Stat 107 Final Project

Project title: Magic Formula Investing: Statistical Analysis

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Project idea: Magic Formula

Joel Greenblatt, the founder of Gotham Capital Hedge Fund and a professor at Columbia's Business School, introduced his "Magic Formula" for investing, in his popular 2005 book, *The Little Book that Beats the Market*. The fundamental idea of the Magic Formula is that companies generating superior return on capital and earnings yield will result in superior investment performance. The Magic Formula relies on two key company metrics to assess company performance:

1. Return on Capital: EBIT / (NFA + NWC) where NFA is calculated as net depreciated cost of PP&E
2. Earnings Yield: EBIT / EV where EV is calculated as a company's market capitalization (including common and preferred equity) plus net interest-bearing debt.

Greenblatt restricts his investment universe to non-financial, non-utility stocks, as stocks in these industries tend to not employ conventional EBIT metrics to report financials. Additionally, he restricts his investment universe to stocks with market capitalizations of greater than $50 MM.

With these guidelines in mind, we would like to simulate portfolio performance using the previous metrics as a ranking mechanism.

The goals of this project are to:

1. Implement the Magic Formula in R
2. Simulate past literature / articles - backtesting
3. Assess the efficacy and effectiveness of the magic formula based on our results

Intro Reference: Use This 'Magic Formula' to Beat the Market Investing

For more information on the Magic Formula, reference:
Screener strategies & performance

Papers to read: Include titles and sources for information.

Magic Formula Stock Screening: https://www.magicformulainvesting.com/

GitHub: git@github.com:ziziberry/Stat107MagicFormula.git

References:
Book: The Little Book That Beats the Market
[Quantitative Value, + Web Site: A Practitioner's Guide to Automating Intelligent Investment and Eliminating Behavioral Errors](Quantitative Value)
[The Manual of Ideas: The Proven Framework for Finding the Best Value Investments](The Manual of Ideas)
Articles:
Does the Magic Formula Really Work?
- good walk through of implementing magic formula
Joel Greenblatt's Forgotten Original Magic Formula
http://www.quant-investing.com/strategies/magic-formula-pi-6m
http://basehitinvesting.com/some-thoughts-on-joel-greenblatts-magic-formula-and-its-ytd-results/
http://www.forbes.com/sites/moneybuilder/2013/07/16/why-you-should-joel-greenblatts-magic-formula-stocks-seriously/
Literature:
- http://www.scribd.com/doc/141257795/Magic-Formula-White-Paper
- http://www.aaii.com/journal/article/the-magic-formula-approach-to-stockpicking