Debt and Margins

The effect of debt on profit margins for S&P 500 companies

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Background and definitions

- This short presentation explores the relationship between debt to equity (D/E) and profit margins of publicly traded companies
- The analysis is limited to companies that belong to the Standard & Poor's 500 index.These are among the largest companies in North America
- The presentation only covers the exploratory part of the data
- An accompanying shiny web app gives further details into the data
- The initial data was downloaded from www.FinViz.com and serves to support this assignment only

Description of the analysis

- Covers companies that are members of the S & P 500 index (500 companies)
- Companies with incomplete information were excluded, resulting in 397 companies
- We explore the relationship of debt to net margins by sector
- To normalize the debt of companies the debt to equity ratio is used (ltdeb) instead of the dollar value of debt
- To avoid outliers, in the graphs we have limited company's D/E ratios to 200% or lower

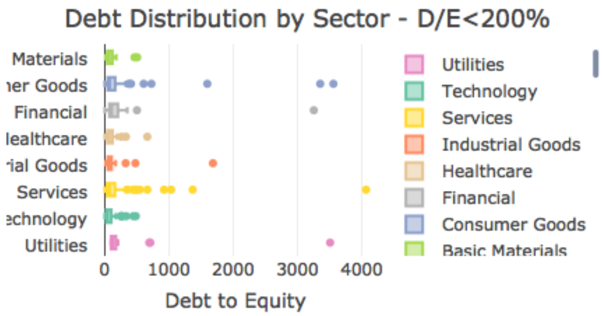
Definitions:

- Mkt capitalization: refers to the total dollar market value of the company's outstanding shares (mktcap)
- Debt to equity ratio: refers to the relative proportion of shareholders' equity to debt(ltdeb)
- Net Profit Margin: net proft divided by sales(pm)

Data Summary

SECTOR	NUMBEROFSTOCKS	MEDIAN_MKTCAP	MEDIAN_DEBT	MEDIAN_GM	MEDIAN_OM	MEDIAN_PM
Technology	63	19.28716	46.0	58.9	17.90	12.80
Industrial Goods	41	17.76298	66.0	30.7	12.60	8.70
Basic Materials	44	21.32035	70.0	36.1	5.25	1.80
Healthcare	41	25.67166	74.0	64.9	16.30	12.00
Consumer Goods	63	18.50646	77.0	38.9	12.50	8.20
Services	87	16.00509	78.0	37.3	11.70	7.20
Financial	38	16.49506	108.5	69.0	24.75	19.25
Utilities	22	20.17010	123.5	71.4	19.45	9.55

Distribution of debt by sector



Initial Observations:

1. There is variability in levels of debt by sector. Basic Materials and Financials are among the sectors with the highest median Debt to Equity levels
2. This variability in debt levels does not seem to have a clear corresponding relationship with profit margins. For the most part profit margins follow a horizontal band, independent of the levels of debt
3. We conclude that debt, by itself, does not have a material impact in profit margins.