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STOCK MARKET ANALYSIS

TAKE-AWAYS AND INSIGHTS WEEK 3

KEY TAKEAWAY

Data-Snooping, Technical Trading Rule Performance, and the Bootstrap

Technical trading rules:

It is being used for over a century. Debate on its effectiveness.

Data reuse:

selection bias, the rule is based on the dataset and re-applied to the same data

Key takeaway:

technical trading rules work better in the past, given the stock market nowadays is becoming more efficient

STOCK INVESTMENT STRATEGY



strategy 1: stay if MACD above signal

strategy 2: stay when overbought
(RSI>70)

strategy 3: stay when oversold
(RSI<30)

strategy 4: Buy and hold strategy

TIME PERIOD: '2012-07-01' TO '2016-12-31'

##	AMAZON	Strategy1	Strategy2	Strategy3	Buy & Hold	Strategy
##	Cumulative Return	0.36	0.13	0.17		2.28
##	Annualized Return	0.07	0.03	0.04		0.30
##	Sharpe Ratio	0.03	0.02	0.03		0.06
##	Annualized Sharpe Ratio	0.33	0.28	0.42		1.00

##	FACEBOOK	Strategy1	Strategy2	Strategy3	Buy & Hold	Strategy
##	Cumulative Return	1.16	0.12	0.26		2.70
##	Annualized Return	0.19	0.03	0.05		0.34
##	Sharpe Ratio	0.05	0.01	0.02		0.06
##	Annualized Sharpe Ratio	0.69	0.14	0.32		0.86

##	GOOGLE	Strategy1	Strategy2	Strategy3	Buy & Hold	Strategy
##	Cumulative Return	0.57	0.34	0.35		1.73
##	Annualized Return	0.11	0.07	0.07		0.25
##	Sharpe Ratio	0.04	0.04	0.06		0.07
##	Annualized Sharpe Ratio	0.63	0.67	1.03		1.08

FOR ALL 3 STOCKS

BUY & HOLD STRATEGY GIVES THE
BEST CUMULATIVE RETURN AND
ANNULIZED RETURN AND SHARP
RATIO

TIME PERIOD: '2017-01-01' TO '2020-09-01'

##	AMAZON	Strategy1	Strategy2	Strategy3	Buy & Hold	Strategy
##	Cumulative Return	0.78	0.39	0.48		2.61
##	Annualized Return	0.20	0.11	0.13		0.50
##	Sharpe Ratio	0.06	0.06	0.07		0.09
##	Annualized Sharpe Ratio	0.95	0.90	1.16		1.58

##	FACEBOOK	Strategy1	Strategy2	Strategy3	Buy & Hold	Strategy
##	Cumulative Return	-0.05	-0.10	0.18		0.96
##	Annualized Return	-0.02	-0.03	0.05		0.24
##	Sharpe Ratio	0.00	-0.01	0.03		0.05
##	Annualized Sharpe Ratio	-0.06	-0.22	0.44		0.66

##	GOOGLE	Strategy1	Strategy2	Strategy3	Buy & Hold	Strategy
##	Cumulative Return	-0.15	-0.10	0.34		0.78
##	Annualized Return	-0.05	-0.03	0.10		0.20
##	Sharpe Ratio	-0.01	-0.02	0.05		0.05
##	Annualized Sharpe Ratio	-0.27	-0.37	0.85		0.69

FOR AMAZON AND FACEBOOK,

**BUY & HOLD STRATEGY GIVES THE
BEST CUMULATIVE RETURN AND
ANNULIZED RETURN AND SHARP
RATIO**

FOR GOOGLE

STRATEGY 3 GIVES BEST SHARP RATIO

TIME PERIOD: '2020-01-01' TO '2020-09-01'

##	AMAZON	Strategy1	Strategy2	Strategy3	Buy & Hold	Strategy
##	Cumulative Return	0.67	0.22	0.11		0.89
##	Annualized Return	1.16	0.34	0.16		1.59
##	Sharpe Ratio	0.17	0.10	0.07		0.16
##	Annualized Sharpe Ratio	3.93	1.70	1.06		4.03

##	FACEBOOK	Strategy1	Strategy2	Strategy3	Buy & Hold	Strategy
##	Cumulative Return	0.26	0.18	-0.03		0.44
##	Annualized Return	0.41	0.28	-0.04		0.72
##	Sharpe Ratio	0.09	0.11	-0.01		0.08
##	Annualized Sharpe Ratio	1.48	1.87	-0.18		1.46

##	GOOGLE	Strategy1	Strategy2	Strategy3	Buy & Hold	Strategy
##	Cumulative Return	0.15	0.03	0.01		0.24
##	Annualized Return	0.23	0.04	0.01		0.37
##	Sharpe Ratio	0.06	0.03	0.01		0.06
##	Annualized Sharpe Ratio	0.96	0.45	0.04		0.88

FOR AMAZON

BUY & HOLD STRATEGY GIVES THE
BEST CUMULATIVE RETURN AND
ANNULIZED RETURN AND SHARP
RATIO

FOR FACEBOOK AND GOOGLE

STRATEGY 1 GIVES BEST SHARP RATIO