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Goodness-of-fit tests for compound distributions with applications in insurance

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Goodness of fit procedures are provided to test for specified compound models for the total claims, as well as for the constituent components namely the claim frequency distribution, as well as distribution of individual claims. This is done without the need for observations on these two component variables. Goodness-of-fit tests that utilize the Laplace transform as well as classical tools based on the distribution function, are proposed and compared. These methods are validated by extensive simulations and then applied to a real data example.

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