

# Paper Submission and Peer Review

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# Now you have written your masterpiece! What's next?

Let  $\mathcal{IR}$  denote the set of all IR contracts. Then, in particular,  $\mathcal{IR} \neq \emptyset$  since it contains the status-quo, i.e., the no-risk-sharing contract consisting of no indemnification and no premium payments.

**Remark 2.1.** Note that by translation invariance of the risk measures  $\rho_i$ ,  $i \in \mathcal{N}$ , and  $\rho$ ,  $(\{I_i^*\}_{i=1}^n, \{\pi_i^*\}_{i=1}^n) \in \mathcal{IR}$  if and only if

$$\pi_i^* \leq \rho_i(X_i) - \rho_i(R_i^*(X_i)), \quad \forall i \in \mathcal{N}, \text{ and,} \quad (1)$$

$$\rho\left(\sum_{i=1}^n I_i^*(X_i)\right) \leq \sum_{i=1}^n \pi_i^*. \quad (2)$$

Let  $\mathcal{P} \subseteq \mathcal{IR}$  denote the set of all PO contracts, and let  $\mathcal{S}'$  be the set of all minimizers for the following sum-minimization problem:

$$\inf_{(\{I_i\}_{i=1}^n, \{\pi_i\}_{i=1}^n) \in \mathcal{IR}} \sum_{i=1}^n \rho_i(R_i(X_i) + \pi_i) + \rho\left(\sum_{i=1}^n (I_i(X_i) - \pi_i)\right).$$

**Theorem 2.1.** The following hold:

(i)  $\mathcal{P} = \mathcal{S}'$ .

(ii)  $(\{I_i^*\}_{i=1}^n, \{\pi_i^*\}_{i=1}^n) \in \mathcal{S}'$  if and only if

(a)  $\{I_i^*\}_{i=1}^n$  solves

$$\inf_{\{I_i\}_{i=1}^n \in \mathcal{I}^n} \sum_{i=1}^n \rho_i(R_i(X_i)) + \rho\left(\sum_{i=1}^n I_i(X_i)\right), \text{ and} \quad (3)$$

(b)  $(\{I_i^*\}_{i=1}^n, \{\pi_i^*\}_{i=1}^n)$  satisfies (1) and (2).

(iii) For any  $\{I_i^*\}_{i=1}^n \in \mathcal{I}^n$  that solves (3), there exist  $\{\pi_i^*\}_{i=1}^n \in \mathbb{R}^n$  such that  $(\{I_i^*\}_{i=1}^n, \{\pi_i^*\}_{i=1}^n)$  satisfies (1) and (2).

The first result of Theorem 2.1 shows that the set of all Pareto optima coincides with the set  $\mathcal{S}'$ , thereby extending Asimit and Boonen [3, Theorem 3.1] to the case of multiple policyholders. In addition, the second and third results of Theorem 2.1 suggest that for a contract to be PO, it is both necessary and sufficient that the collection of indemnities  $\{I_i^*\}_{i=1}^n \in \mathcal{I}^n$  be optimal for (3), regardless of the premium payments, and then the set of premia is chosen so that (1) and (2) hold. As alluded to in the proof of Theorem 2.1, the vector  $\{\pi_i^*\}_{i=1}^n \in \mathbb{R}^n$  given by

$$\pi_i^* = \rho_i(X_i) - \rho_i(R_i^*(X_i)), \quad \forall i \in \mathcal{N}, \quad (4)$$

That involves...

- Author(s)
  - Co-author(s)
  - Corresponding author
- Journal
  - Administration
  - Editorial board
  - Reviewer(s)
- Publisher
- Professional association (sometimes)

# Author(s)

- Targeting journals
  - Usually set when writing up the paper
  - Depends on area and nature of the paper
    - Read aims and scope (or equivalent) of journals
    - Regular or special issue of journals
  - Depends on standard of the paper
    - Diversify targets by top-tier, mid-tier, and back-up
  - Agreement among authors
- Be careful on predatory journals
  - unsolicited email invitation to submit
    - or to join their editorial board
  - journal name/scope too broad and fishy
    - Pioneer (???) Journal of Theoretical and Applied Statistics
  - promising very fast turnaround times
    - "submit now for publication in our April 2024 issue!"
  - submission fees or exorbitant publication fees
  - unknown or blacklisted publisher

- Corresponding author
  - Handles submission process
  - Reads guide for authors (or equivalent)
    - Page and/or limits, font size, line-spacing, margins, etc.
    - Free format submission?
  - Submits .pdf and/or source files (.tex, .bib, etc.)
  - Pays submission fee, if any,
    - to journal, publisher, or professional association
    - from funding
  - Liaises between authors and journal

- Administration checks whether the submitted paper follows guide for authors
  - Forwards it to editorial board, or
  - Sends it back to author(s) for revision to follow the format
- Editorial board typical hierarchical structure:
  - Editor(s)(-in-Chief)
  - Area/Department/Senior Editors (sometimes)
  - Associate Editors

## Journal: Editorial board (Cont.)

- Editor(s)(IC)
  - checks whether area and nature of the submitted paper matches aims and scope of the journal
    - Forwards it to one of the Area/Department/Senior Editors or Associate Editors, whose expertise best matches to the topic of the submitted paper, or
    - Desk rejects
  - is the ultimate decision-maker but mainly based on Editors' and/or reviewers' recommendations
    - Acceptance
    - Provisional acceptance and resubmit (sometimes)
    - Minor revision and resubmit
    - Major revision and resubmit
    - Rejection but invite to resubmit (sometimes)
    - Rejection

## Journal: Editorial board (Cont.)

- Area/Department/Senior Editors or Associate Editors
  - could be another check to ensure that the topic of the submitted paper is in line with the interests of the journal
    - Recommends and/or invites reviewers for **peer review**, or
    - Recommends desk rejection
  - collect and read review report(s)
  - summarize and make recommendation to Editor(s)(IC)
  - if necessary, could be another reviewer themselves



# Lessons learned as author I

- Carefully check guide for authors to minimize the back-and-forth time with administration
- Really understand aims and scope of a journal
  - Read aims and scope statement
  - Check published papers
  - Find out expertise of Area/Department/Senior Editors or Associate Editors
- Strategically target journals
  - Don't aim too high or too low
- Strategic references
  - Any published papers in the journal relevant to the topic
  - Be exhaustive but also selective to maximize the probability of passing **peer review**

## Peer review: As reviewer

- Receives email invitation to review from editorial board
  - Title and abstract
  - Author(s) (some journals)
  - Full paper (some journals)
  - Time frame
- Single-blind versus double-blind
  - Both cases: Author(s) does not know who the reviewer(s) is
  - Single-blind: The reviewer knows who the author(s) is; any conflict of interest?
  - Double-blind: The reviewer does not know who the author(s) is
- Time frame varies among journals
  - one week, one month, six weeks, two/three months, etc.
- Mostly volunteer; few journals pay
- Either agree or decline to review
  - Agree: given full paper and review report submission link
  - Decline: suggest suitable alternative reviewer(s)

## Peer review: As reviewer (Cont.)

If agree...

- uphold academic integrity to provide unbiased, timely, faultless, and rigorous judgement and recommendation
- Unbiasedness: particularly relevant to single-blind review; set aside personal entanglement (good/bad) with the author(s)
- Timeliness: finish within time frame; let Editors know if more time is needed with legitimate reasons
- No fault: error free
- Author(s) does not know who the reviewer(s) is, but...
  - Editors *does know* who the reviewer(s) is
  - Don't ruin reputation

# Peer review: As reviewer (Cont.)

## Rigorousness. How?

- Read abstract, introduction, and conclusions first
  - Big picture and first impression
  - Initial sense of recommendation: accept or reject
- Then line-by-line reading round 1
  - Main research question? Relevant and interesting?
  - Originality? Contribution to literature?
  - Paper well-written? Clear and easy to follow?
  - Any gaps and/or flaws in proofs?
  - Any exaggerating claims? Any (self-)plagiarism?
  - Stronger sense of recommendation: accept, revisable, or reject
- Final line-by-line reading round 2, if not being rejected
  - Revisit questions above. Same judgements?
  - If revisable or reject,
    - list out major and minor criticisms with reasoning,
    - and most importantly, provide constructive suggestions to help improve

# Peer review: As reviewer (Cont.)

## Review report...

- Recommendation
  - Acceptance
  - Minor revision and resubmit
  - Major revision and resubmit
  - Rejection but invite to resubmit (sometimes)
  - Rejection
- Comments to author(s)
  - Cannot directly or indirectly reveal identity
  - Max. 3 parts
    - Summary: research question(s), contribution(s), and positive point(s)
    - Major comments: bullet points; detailed reasons and constructive suggestions
    - Minor comments: bullet points; some grammatical mistakes, scattered typos, figure coloring, table formatting, etc.
- Confidential comments to Editors

# Peer review: As reviewer (Cont.)

This paper studies an insurance demand problem when the objective includes both the EUT and the gambling components which is defined in (2.3). The gambling component is assumed to be S-shaped which is defined in (2.4) and is in line with the famous cumulative prospect theory. This paper contains two parts of results. First, with assuming that the insurance contract is given by coinsurance, the authors provide sufficient condition for underinsurance and overinsurance respectively. Second, considering general insurance contracts lying in the set (2.1), the authors solve the optimal insurance problem which leads to a deductible for the loss region.

In my opinion, the direction is novel and is suitable for IME audience. However, I do have the following comments/suggestions which I hope the authors could address.

1. The two parts of the results in this paper are quite detached. While the authors discussed the underinsurance and overinsurance issues in the abstract, introduction, and conclusion when selling this paper, they are in fact conclusions ONLY when the coinsurance is provided. This could be misleading for readers who might not read the details of the paper. I think the authors should make them clear throughout the paper that the conclusions apply WHEN the coinsurance is considered. Moreover, in order to make the two parts of the results to be more coherent, could the authors derive similar conclusions AFTER the optimal insurance contract is solved in Proposition 5? If this can be achieved, the impact of the paper will be far more than the current one.
2. More comments on the inequality conditions in Proposition 1 and 2 should be given. I understand the authors interpreted large or small  $\lambda$ , but how about the two thresholds? What do they represent? Why the  $\lambda$  measure should be comparing with the ratios? And, do the two inequality conditions in Proposition 1 and 2 mutually exclusive, which should be the case and otherwise Proposition 1 and 2 contradict?
3. Put the example on page 12 and 13 in example environment.
4. The authors did not interpret much the gain region's indemnity. What are those equations right after (4.8) and (4.9)? Detailed elaborations should be given.
5. Related to point 4 above, a numerical example should also be given to Proposition 5 like other results in this paper. This example might be helpful for readers to better understand the equations right after (4.8) and (4.9).
6. Put the example on page 18 in example environment.

# Peer review: As reviewer (Cont.)

This paper solves for robust optimal consumption, investment, futures, and insurance strategies of a firm, which faces model ambiguity on the probability measure, and thus the Brownian motion for the capital depreciation shock. In Section 2, this paper formulates the robust optimal control problem step-by-step. In Section 3, the author states the standard HJB equation of the problem; together with several FOCs and applying the ansatz, the author states Proposition 1 without a detailed proof. The author did not further study the ODE or other properties of the controls from Proposition 1; instead, in Section 4, this paper only studies the problem numerically but by doing so provides a few insights.

While the problem would be interesting to insurance audiences, the current version of the manuscript should not be considered for publishing in IME with the following reasons.

1. There are quite a lot of typos and notational inconsistencies throughout Section 2 which interrupt the reader to follow the problem formulation closely. Just for example, in (3), it should be  $s(i)$  instead of  $g(i)$ , which is a very obvious mistake that the author should have spotted before submission; in (7), there should be a time index for  $K$  as well. Moreover, in Section 2, the author only verbally states which are the control variables on page 8 without stating them mathematically and clearly, let alone precisely defining the value function which shall be used in Section 3. The authors should fundamentally revise and proofread the problem formulation, if not the whole paper for typos, in any future submissions. Otherwise, any readers would have to define certain mathematical objects themselves as well as paste the puzzles together to fully understand the paper.
2. There has not been enough mathematical advancement in Section 3. In particular, applying HJB equation to solve an optimal control problem is a very standard technique. What bothers me most is that the max arguments and the min argument in the HJB Equation (16) are only related via the futures strategy term which is linear to the measure generator. Therefore, it is not surprising at all that the author was able to apply two-step FOCs and guessed a standard ansatz. If the author wants to deepen the depth of this paper, more theoretical properties or results should be derived from Proposition 1.
3. In line with the second comment above, this paper in fact only solves the problem numerically in Section 4. To me, this is definitely not enough to have the paper being published in IME, regardless of how much insights could be drawn from the numerical results, provided that the optimal control problem itself is not fully invented by the author.
4. Finally, I think the wordings used in this paper are not proper at some points. For example, I believe the title of this paper is quite misleading; there are actually four control variables there; also, are persistent shocks and limited commitment highlighted features of this paper? This paper also mentions the so-called key-man risk in the abstract and at the beginning of introduction, but did not mention it again throughout the whole paper; is that only to motivate the model ambiguity setting?



## Lessons learned as author II

- Put author(s) in reviewer's shoes
- Set aside preconceptions on the paper
- Walk through the reviewer's task
  - Read abstract, introduction, and conclusions first
  - Then line-by-line reading round 1
  - Final line-by-line reading round 2
- Any unclear statements? Any flaws? Any improvements?



## Peer review: As author

After (usually) long waiting...

- Editor(s)(IC) emails decision together with review report(s) and Area/Department/Senior Editor or Associate Editor comments, if any
- Unless acceptance, read comments carefully, even if being rejected
- If resubmit,
  - revise the paper based on relevant suggestions, and highlight the changes
  - prepare a point-to-point response letter to each reviewer and to Editors
    - Repeat each criticism and suggestion, if any
    - Response on
      - (a) what have been changed (detailed pointer) and why agree, or
      - (b) why the suggestion is not incorporated (i.e., why disagree)
- If being rejected, any useful revision suggestions? Then prepare to submit to the next targeted journal

# Summary and Big Picture

Questions?