Dear Dr. Clauset,

Please find attached our revised manuscript "Non-equilibrium evolution of volatility in origination and extinction explains fat-tailed fluctuations in Phanerozoic biodiversity" that we wish to re-submit as a Research Article to *Science Advances*.

We thank you and the reviewers very much for greatly helping to improve this manuscript. In our response to reviewers we have detailed these improvements. In case of any questions, please feel free to contact me as the corresponding author (contact information in the signature) or either of the co-authors:

Dr. Pablo Marquet pmarquet@bio.puc.cl + 56 2 686 2639

Dr. Miguel Fuentes fuentesmig@gmail.com +56 9 981 42646

Thank you for your continued interest in our work and for your time in this review process.

Sincerely,

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