Empirical evidence of financial statement manipulation in going concern and bankrupted companies

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Empirical evidence of financial statement manipulation in going concern and bankrupted companies

AGENDA

1. Aim of the research
2. Main references
3. Sample and Research Method
4. Expected findings, limitations
This study aims to use archival data to discover whether and to what extent Benford’s Law performance is a leading indicator of financial distress (i.e., insolvency or bankruptcy).

- Italian unlisted companies (no IAS/IFRS)
- Analysis of all available financial statement items (BS and IS)
- Empirical evidence of financial statement manipulation in going concern and bankrupted companies
② Main References


Empirical evidence of financial statement manipulation in going concern and bankrupted companies
② Main References


Benford Law application on bankrupt entities

Only one available study on Municipalities (PhD thesis)

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I added this one because it is the reference for the FSD (mentioned later)

Bradley Barney; 09/07/2019
### 3. Sample and research method

#### Sample of companies:

- unlisted
- going concern (active) vs insolvent vs bankrupt
- Italian companies

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1,377,284 companies
③ Sample and research method

Bankrupt and insolvent companies

Legal status:

- **Insolvent companies**
  - Active (default of payment)
  - State of insolvency
  - Active (receivership)
  - Composition with creditors

- **Bankrupt companies**
  - Bankruptcy
  - Controlled administration
  - Compulsory administrative liquidation
  - Post-bankruptcy composition with creditors

111,359 companies

5 years of financial statements

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Sample and research method

- Company-year level Benford’s Law conformance metrics:
  - Mean absolute deviation (MAD) for first digit
  - Excess MAD for first two digits
  - Financial statement divergence (FSD) score

- Match bankrupted/insolvent-going concern companies
  - Available financial statements for same five fiscal years
    - Control for time-varying economic fluctuations, regulatory changes, etc.
  - Same or similar industry
  - Similar number of employees

- Analyses:
  - Test for significant differences in first year (of the five), second year, etc.
  - Determine lead time at which differences are manifest
  - Characterize conformance trajectories over time
  - Create multivariable logistic regression model for predicting future status
Expected findings and limitations

Research Hypothesis 1:
- The Benford’s law conformity of the financial statement numbers of insolvent or bankrupt companies differs from the conformity of active companies.

Research Hypothesis 2:
- The Benford’s law conformity of the financial statement numbers of bankrupt companies differs from the conformity of insolvent companies.

Limitations:
- Pre-distress financial statement data is missing for some companies;
- Difficulty to make a deeper analysis of insolvent companies that were later reclassified as going concern.

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