Referee’s report: Pricing compound and extendible options under mixed fractional Brownian motion with jumps

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The paper submitted to *Axioms* studies the compound and extendible option pricing when the underlying asset follows a mixed fractional Brownian motion with jumps. A closed-form formula is derived. Numerical studies are also provided. The paper is overall well-written. I have following minor comments.

- In Equation (2.3), $J(n)^{N(t)}$ is weird. I think perhaps it should be $J(N(t))$. When you define $J(n) = \prod_{j=1}^{n} J_j$, it is for every $n \in \mathbb{N} \cup \{0\}$, does not need to have $n$ Poisson distributed. Then $J(N(t))$ gives exactly what you want.

- After Equation (2.2.), you do not need the space before “where $\mu, \sigma, \lambda$ are constant”.

- After the first equation on page 4, add “where” before $\lambda' = \lambda(1 + k)$.

- Top of page 5, “use the Poisson probabilities”, you need to rewrite this sentence. It doesn’t read good mathematically.

- Before (3.3), “Evaluation the first expectation” should be “Evaluating the first expectation”.

- Before (3.4), “can be evaluate to give” should be “can be evaluated to give”.

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