

What is S&P 500 index?

- an overview of the most followed equity index

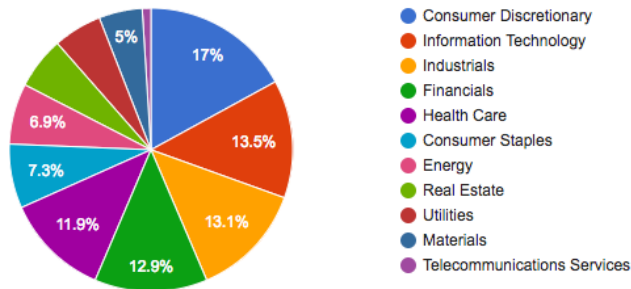
Overview

- Who is the audience
 - People who have limited knowledge in finance
- Why do I care?
 - one of the most commonly followed and cited equity indices, and many considered it a bellwether or the U.S. economy
 - it is a reflection of the composition of the economy (It's old but its components change over time)
 - Boring?? but most hedge funds in the last few years cannot beat the benchmark index (passive investment vs active investment)
- What's S&P
 - an American stock market index
 - based on the market capitalizations of 500 large companies having common stock listed on the NYSE or NASDAQ.
 - it's market-weighted
 - S&P 500 was founded in 1957, and it gave rise to indexing
 - 500 stocks but it comprised of 80% of the market

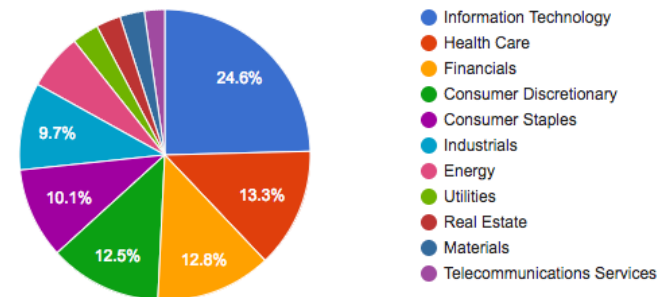


What's in the index

Number of Company by Sector



Market Capitalization by Sector



- SP500 is very diverse - has 11 major sectors
- Consumer Discretionary is the most popular sector
- Information Technology is the biggest sector by market capitalization.
 - the top 3 sectors in the index (Information Technology, Health Care and Financials) comprised of more than 50% of the index

Overview

What's in the index

Market Capitalization by Sector

Fundamental Ratio by Sector

52 Weeks High, Price Range, and Company Size

What's Next

Market Capitalization by Sector



- company's market capitalization is not normally distributed (even after log transformation)
- Movement of big companies has a greater impact on the index
- Example of outliers:
 - Information Technology (Apple, Alphabet, Microsoft, Facebook)
 - Consumer Discretionary (Amazon)
 - Energy (Exxon Mobil)
 - Health Care (Johnson & Johnson)
 - Financial (JP Morgan, Wells Fargo, Bank of America)

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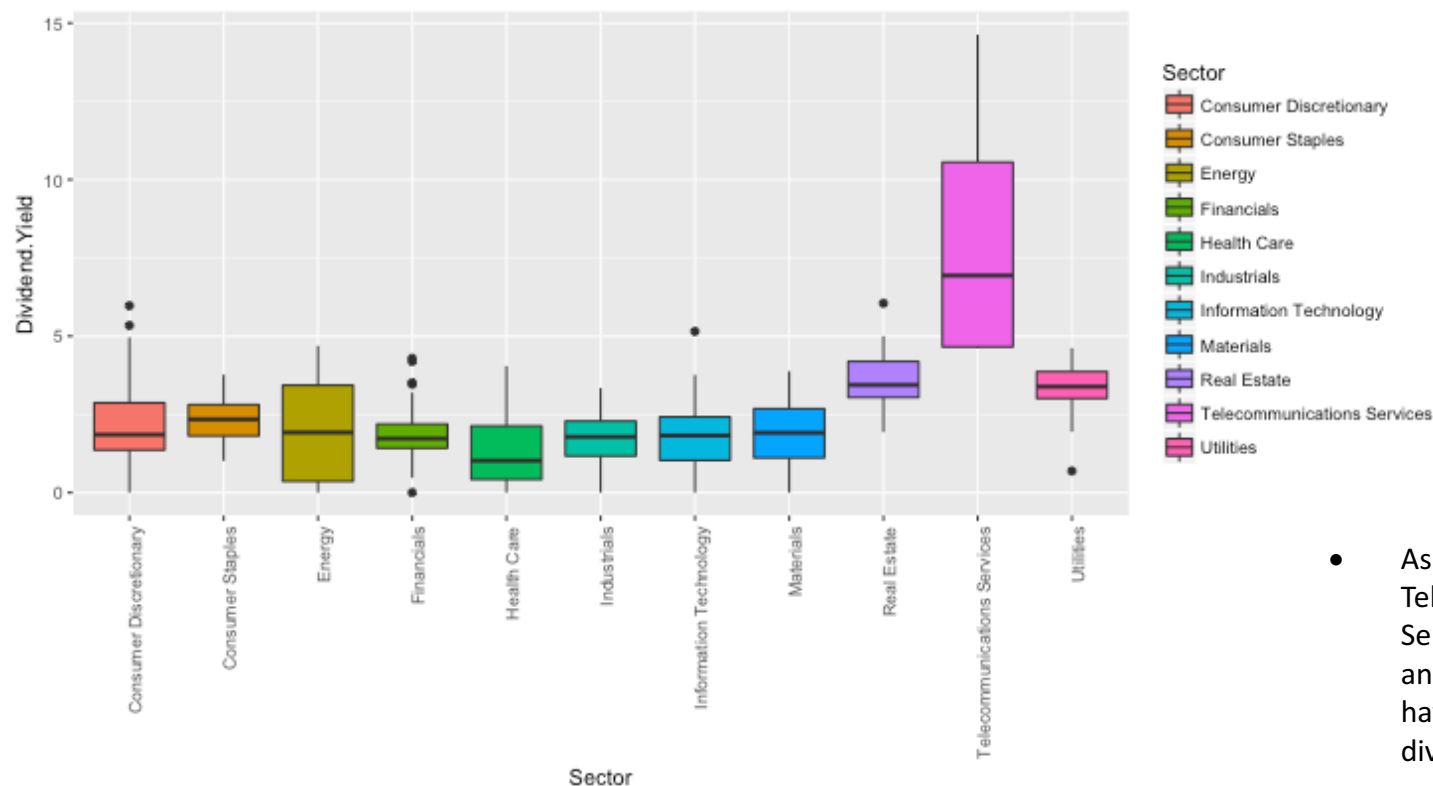
Market Capitalization by Sector

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What's Next

Fundamental Ratio by Sector (I) (Dividend Yield)



- As expected, Telecommunication Services, Utilities and Real Estate have the higher dividend yield

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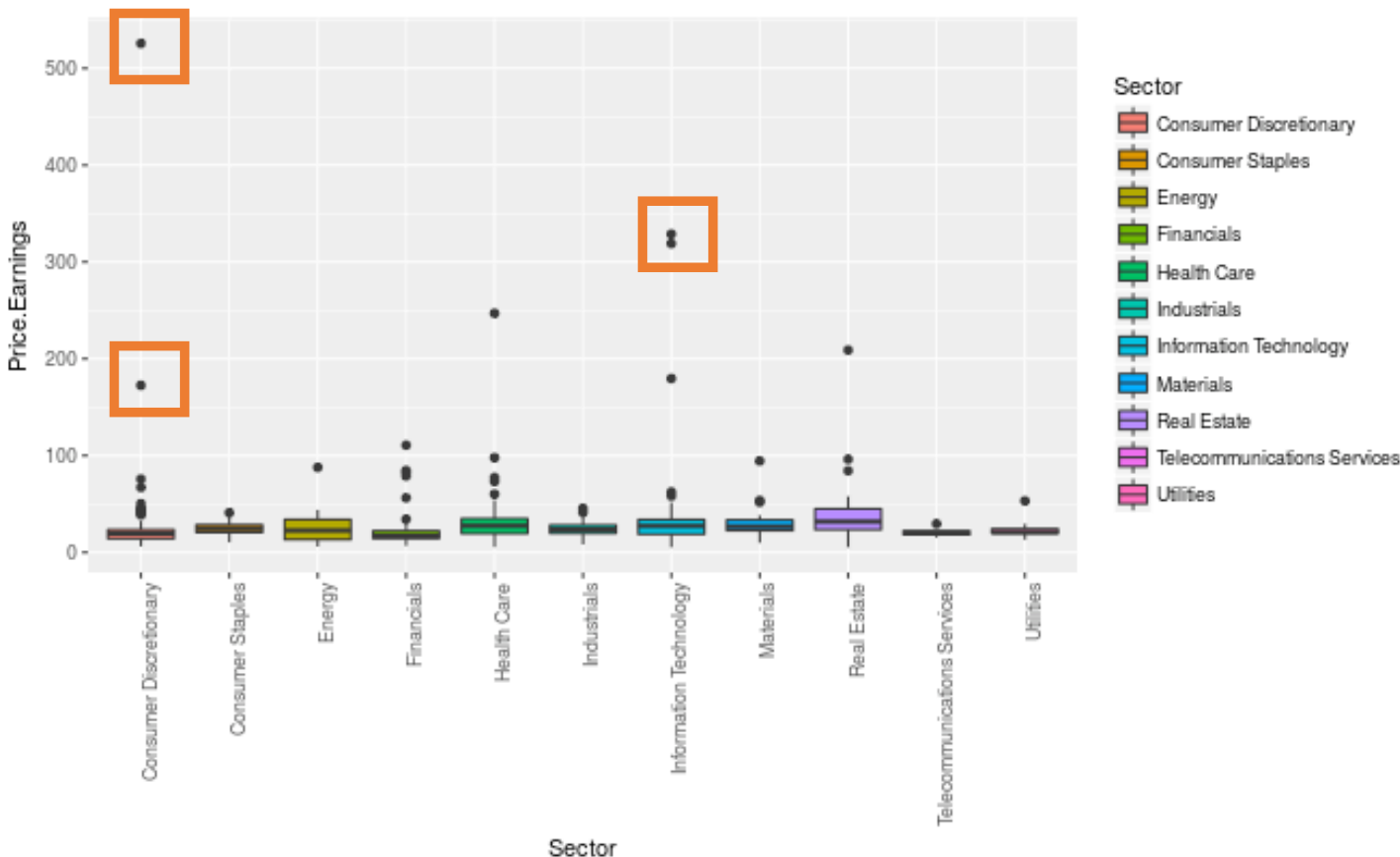
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What's Next

Fundamental Ratio by Sector (II) (Price per Earning)



- High P/E = expensive stock?
(investors overpaid per earning dollar?)
- High P/E = hot stock?
(investors are willing to overpay per current earning dollars for its growth potential)
- Examples:
Consumer Discretionary:
Chipotle (P/E @525)
Amazon (P/E @ 173)

Information Technology
Netflix (P/E @ 329)

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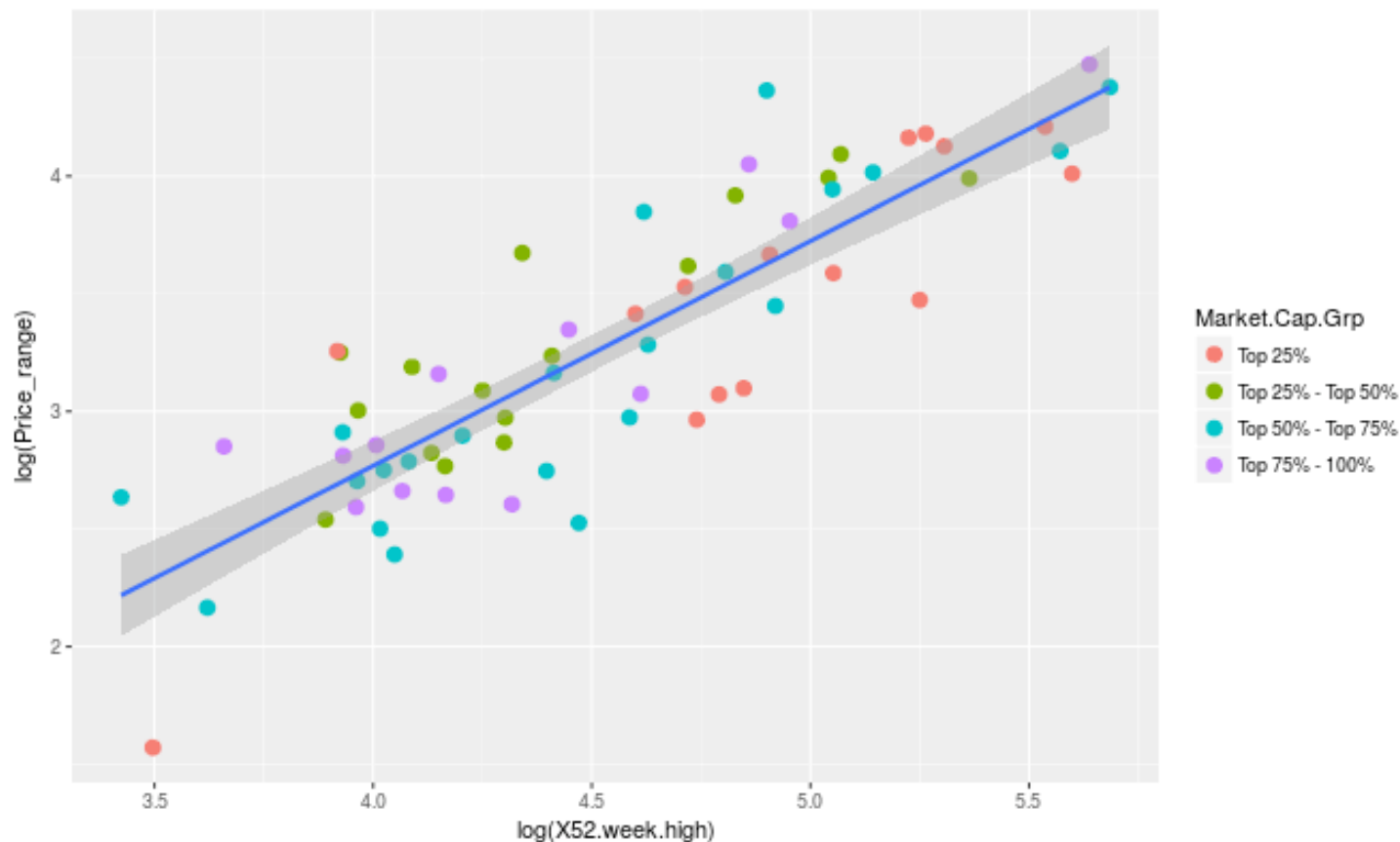
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What's Next

52 Weeks High, Price Range & Company Size



- Linear Relationship between 52 weeks high and Price Range (consistent among all industries)
- big companies have high stock price
- Price clusters in different industries is not so obvious

Overview

What's in the index

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What's Next

What's Next?

- Summary
 - S&P500 has a diverse sector distribution
 - Dynamic nature of the index, it reflect the current state of the economy
 - Some statistics reflects “hotness” factor? and it is relevant to us!!!
- How can I improve this project?
 - Improve graph (more interactive)
 - Incorporate time dimension
- Any Questions and comments?

