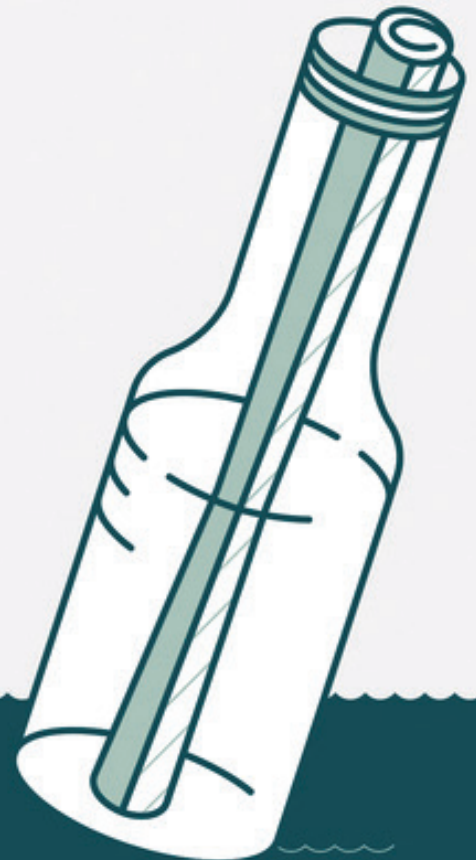


CMT LEVEL I CURRICULUM

2022 CHARTERED MARKET
TECHNICIAN EXAM

AN INTRODUCTION TO
TECHNICAL ANALYSIS



WILEY

Level I. An Introduction to Technical Analysis

Section I: Theory and History of Technical Analysis

1. The Basic Principle of Technical Analysis — The Trend

- Define what is meant by a trend in technical analysis
- Explain why determining the trend is important to analysts
- Identify primary, secondary, short-term, and intraday trends
- Describe the basic beliefs behind the art of technical analysis
- Define “fractal” as used in describing price action

2. Dow Theory

- Describe the history of the development of Dow Theory
- Discuss the basic principles of Dow Theory
- Identify the three basic types of trends identified in Dow Theory as defined by time: primary, secondary and minor
- Identify the three basic trend patterns of all prices: upward, downward and sideways
- Describe the “ideal market picture” according to Dow Theory
- Express the concept of confirmation in Dow Theory
- Explain the role of volume in Dow Theory

3. Introduction to Charts Part 1

- Explain how a technical analyst uses charts to summarize price action
- Discuss the advantages of reviewing price information in chart format
- Identify the four basic price points represented in charting
- Describe how to construct line, bar, and candlestick charts
- Identify the components of individual candles - real body and shadows
- Review the information available in line, bar, and candlestick charts
- Describe what is meant by “data interval”
- Define “range” as it applies to prices on a bar or candlestick
- Define “fractal” and how it relates to chart construction

4. Introduction to Charts Part 2

- Identify the variables plotted on the axes in a conventional price chart
- Explain the differences between arithmetic and logarithmic scales and their uses
- Describe typical methods for displaying volume in a price chart
- Discuss volume as an alternative to time on the x-axis of a chart

5. Trends — The Basics

- Explain why trend identification is important to achieve profits
- Recognize an uptrend, a downtrend, and a trading range
- Describe the concept of support and resistance and the underlying psychology
- Identify trends using most common methods
- Recall how significant reversal points are identified
- List general rules for trendlines

6. Breakouts, Stops, and Retracements

- Describe and identify breakouts
- List methods for confirming and filtering breakouts
- Explain the purpose of entry and exit stops
- Describe methods for setting entry and exit stops
- Define retracements, pullbacks and throwbacks

7. Moving Averages

- Describe the basic principle of moving averages
- Explain how to calculate simple, linearly weighted and exponentially smoothed moving averages
- Identify trends and signals with moving averages
- Describe and interpret Directional Movement Indicators
- List common envelope, channel and band indicators and their characteristics

8. Bar Chart Patterns

- Define what is meant by “chart patterns”
- List common characteristics of patterns
- Discuss opposing viewpoints over whether patterns exist
- Describe the influence of computer technology on price-pattern study
- Identify classic chart patterns such as triangles and double and triple tops and bottoms
- Identify rounding chart patterns such as head-and-shoulders
- Identify “half-mast” chart patterns such as flags and pennants

9. Short-Term Patterns

- Locate reversals in longer-term trends using short-term price patterns
- Describe the types of gaps that occur on price charts and their significance
- Recognize wide-range and narrow-range bars and their implications for volatility
- Identify one and two-bar reversal patterns
- Identify common candlestick patterns and their significance within a trend

10. Introduction to Volume Analysis

- Define volume
- Define open interest
- Define the terms related to volume as discussed in this chapter
- Describe how volume provides information on liquidity and participation
- Describe how volume adds perspective to price action

11. Volume: The Technician's Decryption Device

- State the implications of volume changes for price trends
- Identify trends in price and volume in a chart
- Describe how volume is displayed in a Volume-at-Price chart
- Define VWAP
- Describe Equivolume charts
- Explain how open interest rises and falls
- State the implications of open interest changes for price trends

12. An Introduction to Volume Indicators

- List the seven types of volume indicators
- Describe the major differences among the types of volume indicators

13. Confirmation

Define terms including overbought, oversold, failure swings, divergence and reversal

List the major indexes and oscillators designed to use volume as confirmation

Describe open interest and how it might be used for confirmation

Explain the concept of momentum in price action

Identify characteristics and applications of indexes and oscillators such as MACD, RSI and stochastics

14. Candlestick Charting Essentials

Describe strengths and limitations of candle charts

Identify the components of individual candle lines - real bodies and shadows

Explain how candles graphically depict the high, low, open, and close of a trading period

Identify candle confirmations of support and resistance

15. Point-and-Figure Charting

List three important characteristics of point-and-figure charts

Define "box size" and "reversal"

Describe how point-and-figure charts are constructed

Explain the importance of box size to the sensitivity of point-and-figure charts

Review the construction of various box size and reversal point-and-figure charts

Identify common point-and-figure patterns

Explain how trendlines are drawn on point-and-figure charts

Locate basic signals on a point-and-figure chart

Describe the concept of price targets attained by using a horizontal or vertical count on a point-and-figure chart

Section III: Advanced Concepts in Charting and Trend Analysis

16. Introduction to the Wave Principle

- Describe the basic operating theory of the Wave Principle
- Define motive waves and corrective waves
- Identify types of motive waves such as impulse, extension and diagonal
- Identify types of corrective waves such as zigzag, flat and triangle
- Label waves using standard Elliott Wave notation
- Describe Fibonacci relationships as applied to Elliott Wave analysis

17. The Anatomy of Elliott Wave Trading

- Match the waves as labeled on a chart to the description in the text
- List the waves considered the most advantageous to trade
- Describe trade signals associated with various wave patterns

18. Measuring Market Strength

- Explain the concept of divergence
- Define market breadth
- Identify signals of change in market breadth using the advance-decline line
- Describe other measures of internal stock-market strength such as McClellan's calculations
- Explain the use of volume in measuring stock-market strength
- Identify measures of stock-market strength from new high and new low data
- Describe measures of stock-market strength based on the number of stocks priced above their moving average

19. Foundations of Cycle Theory

- Name the two types of cycles
- Identify the three defining characteristics of a cycle
- List and define Hurst's seven Principles of Commonality
- Define a composite wave
- Identify left and right translation
- Describe a dominant cycle
- Recall the tools which aid in cycle identification

20. Basics of Cycle Analysis

- Explain how the annual cycle conforms to cycle theory
- Describe two methods of detrending price data
- Restate common seasonal tools
- Memorize notable economic cycles and their periods
- Recall some sequences/nonlinear cycles

21. Markets, Instruments, Data, and the Technical Analyst

Name four asset classes amenable to technical analysis

List five tradeable instruments that a technician is likely to employ

Describe data-handling issues with which a technician should be familiar

22. Equities

Define equity securities and primary data types

Describe the benefits of equities for investors

Identify the effect of corporate actions on price data

Classify sectors, capitalization, and other ways to segment the market

23. Indexes

Identify major global equity indexes

Name common non-equity indexes used by technical analysts

Explain weighting methods used in major indexes

Define "survivorship bias"

24. Fixed Income/Bonds

List the major types of issuers of debt securities

Identify the basic terms of a debt instrument: issuer, coupon, maturity

State the ways in which debt prices are expressed

Explain the relationship between price and yield

Define "yield curve"

Describe the importance of US government debt in the pricing of other debt securities: "yield or credit spread"

25. Futures

Explain the purpose of futures markets

Classify various futures markets as industrial, agricultural, financial, etc.

List the major terms of a futures contract

Define open interest in futures

Describe challenges technicians face when using futures market data

26. Exchange-Traded Products (ETPs)

Define an exchange-traded product

Review differences between exchange-traded funds (ETF) and exchange-traded notes (ETN)

Describe the uses for leveraged ETPs

27. Foreign Exchange (Currencies)

Identify the base and quote currencies in a pair

Classify currency pairs as "major" or "cross"

Discuss the impact on technical analysis of the "dealer market" system of currency trading

Explain the data used in building currency charts

Describe cryptocurrencies

28. Options

Explain the purpose of options markets

List the major terms of an option contract

Describe "the Greeks"

Define implied volatility

29. Understanding Implied Volatility

Explain the difference between historical and implied volatility

Describe the concept of put-call parity

Discuss how implied volatility may be used to estimate price movement

State how to calculate single-day implied volatility

30. About the VIX Index

Describe the components of the VIX index

Explain the implications of a rising or falling VIX index

State how to calculate expected 30-day market movement

Section V: Behavioral Finance and Other Theories of Market Dynamics

31. What is the Efficient Market Hypothesis

Identify the basic concept of the Efficient Market Hypothesis (EMH)

Describe the three forms of the EMH

Explain the characteristics of stock prices as a martingale

Describe how randomly generated output can appear non-random and how that might relate to asset prices and returns

Identify the three areas in which behavioral finance challenges the EMH

32. The Forerunners to Behavioral Finance

Explain momentum strategies and mean-reversion strategies

Define the general concept of value investing

Describe why value investing is similar to a mean-reversion

Explain how value investing (Graham and Dodd) conflicts with the EMH

33. Noise Traders and the Law of One Price

Define “fungibility” in the context of financial markets

Explain “arbitrage”

Describe “noise” vs. “information”

Define “noise trader”

34. Noise Traders as Technical Traders

Explain why technical traders are considered a specific type of noise trader

Describe the actions of technical traders as noise traders in the context of market valuation

35. Academic Approaches to Technical Analysis

Describe how technical analysis remains relevant despite the EMH

Discuss how the Adaptive Market Hypothesis reconciles the EMH with technical and behavioral factors

Section V: Behavioral Finance and Other Theories of Market Dynamics

36. Market Sentiment and Technical Analysis

Define “sentiment” as it relates to financial markets

Discuss the importance of the “crowd”

Describe the challenges of using sentiment indicators

37. Sentiment Measures from Market Data

Describe VIX as a sentiment measure

Explain the use of options volume and open interest as sentiment indicators

Describe the use of futures open interest in gauging sentiment

Identify the three primary groups in the Commitments of Traders report

Define short interest

Explain insider activity as a sentiment indicator

38. Sentiment Measures from External Data

Describe the use of news and advisories as sentiment measures

Explain the concept of contrary opinion

Indicate how mutual fund cash and other funds measures are used to gauge sentiment

39. Introduction to Descriptive Statistics

Describe the three most common measures of central tendency: mean, median, and mode

Discuss alternative methods of calculating the mean and their uses

Describe what is meant by “measures of dispersion”

Explain two measures of dispersion: standard deviation and variance

State the value of data visualization as a complement to descriptive statistics

40. Introduction to Probability

Define probability

Explain the impact of the law of large numbers on a series of outcomes

Define random variable and the phrase “independent and identically distributed”

Describe a normal probability distribution

Identify skew and kurtosis

Section VII: Perspectives on Technical Trading Systems

41. Objective Rules and Their Evaluation

- Describe objective and subjective methods in technical analysis
- Define “rule” as used in trading systems
- Explain binary rules as well as individual and multiple thresholds
- Identify traditional rules and inverse rules
- Describe the key components of “trading costs”
- Discuss the importance of benchmarking in evaluating trading rules
- Describe the value of using detrended prices

42. Being Right or Making Money

- List the four key characteristics Ned Davis claims are common to successful investors
- Describe the importance of having plans to persevere through mistakes and losses
- Identify Ned Davis’ nine rules to consider when building a timing model
- Discuss the theory behind “contrary opinion”

43. The Model Building Process

- Describe “internal” and “external” indicators
- Explain the use of valuation indicators as sentiment measures
- Describe the basic relationships of economic growth, Fed policy and money supply
- Discuss the use of moving average signals based on “crossings” and “slopes”
- Explain the use of price momentum and indicator momentum
- Identify the problem of curve-fitting, or overoptimization

44. Relative Strength as a Criterion for Investment Selection

- Define relative strength
- Explain the value of relative strength in analyzing stock price movements
- List several relative strength ratios that may be calculated
- Identify some of the limitations of relative strength in investment decisions