Evaluating the Cryptocurrency Markets

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Whitestone Foundation For Research

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Market Prediction Elements

The Dow Theory

LEARNING TO UNDERSTAND FINANCIAL MARKETS

- In the early 20th century, many traders used the "Dow Theory" as espoused by Charles H. Dow (1851-1902) and collected into an official theory of analyzing financial markets by William Peter Hamilton, Robert Rhea, and E. George Schaefer. The theory is as follows:
  1. The Financial Markets have three movements:
     1. The Main Movement
     2. The Medium Swing
     3. The Short Swing
  2. Market Trends have Three Phases:
     1. The Accumulation Phase
     2. Rapid Change Phase
     3. Distribution Phase

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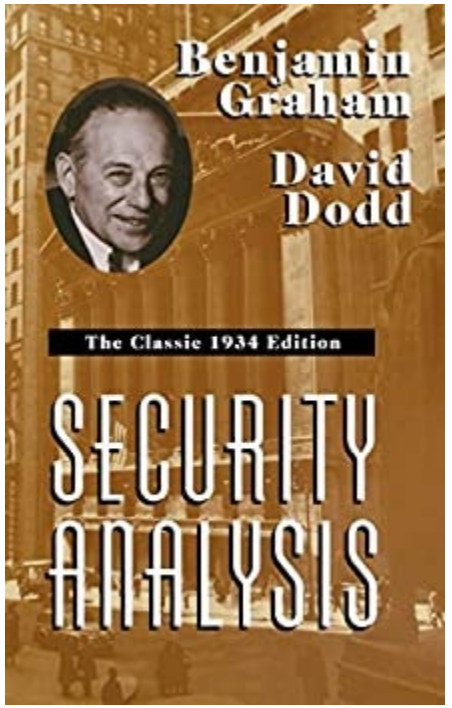
3) The Financial Markets quickly discounts all news concerning a stock.
4) The Stock Market Averages must confirm each other.
    1) The Dow Jones Industrial Average (DOW30)
    2) Dow Jones Transportation Index
    3) Dow Jones Utilities Average
5) Trends are confirmed by Volume
6) Trends exist until definitive signals prove they have ended.

ADJUSTING TO A STOCK MARKET CRASH

HOW DID THEY ADJUST???

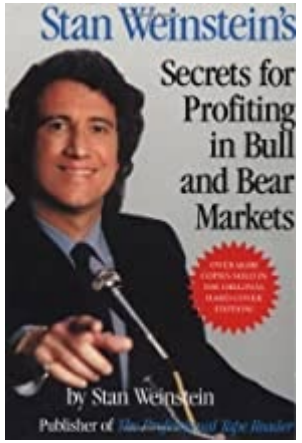
LEARNING TO UNDERSTAND FINANCIAL MARKETS

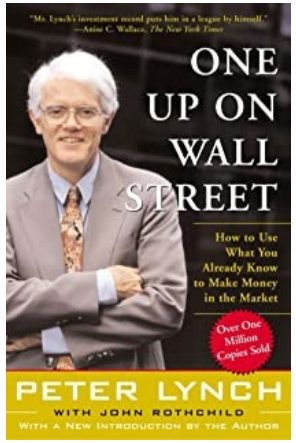
- After the September 4 to November 13, 1929, Stock Market Crash, many financial analysts began to complain that the Dow Theory was not a good timing system. They felt like it failed to call the Crash.
  - What they didn't realize is that the Federal Reserve was raising interest rates too quickly. The Dow Theory failed to directly account for rises and falls in Interest Rates.
  - Graham and Dodd published a book titled *Security Analysis* which produced a new formula to value companies:
    - V = E(8.5 + 2g), where V is the value of the company, E represents earnings, and g represents a company's growth rate. The 8.5 represented a "normal" company Price-Earnings Ratio.
    - They did NOT account for interest rates, which when increasing, can lower an earnings outlook and when decreasing, can increase earnings.
- In the 1950s, many investors began using graph paper to chart the daily results of various stocks and bonds in the market. Some of these chartists eventually started publishing investment newsletters. Some of the analysis was good while others were mediocre.



LEARNING TO UNDERSTAND FINANCIAL MARKETS

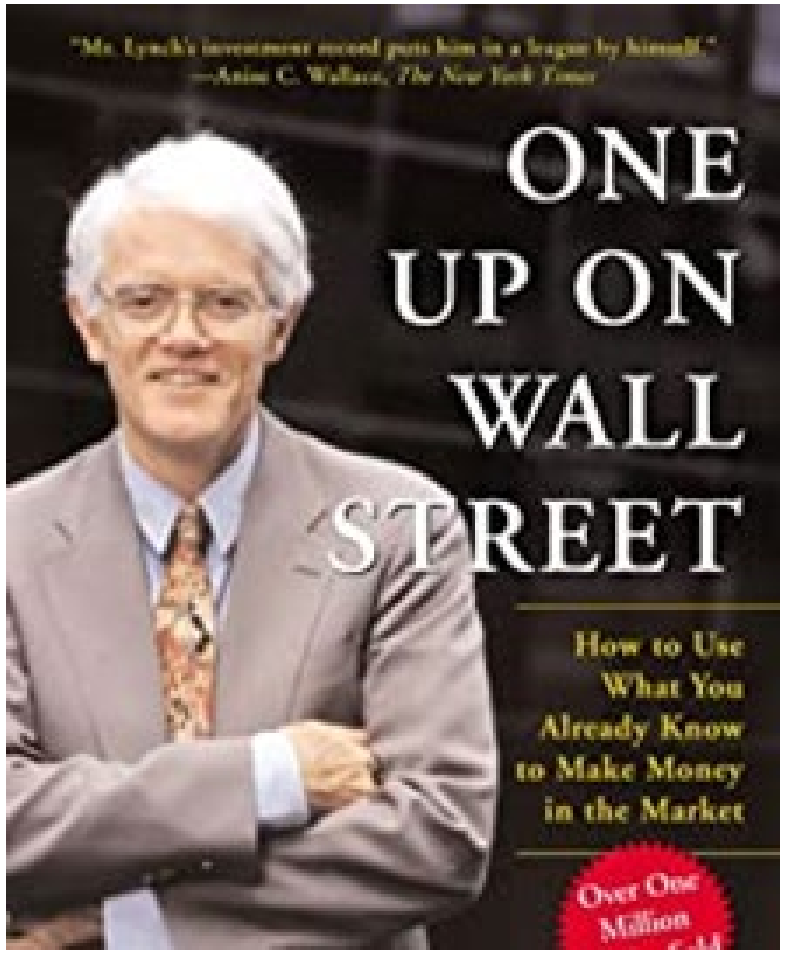
- When the stock market started to boom in the 1980s with the value of personal computing started becoming a part of the world economy, investment analysis went from calculators, pens, and graph paper to computers.
- Many of these analysts started using trend analysis, Fibonacci sequences, and other methods to analyze financial markets. Spreadsheet programs meant that almost anyone could write a program to analyze the financial markets and individual financial instruments.
- The leaders in this industry were Peter Lynch, one of the founders of Fidelity Financial, Stan Weinstein, and Wall Street Week panelist Martin Zweig.





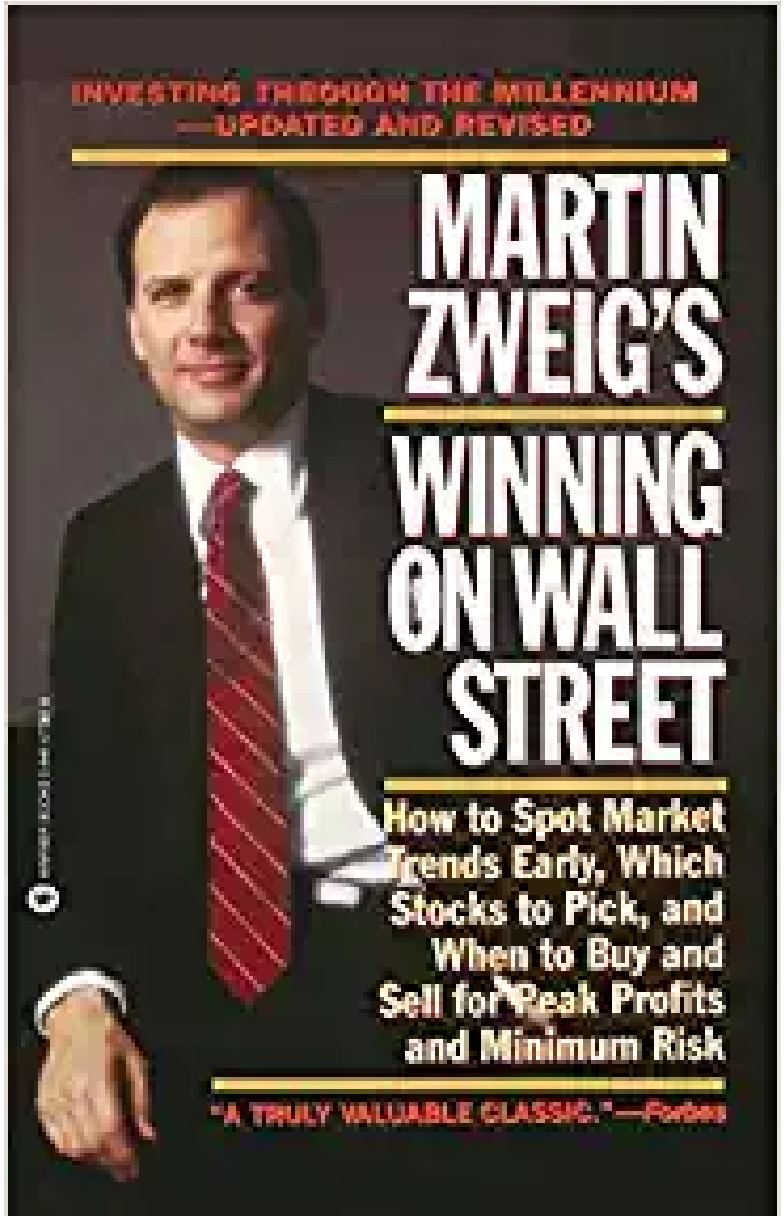
PETER LYNCH

- Peter Lynch was hired as an intern at the then obscure Fidelity Investments, a company that ran several mutual funds. He eventually became Fidelity's Director of Research until 1977 when he was given charge of Fidelity Magellan Fund, a small mutual fund with 18 million dollars in assets.
- By 1990 when he retired from Fidelity Magellan, the fund was worth 14 billion dollars.
- Mr. Lynch looked for individual stocks that met his criteria (Growth at a Reasonable Price). He used his computing power to evaluate companies to determine their growth potential.
- Mr. Lynch got his B.A. degree from Boston College and his M.B.A. from Wharton School of Business, the University of Pennsylvania.



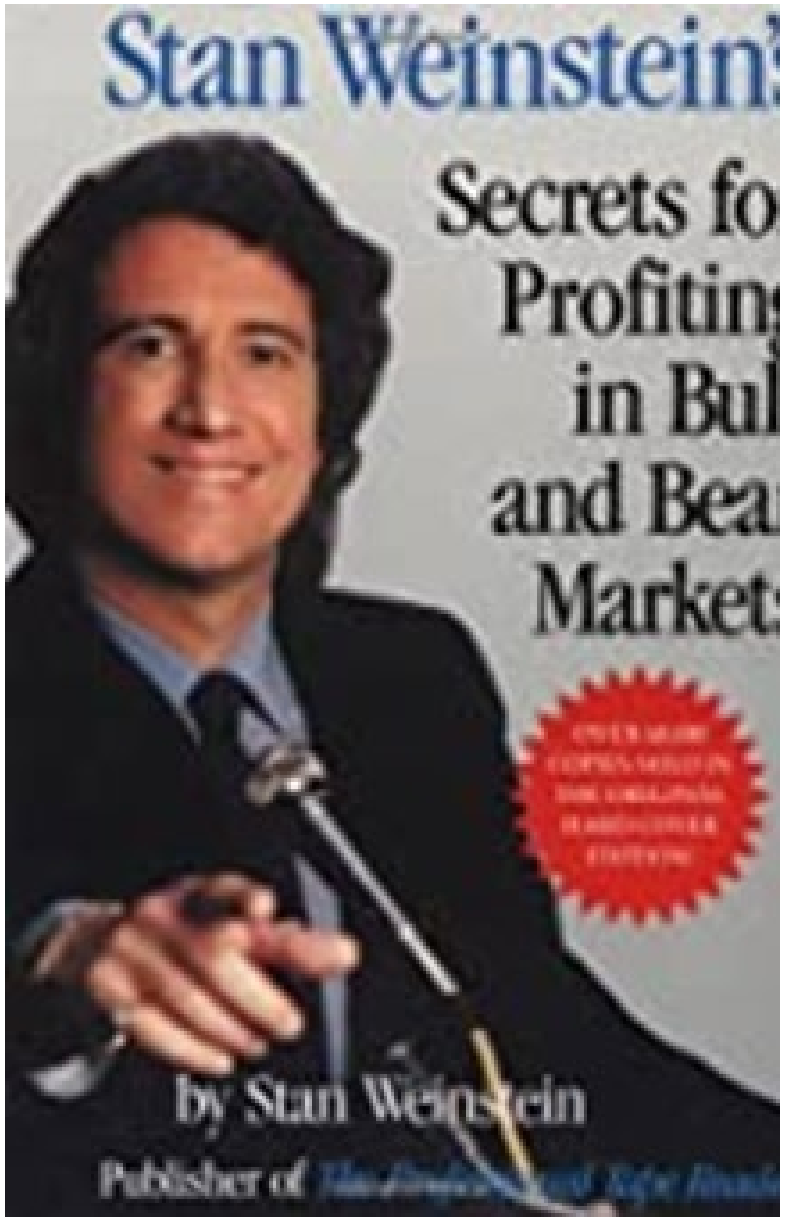
MARTIN E. ZWEIG, PH.D.

- Martin Zweig shocked the world on October 16, 1987, during an airing of *Wall Street Week*, when he effectively predicted the stock market crash that happed the following Monday, October 19.
- His stock methods made him one of the richest men on Wall Street as he repeatedly beat every stock market manager on the TV Show *Wall Street Week*.
- He graduated with a B.S.E. from Wharton School of Business, the University of Pennsylvania in 1964, M.B.A from the University of Miami in 1967, and a Ph.D. from Michigan State University in 1969. He taught finance at Iona College and Baruch College.
- His models used a combination of Fundamental Analysis and using statistical analysis-interest rate analysis to pick growth stocks rather successfully.



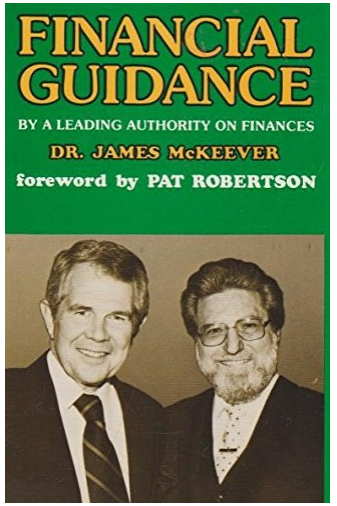
STAN WEINSTEIN

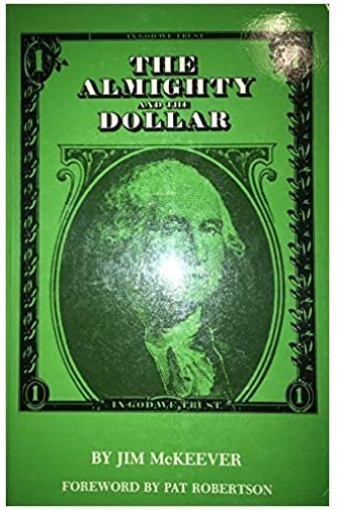
- Stan Weinstein is a bit of a maverick in the financial world.
- He first appeared on *Wall Street Week* in the early 1980s to promote his newsletter, the *Professional Tape Reader.* He told readers of how he used a 50-week moving average to project when the stock market would go up and when it would go down.
- Show host Louis Rukeyser and two of the panelists mocked his investment theories while Martin Zweig was more sympathetic.
- When he was proven right, he would return to *Wall Street Week* several more times and became a favorite guest.



Jim McKeever

- Jim McKeever got his start in the world of Information Technology working for IBM in the 1970s.
- He became a Christian and eventually started publishing books on theology and financial subjects.
- He was one of the first people to question the Pre-Tribulation Rapture Theory.
- He published a newsletter for Christians titled *End Times News Digest*.
- He also published a financial newsletter titled the *McKeever Strategy Letter* to advise people on their investments. His newsletter was rated #1 on *Hulbert's Financial Digest* three years in a row.
- He failed to see the 1987 crash, which hurt his newsletter's circulation. However, in fairness, the 1987 crash ended a lot of publications.
- He was eventually a guest on *Wall Street Week* but was not treated all that well by most of the panelists. Only Marty Zweig was civil to him. It is interesting that Zweig's and McKeever's newsletters best predicted the movements of the stock market.
- Dr. McKeever tried to operate a mutual fund, but it never performed as well as his newsletter. He had to disband it. It is hard to run a Mutual Fund from a ranch in Medford, Oregon. Executing trades for a mutual fund requires direct connections to the trading floors of the exchanges (stock, bond, and mercantile).





PROFESSOR MACK'S METHODOLOGY

- Professor Tom Mack watched a presentation by John Bollinger on Financial News Network in the early 1980s. Mr. Bollinger was the first to use moving average analysis with standard deviations to develop a system of "bands" telling investors when to buy or sell.
- When Prof. Tom Mack was in graduate school at The University of South Dakota, he used some of Mr. Bollinger's work to come up with his own theory.
- He used Fibonacci numbers to develop a series of moving averages to evaluate the standing of various financial investments. He then used standard deviations to plot the progress or lack of progress of that investment.

USING THE MOVING AVERAGE

- The Average of a group of numbers is the middle point of those numbers:

	5
	15
	20
	15
	30
Sum =	85

When we count the "data points" we find there are five.

To find the average, you divide the sum of the numbers by the number of data points:

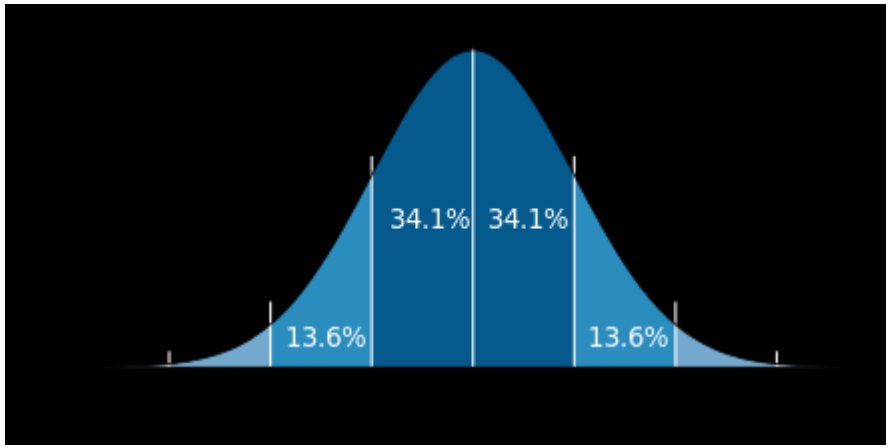
Average ($\bar{x}$): 85 / 5 = 17

USING THE MOVING AVERAGE

- To determine the validity of an average calculation, we need to measure the average number of deviations from that average (mean).

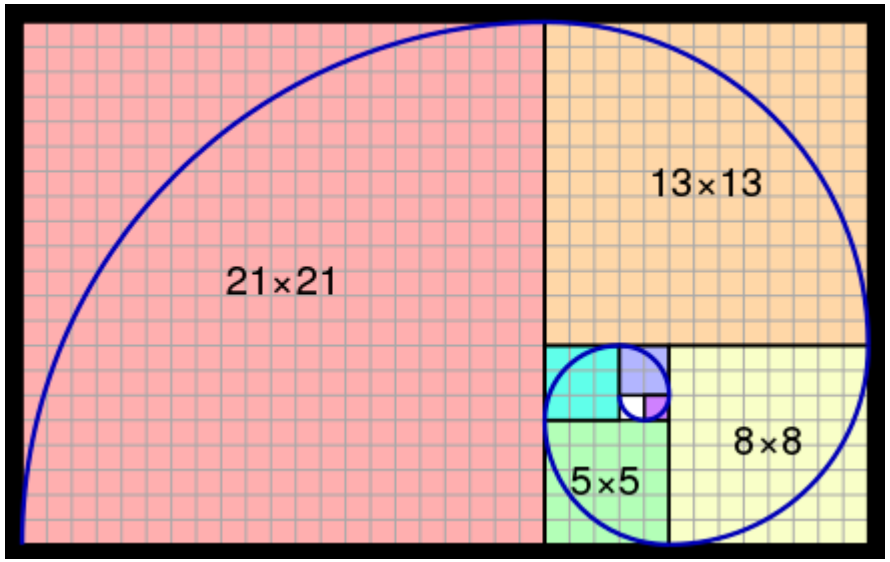
	5 – 17 =	-12 x -12 =	144
	15 – 17 =	-2 x -2 =	4
	20 – 17 =	3 x 3 =	9
	15 – 17 =	-2 x -2 =	4
	30 – 17 =	13 x 13 =	169
Sum(∑)=	85		330
$\bar{x}$ =	17	Variance σ^2 =	18

Standard Dev. σ = 4.2



THE FIBONACCI NUMBERS

- Leonardo Fibonacci is considered the father of modern European Mathematics. When he was young, he traveled extensively in the Middle East and learned of the Hindu-Arabic number system we use today.
- He is also the father of modern accounting, importing the double-entry bookkeeping system from the Middle East and using it in Pisa, Italy where he was from.
- His biggest challenge came when a leader in Pisa asked him to project the growth of rabbit populations. The answer he gave is now called the Fibonacci Sequence:
  - 1, 1, 2, 3, 5, 8, 13, 21, 34, 55, 89, 144, 233, 377, 610, *etc.*
  - The Fibonacci Sequence can be found in nature.
  - It can also be used to project human behaviors.



USING THE FIBONACCI NUMBERS TO PREDICT FINANCIAL MARKETS

- To get our source information, we calculate both the moving averages and standard deviations for every coin/token at the following intervals:
  - 8 days
  - 13 days
  - 21 days
  - 34 days
  - 55 days
  - 89 days
  - 144 days
  - 233 days
  - 377 days
  - 610 days
  - 987 days

USING THE FIBONACCI NUMBERS TO PREDICT FINANCIAL MARKETS

- We then evaluate the current stock price in relation to the moving averages at each Fibonacci level.
- Coins/tokens are then matched by the standard deviation of the to get a price position.
- The values of each of the moving averages and then summed to get a Composite Reading

THANK YOU

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