

FE517 SAS for Finance

Backtesting

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Content

- Basic Statistical Analysis for AAPL, SP500, GE and MS
- Simple Moving Average (SMA)
- Comparison between implementing SMA trading strategy or not
- Conclusion





Basic Statistical Analysis

Basic Statistical Measures (AAPL)

Mean	98.86302
Median	94.19429
Mode	97.34000
Std Deviation	46.56385
Variance	2168
Range	204.63429
Interquartile Range	63.41571

Basic Statistical Measures (SP500)

Mean	1850.365
Median	1891.695
Mode	1064.880
Std Deviation	518.35500
Variance	268692
Range	1908
Interquartile Range	813.88507



Basic Statistical Analysis (Cont.)

Basic Statistical Measures (GE)	
Mean	22.46202
Median	23.26500
Mode	16.25000
Std Deviation	5.60444
Variance	31.40978
Range	25.49000
Interquartile Range	8.77000

Basic Statistical Measures (MS)	
Mean	31.66133
Median	30.07500
Mode	16.61000
Std Deviation	10.93144
Variance	119.49639
Range	46.55000
Interquartile Range	14.11500

10Y AAPL Closing Price



10Y SP500 Closing Price

10Y SP500 Close Price



10Y GE Closing Price

10Y GE Close Price



10Y MS Closing Price





Simple Moving Average (SMA)

- A simple moving average (SMA) is an arithmetic moving average calculated by adding the closing price of the security for a number of time periods then dividing this total by the number of time periods.
- Many traders watch for short-term averages to cross above longer-term averages to signal the beginning of an uptrend.
- Short-term averages can act as levels of support when the price experiences a pullback.

SMA_short v.s. SMA_long (AAPL)

SMA_short v.s. SMA_long Closing Price



SMA_short v.s. SMA_long (SP500)



SMA_short v.s. SMA_long (GE)

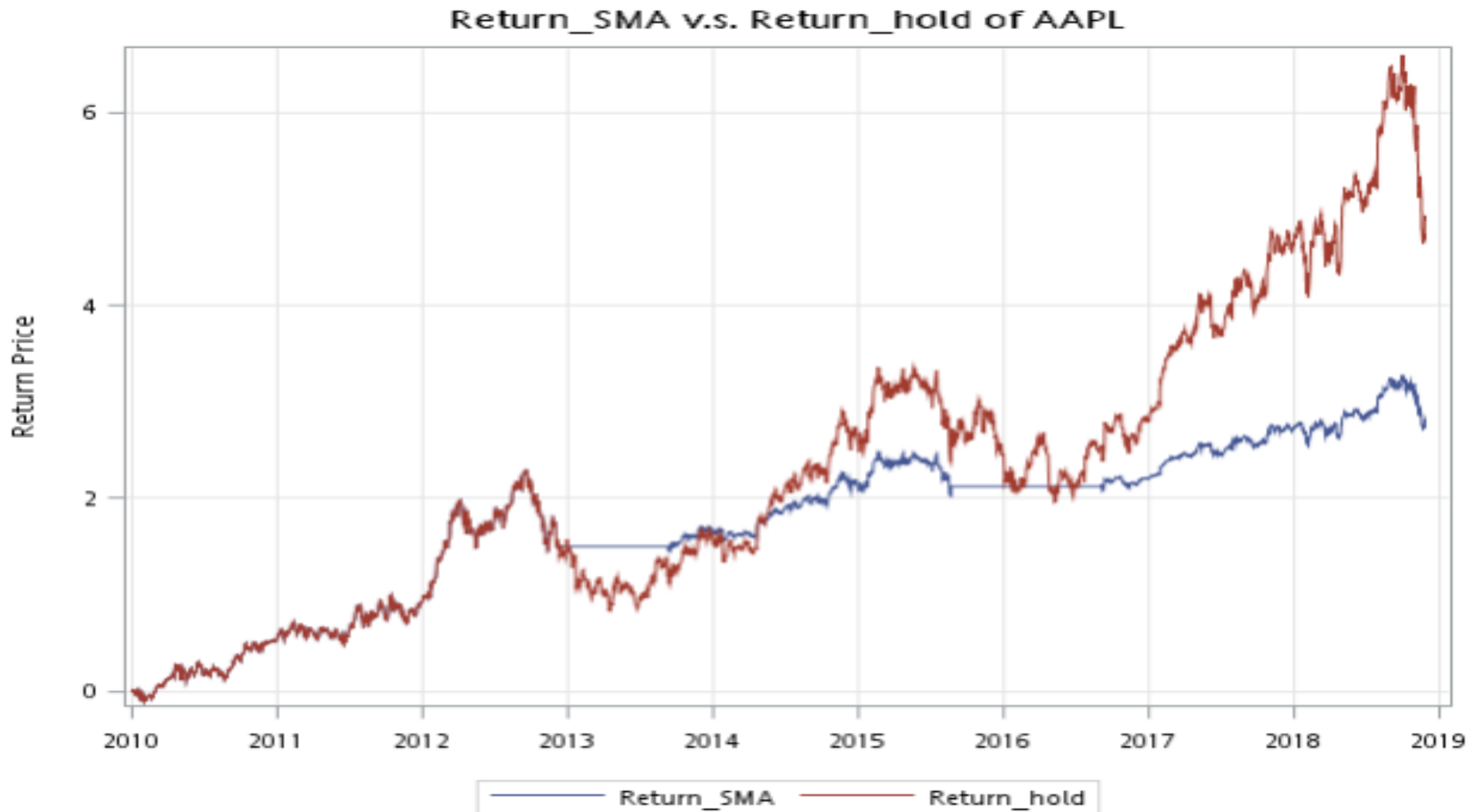


SMA_short v.s. SMA_long (MS)

SMA_short v.s. SMA_long Closing Price



Return_SMA v.s. Return_hold (AAPL)

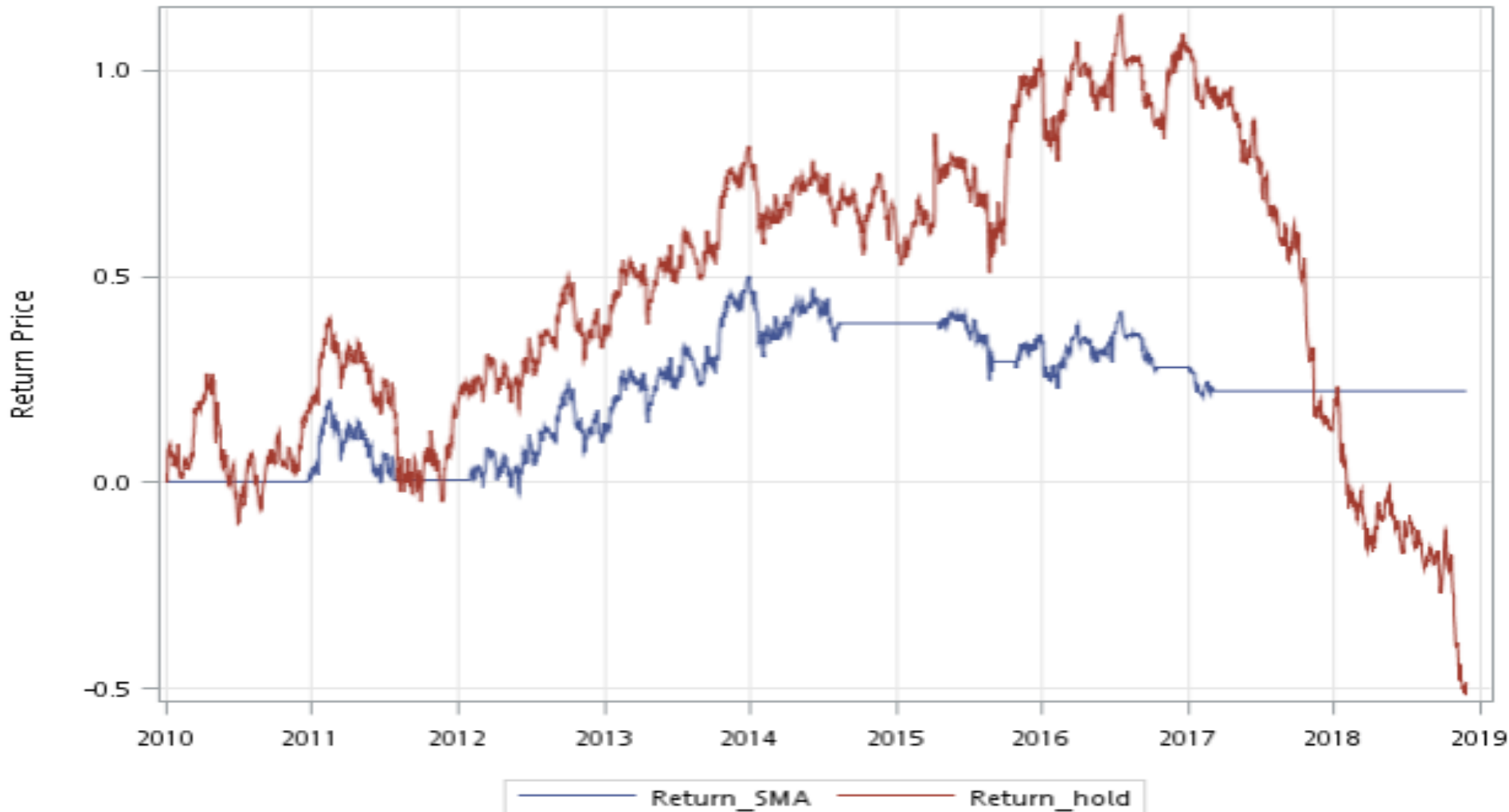


Return_SMA v.s. Return_hold (SP500)



Return_SMA v.s. Return_hold (GE)

Return_SMA v.s. Return_hold of GE



Return_SMA v.s. Return_hold (MS)

Return_SMA v.s. Return_hold of MS





Thank you for listening!