The tests diagnostic statistics of poolability F-test, Hausman and Breusch and Pagan tests are presented and additional discussions on this estimation approach were included.

(m) As a minor adjustment, officially Hong Kong is not a country, but a Chinese territory.

Answer/Action: A note on this was provided.