

## CHAPTER 9

### Behavioral Finance and Technical Analysis

## 9.1 THE BEHAVIORAL CRITIQUE

### Behavioral Finance

- Investors do not always process information correctly
- Investors often make inconsistent or systematically suboptimal decisions

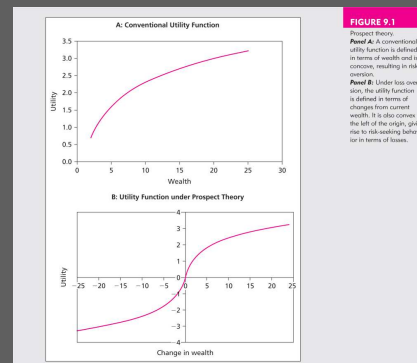
### Information Processing Critique

- Forecasting errors
- Overconfidence
- Conservatism
- Sample size neglect and representativeness

### Behavioral Biases

- Framing
- Mental accounting
- Regret avoidance
- Prospect theory

### Figure 9.1 Prospect Theory



## Limits to Arbitrage

- Fundamental risk
- Implementation costs
- Model risk

## Limits to Arbitrage and the Law of One Price

- Siamese twin companies
- Equity carve-outs
- Closed-end funds

Figure 9.2 Pricing of Royal Dutch Relative to Shell (Deviation from Parity)

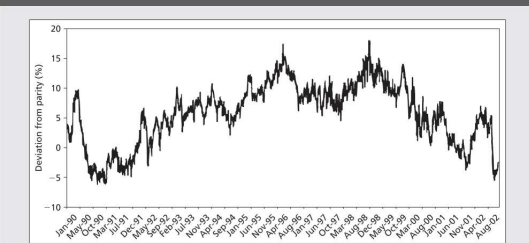


FIGURE 9.2

Pricing of Royal Dutch relative to Shell (deviation from parity)

Source: O. A. Lamont and R. H. Thaler, "Anomalies: The Law of One Price in Financial Markets," *Journal of Economic Perspectives* 17 (Fall 2003), pp. 191-202.

## Bubbles and Behavioral Economics

- As the dot-com boom developed, it seemed to feed on itself
- Investors were increasingly confident of their investment prowess

## Evaluation of the Behavioral Critiques

- Arguments that the evidence does not support one type of irrationality
- Relatively new field

## 9.2 TECHNICAL ANALYSIS AND BEHAVIORAL FINANCE

## Trends and Corrections

- Dow theory
- Point and figure charts

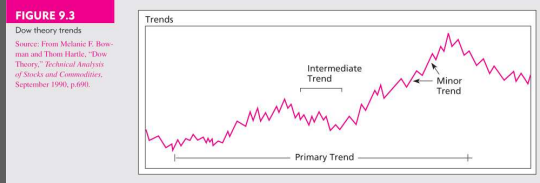
## Trends and Corrections

- Moving averages
  - Average price over some historical period (5 weeks or 200 days)
  - When current price crosses the average a trading signal occurs
  - Bullish signal when the current price rises above the moving average
  - Bearish sign when the current price falls below the moving average

## Trends and Corrections

- Breadth
  - The extent to which movements in a broad index are reflected widely in movements of individual stocks
  - Spread between advancing stocks and declining stocks
  - Also used in industry indexes

## Figure 9.3 Dow Theory Trends



## Table 9.1 Stock Price History

TABLE 9.1	Date	Price	Date	Price
Stock price history	January 2	\$40	February 1	\$40*
	January 3	40.50	February 2	41
	January 4	41	February 5	40.50
	January 5	42*	February 6	42*
	January 8	41.50	February 7	45*
	January 9	42.50	February 8	44.50
	January 10	43	February 9	46*
	January 11	43.75	February 12	47
	January 12	44*	February 13	48*
	January 15	45	February 14	47.50
	January 16	44	February 15	46 <sup>1</sup>
	January 17	41.50 <sup>1</sup>	February 16	45
	January 18	41	February 19	44*
	January 19	40*	February 20	42*
	January 22	39	February 21	41
	January 23	39.50	February 22	40*
	January 24	39.75	February 23	41
	January 25	38*	February 26	40.50
	January 26	35*	February 27	38*
	January 29	36 <sup>1</sup>	February 28	39
	January 30	37	March 1	36*
	January 31	39*	March 2	34*

<sup>1</sup>Indicates an event that has resulted in a stock price increase or decrease of at least \$2.  
<sup>\*</sup>Denotes a price movement that has resulted in either an upward or a downward reversal in the stock price.

## Figure 9.4 Point and Figure Chart for Table 9.1

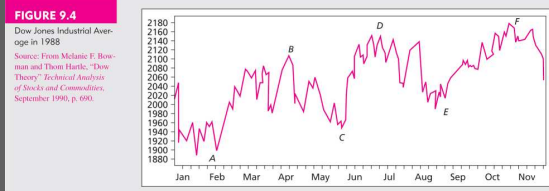


Figure 9.5 Point and Figure Chart for Atlantic Richfield

FIGURE 9.5

Point and figure chart for Table 9.1

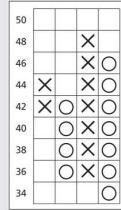


Figure 9.6 Dow Jones Industrial Averages in 1988

FIGURE 9.6

Point and figure chart for Atlantic Richfield

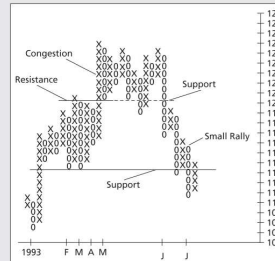


Figure 9.7 Share Price and 50-Day Moving Average for Apple Computer

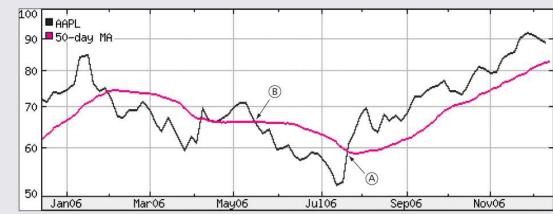


FIGURE 9.7

Share price and 50-day moving average for Apple Computer  
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Figure 9.8 Level of the DJIA and the 5-Week Moving Average

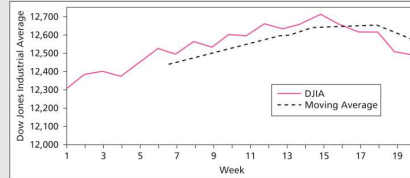


FIGURE 9.8

Moving averages

Figure 9.8 Moving Averages

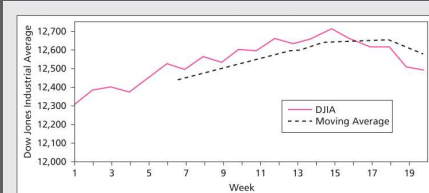


FIGURE 9.8

Moving averages

Table 9.2 Breadth

TABLE 9.2	Day	Advances	Declines	Net Advances	Cumulative Breadth
Breadth	1	802	748	54	54
	2	917	640	277	331
	3	703	772	-69	262
	4	512	1122	-610	-348
	5	633	1004	-371	-719

Note: The sum of advances plus declines varies across days because some stock prices are unchanged.

## Sentiment Indicators

### ■ Trin Statistics:

$$\text{Trin} = \frac{\text{Volume declining/Number declining}}{\text{Volume advancing/Number advancing}}$$

### ■ Relative strength

- Measures the extent to which a security has outperformed or underperformed either the market or its industry

## Sentiment Indicators

### ■ Confidence index

- Ratio of the average yield on 10 top-rated corporate bonds divided by the average yield on 10 intermediate-grade corporate bonds

### ■ Put/call ratio

- Call options give investors the right to buy at a fixed exercise price and a put is the right to sell at a fixed exercise price
- Change in ratio can be given a bullish or bearish interpretation

## Sentiment Indicators

### ■ Short Interest - total number of shares that are sold short

- When short sales are high a signal occurs
- Bullish interpretation
- Bearish interpretation

## A Warning

- Although the ability to discern apparent patterns with stock market prices is irresistible—it is also possible to perceive patterns that may not exist

Figure 9.10 Actual and Simulated Levels for Stock Market Prices of 52 Weeks

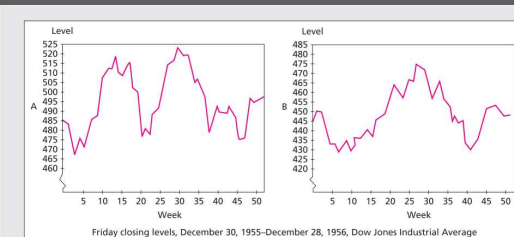


FIGURE 9.10

Actual and simulated levels for stock market prices of 52 weeks

Note: Friday closing levels, December 30, 1955–December 28, 1956, Dow Jones Industrial Average.

Source: Harry Roberts, "Stock Market Patterns and Financial Analysis: Methodological Suggestions," *Journal of Finance*, March 1959, pp. 11–25. Reprinted by permission of the publisher, Blackwell Publishing, Inc.

Figure 9.11 Actual and Simulated Changes in Weekly Stock Prices for 52 Weeks

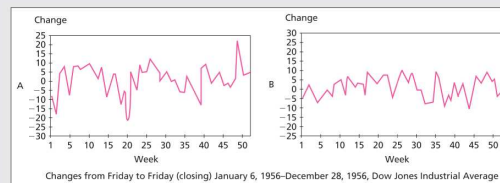


FIGURE 9.11

Actual and simulated changes in weekly stock prices for 52 weeks

Note: Changes from Friday to Friday (closing) January 6, 1956–December 28, 1956, Dow Jones Industrial Average.

Source: Harry Roberts, "Stock Market Patterns and Financial Analysis: Methodological Suggestions," *Journal of Finance*, March 1959, pp. 11–25. Reprinted by permission of the publisher, Blackwell Publishing, Inc.