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Scale-Free Tails in Colombian Financial Indexes: A Primer

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A maximum likelihood method for estimating the power-law exponent verifies that the positive and negative tails of the Colombian stock market index (IGBC) and the Colombian peso exchange rate (TRM) approximate a scale-free distribution, whereas none of the heavy tails of a local sovereign securities index (IDXTES) are a plausible case for such distribution. Results also (i) support critiques regarding the flaws of ordinary least squares estimation methods for scale-free distributions; (ii) question the validity of Zipf's law; (iii) suggest that IGBC and TRM display the scale-free nature documented as a stylized fact of financial returns, and that they may be following a gradually truncated Lévy flight; and (iv) suggest that local financial markets are self-organized systems.

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