MONASH BUSINESS SCHOOL

Expert advice from experts

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Nobel Prize, PhD

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Report for
Acme Corporation

24 September 2020

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147 variables with 102 having the missing value

```
##                             Name        Symbol      Market
##   3M Company              : 1   1COV.DE: 1    DJI  :22
##   Activision Blizzard, Inc.: 1   AAPL   : 1    FTSE : 0
##   adidas AG               : 1   ADS.DE : 1    GDAXI: 7
##   Allianz SE              : 1   ALV.DE : 1    HSI  : 0
##   Amgen Inc.              : 1   AMAT   : 1    NDX  :16
##   Apple Inc.              : 1   AMGN   : 1
##   (Other)                 :39   (Other):39
##                                     Sector                     Industry
##   Drug Manufacturers--General       : 5   Technology            :12
##   Semiconductors                    : 4   Healthcare            : 9
##   Information Technology Services   : 3   Consumer Defensive    : 5
##   Auto Manufacturers                : 2   Communication Services: 4
##   Discount Stores                   : 2   Consumer Cyclical     : 4
##   Farm & Heavy Construction Machinery: 2   Industrials           : 4
##   (Other)                           :27   (Other)               : 7
##    intra_day           ent_value          trail_pe         for_pe
##  Min.   :      6.4  Min.   :      7.8  Min.   : 7.54  Min.   : 3.59
##  1st Qu.:     36.3  1st Qu.:     59.3  1st Qu.: 17.26  1st Qu.:14.62
##  Median :     79.6  Median :    122.4  Median : 24.74  Median :18.54
##  Mean   : 71455.7  Mean   : 70367.6  Mean   : 46.22  Mean   :21.90
##  3rd Qu.:    204.8  3rd Qu.:    241.0  3rd Qu.: 41.50  3rd Qu.:25.85
##  Max.   :1670000.0  Max.   :1670000.0  Max.   :769.92  Max.   :98.25
##
##      peg             ttm             mrq             rev
##  Min.   :-27.96  Min.   : 0.25  Min.   : 0.620  Min.   : 0.560
##  1st Qu.:  1.34  1st Qu.: 1.17  1st Qu.: 2.490  1st Qu.: 1.420
##  Median :  2.39  Median : 3.08  Median : 5.320  Median : 3.670
##  Mean   : 19.23  Mean   : 4.40  Mean   : 7.352  Mean   : 4.779
##  3rd Qu.:  4.19  3rd Qu.: 5.94  3rd Qu.:11.710  3rd Qu.: 6.940
##  Max.   :713.67  Max.   :18.62  Max.   :28.070  Max.   :17.570
##
```

```
##       ebitda          tot_risk        envir_risk       social_risk
##   Min.   : 5.69    Min.   :11.00   Min.   : 0.000   Min.   : 3.00
##   1st Qu.:11.48    1st Qu.:17.00   1st Qu.: 1.000   1st Qu.: 7.00
##   Median :14.68    Median :20.00   Median : 2.000   Median :10.00
##   Mean   :18.52    Mean   :22.78   Mean   : 4.333   Mean   :10.76
##   3rd Qu.:21.38    3rd Qu.:27.00   3rd Qu.: 7.000   3rd Qu.:14.00
##   Max.   :83.52    Max.   :40.00   Max.   :18.000   Max.   :25.00
##
##     gover_risk
##   Min.   : 4.0
##   1st Qu.: 6.0
##   Median : 7.0
##   Mean   : 7.6
##   3rd Qu.: 9.0
##   Max.   :12.0
##
```

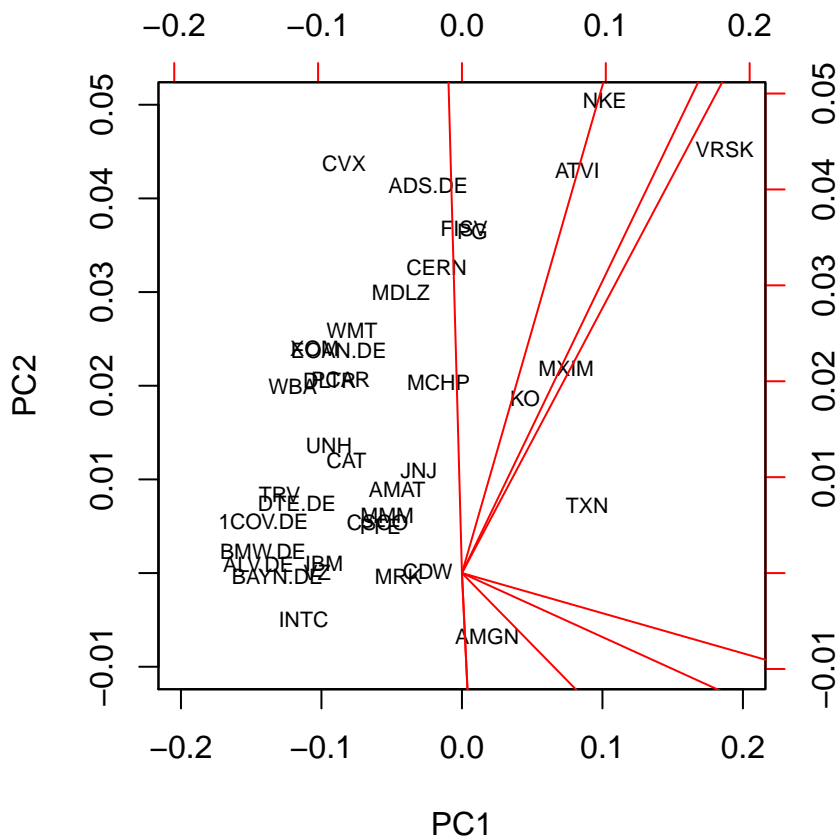## 0.1 Description of the variables related to the value of stocks:

- Market capitalization refers to how much a company is worth as determined by the stock market. It is defined as the total market value of all outstanding shares. To calculate a company's market cap, multiply the number of outstanding shares by the current market value of one share. Companies are typically divided according to market capitalization: large-cap ($10 billion or more), mid-cap ($2 billion to $10 billion), and small-cap ($300 million to $2 billion). Enterprise value includes in its calculation the market capitalization of a company but also short-term and long-term debt as well as any cash on the company's balance sheet. Enterprise value is used as the basis for many financial ratios that measure the performance of a company.

- Enterprise value (EV) is a measure of a company's total value, often used as a more comprehensive alternative to equity market capitalization.

- Trailing P/E is calculated by dividing the current market value, or share price, by the earnings per share over the previous 12 months.

- The forward P/E ratio estimates a company's likely earnings per share for the next 12 months.

- The PEG ratio enhances the P/E ratio by adding in expected earnings growth into the calculation. The PEG ratio is considered to be an indicator of a stock's true value, and similar to the P/E ratio, a *lower PEG may indicate that a stock is undervalued*.

- The P/S ratio is a key analysis and valuation tool that shows *how much investors are willing to pay per dollar of sales for a stock.* The P/S ratio is typically calculated by dividing the stock price by the underlying company's sales per share.A low ratio could imply the stock is undervalued while a ratio that is higher-than-average could indicate that the stock is overvalued.

- The P/B ratio measures the market's valuation of a company relative to its book value.*The market value of equity is typically higher than the book value of a company.* P/B ratio is used by value investors to identify potential investments. P/B ratios under 1 are typically considered solid investments.

- The enterprise value-to-revenue (EV/R) multiple helps compares a company's revenues to its enterprise value. *The lower the better, in that, a lower EV/R multiple signals a company is undervalued.*

- The enterprise value to earnings before interest, taxes, depreciation, and amortization ratio (EV/EBITDA) compares the value of a company—debt included—to the company's cash earnings less non-cash expenses. The EV/EBITDA metric is a popular valuation tool that helps investors compare companies in order to make an investment decision. EV calculates a company's total value or assessed worth, while EBITDA measures a company's overall financial performance and profitability. Typically, when evaluating a company, *an EV/EBITDA value below 10 is seen as healthy*. It's best to use the EV/EBITDA metric when comparing companies within the same industry or sector.

0.1.1 Considering outliers

- outliers in `intra_day` and `ent_value`: MSFT & AAPL
- outliers in `trail_pe`: TSLA
- outliers in `for_pe`: ILMN & TSLA
- outliers in `peg`: DIS, VZ, KO, MMM, CVX, PCAR, CAT, XOM
- outliers in `ttm`: ILMN, V
- outliers in `mrq`: TSLA
- outliers in `rev`: ILMN, V
- outliers in `ebitda`: INTU, ILMN, TSLA, NKE

0.2 Value Analysis
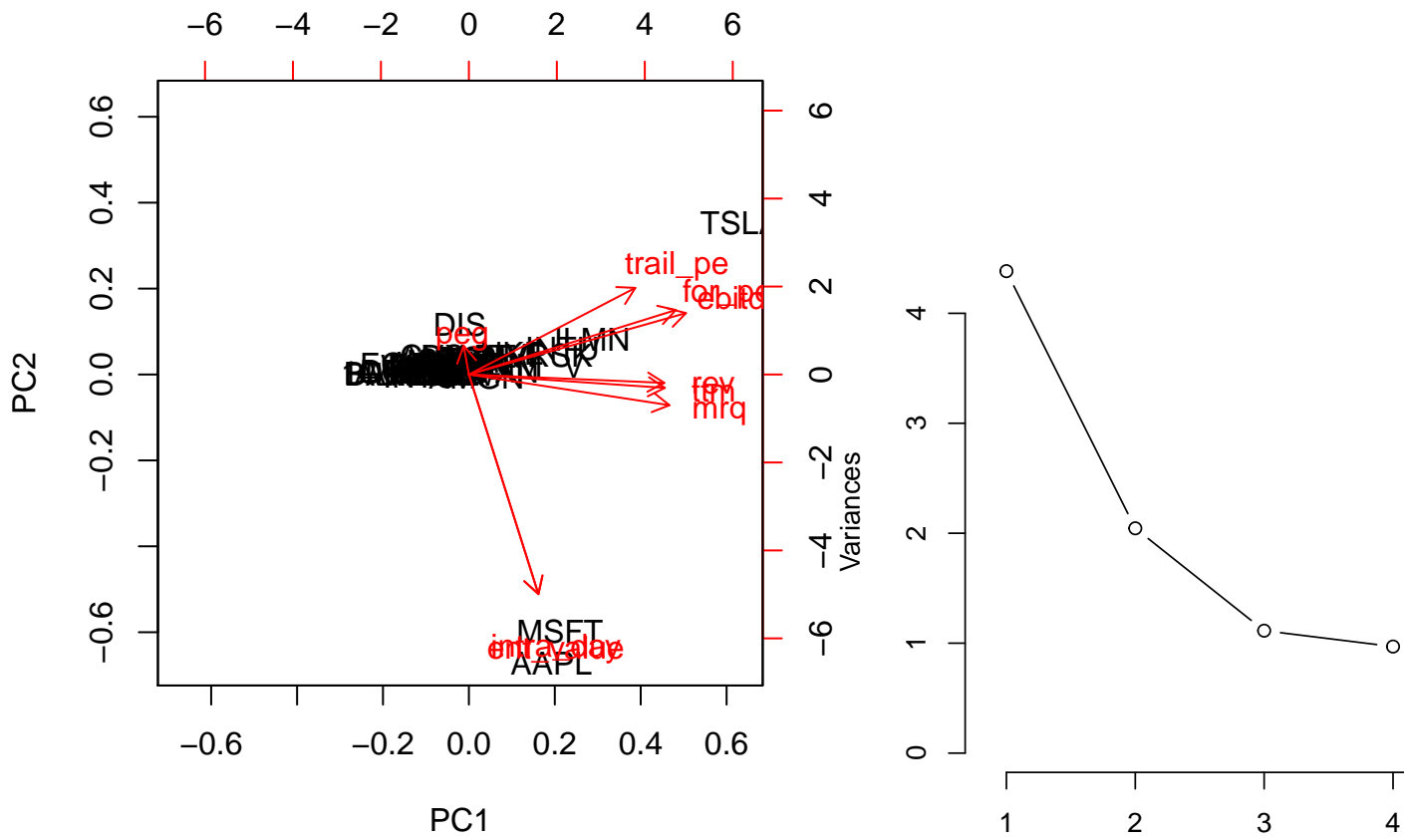

0.3 Value analysis(All)

```
## Importance of components:
##                         PC1    PC2    PC3    PC4     PC5     PC6     PC7
## Standard deviation    2.0937 1.4300 1.0553 0.9845 0.54966 0.31005 0.28822
## Proportion of Variance 0.4871 0.2272 0.1237 0.1077 0.03357 0.01068 0.00923
## Cumulative Proportion  0.4871 0.7143 0.8380 0.9457 0.97927 0.98996 0.99919
##                         PC8     PC9
## Standard deviation    0.08486 0.01127
## Proportion of Variance 0.00080 0.00001
## Cumulative Proportion  0.99999 1.00000
```

0.4 Risk