STUDY GUIDE

for

TECHNICAL ANALYSIS EXPLAINED

FIFTH EDITION

MARTIN J. PRING

Study Guide for Technical Analysis Explained

FIFTH EDITION

MARTIN J. PRING

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CONTENTS

HOW TO USE THIS
STUDY GUIDE

This study guide has been designed as an adjunct to the fifth edition of *Technical Analysis Explained.* The questions are presented in several forms: multiple choice, matching answers, and fill-in-the-blanks. Since technical analysis is a visual art, concerned with chart interpretation, questions featuring charts have been included as much as possible.

Where necessary, the answers contain a narrative by way of explanation, which readers are encouraged to review closely to better understand the material. In cases where charts require interactive action by the reader, the answer is visual and cannot be clearly defined, as with a letter for a multiple-choice question or a word required in fill-in-the-blank questions. Please refer to the charts printed in the answer chapters for explanation. Some questions ask for blanks to be filled in. In most cases, the first letter of the answer is provided in order to give you some guidance.

Each chapter of *Technical Analysis Explained*, with the exceptions of Chapter 20, "Putting the Indicators Together," and Chapter 35, "Checkpoints for Identifying Primary Stock Market Peaks and Troughs," has been allocated a quiz. Their sizes vary, depending upon the length of material contained in the book.

Readers are advised to first study the relevant chapters in *Technical Analysis Explained* and then proceed to the testing phase. A brief summary of the subject matter contained in each individual quiz is included at the beginning of each *Study Guide* chapter, under the heading "Subjects to Be Covered." This is a partial list of the more important subjects covered by the quiz and is included as a guide.

By making a more careful study of these topics, the reader will be in a better position to answer the various questions more accurately.

If less than 70 percent of the questions are answered correctly, it is suggested that further study take place. This should not be done right away. A better approach is to read through more chapters and come back at a later date to the problem ones. In this way there will be less of a tendency to cram or force the learning process, but to let it evolve in a more leisurely and thoughtful way.

THE DEFINITION AND INTERACTION OF TRENDS

Questions

Subjects to Be Covered

The most common types of trends
The basics of peak-and-trough analysis
How peaks and troughs are recognized.

1. Name the three most important and widely used trends.
   A. _____
   B. _____
   C. _____

2. Match the answers for the duration of these trends.
   A. Short   _____   A. 10 to 25 years
   B. Intermediate _____   B. 2 to 6 weeks
   C. Primary   _____   C. 6 weeks to 9 months
   D. Secular   _____   D. 9 months to 2 years

3. Who needs to have an understanding of the direction and maturity of the main trend?
   A. Investors
   B. Traders
   C. A and B
   D. None of the above

4. Peak-and-trough analysis:
  A. Is far too simplistic an approach for technicians to deal with
  B. Was very useful in Dow's day, but is now outdated by more sophis-
     ticated approaches and tools
  C. Should be used in conjunction with other tools in the weight of the
     evidence approach
  D. Only works with short-term and intermediate trends
  E. C and D

5. In this chart, which letter marks the reversal in the upward progression
of troughs?
  A. _____
  B. _____
  C. _____
  D. _____
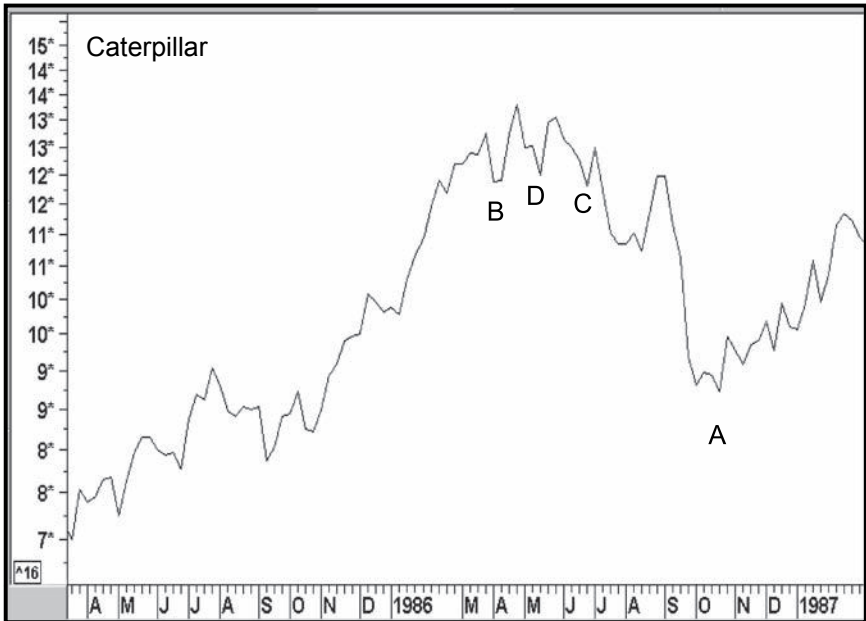
6. Can the principles of peak-and-trough progression be applied to a
5-minute bar chart?
  A. Yes
  B. No

7. In a general sense, why are longer-term trends easier to spot?
    A. Because the bigger they are, the easier it is to see them.
    B. Because there is less random noise as the trend gets longer. Also, the expectations of market participants tend to unfold in a more gradual way as the fundamentals evolve.
    C. Because there are always five intermediate movements in every primary trend, so all you have to do is count to five.
    D. None of the above

8. Please look at the chart featuring Citigroup. If you knew that the high and low preceding the rally at A were 6 and 4 and the close at A was 4.25, would this represent a legitimate peak in peak-and-trough analysis?
    A. Yes
    B. No

9. If C qualifies as a legitimate trough, where is the reversal signal: at D or at the end of the arrow indicated at E?

10. True or false: At B, the series of rising peaks and troughs was reversed.
    A. True
    B. False

Citigroup
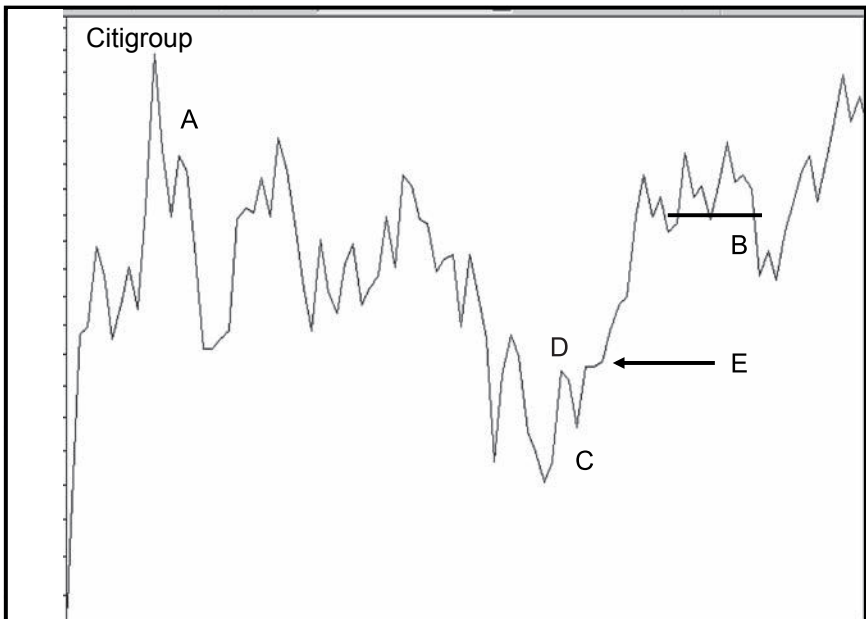
11. What is the most dominant or influential trend?
   A. Intermediate
   B. Short-term
   C. Primary
   D. Secular
   E. Socular

12. True or false: It's a good idea to go for consistency, but even better to go for perfection.
   A. True
   B. False

1

THE DEFINITION AND INTERACTION OF TRENDS

Answers

1. **Short, intermediate, and primary.** Any order qualifies as a correct answer. The secular trend is an important trend, but is not widely followed.

2. **A-B; B-C; C-D; and D-A**

3. **C.** Investors need to know the direction of the long-term trend to correctly position themselves for the long-term. Since a short-term contratrend moves often result in weak price movements and numerous whipsaws, short-term traders also need to form an opinion on the direction of the primary trend. A well-known trading rule is always trade in the direction of the trend.

4. **C.** Peak-and-trough analysis is a basic tool of technical analysis and should never be underrated.

5. **C.**

6. **A.** The principles of technical analysis can be applied to any security in any time frame.

7. **B.** Not only are they easier to spot, but generally speaking, the longer the time span, the more accurate the indicator.

8. **B.** No, the rally at A did not retrace between one-third and two-thirds of the previous decline.

9. **E.** Because the series of declining troughs was still intact at D.

10. **B.** Only the series of rising troughs was reversed at B. The rising peaks were still intact.

11. **D.** The secular trend determines the characteristics of the primary trend, which determines the characteristic of the intermediate, etc. There is no such thing as the "socular" trend.

12. **B.** Because perfection can never be achieved in financial markets whose prices are determined by psychology.

FINANCIAL MARKETS AND THE BUSINESS CYCLE

Questions

Subjects to Be Covered

The chronological relationship between the financial markets and the business cycle

When they peak and trough in the cycle

Understanding the significance of the leads and lags

The six stages

Double cycles

The role of technical analysis

1. Trends in financial markets are:
    A. Determined by investors' expectations of movements in the economy
    B. The effect those changes are likely to have on the price of the asset in which a specific financial market deals
    C. The psychological attitude of investors to these fundamental factors
    D. All of the above

2. Which is the correct chronological sequence for peaks and troughs in the financial markets over the course of the business cycle?
    A. Bonds, stocks, commodities
    B. Stocks, commodities, bonds
    C. Bonds, gold, stocks, commodities
    D. None of the above

3. When are commodities most likely to bottom during a recession?
    A. When it is particularly severe
    B. When the preceding commodity rally has been particularly speculative
    C. When stocks bottom earlier than usual
    D. Never

4. Why does the nature of price moves in bonds, stocks, and commodities differ between different business cycles?
    A. Because they discount different things
    B. Because each business cycle has different characteristics
    C. Because the leads and lags differ
    D. None of the above

5. True or false: If there is no recession there, is no financial market cycle.
    A. True
    B. False

6. If the lead between bonds and stocks at a market bottom is particularly long, you should expect to see:
    A. A weaker bull market in stocks
    B. A stronger-than-average bull market in stocks
    C. Nothing out of the ordinary
    D. A weak commodity bull market

7. When a recovery extends beyond the normal 4 years without a recession but the growth rate slows down noticeably in the middle:
    A. This is known as a double cycle.
    B. The financial markets do not experience the normal chronological sequence.
    C. The financial markets do experience the usual chronological sequence.
    D. A and C.

8. Knowing that there is usually a chronological sequence of financial markets is very interesting, but how can technical analysis be used to identify these points?
    A. By trial and error
    B. By using long-term moving averages and other techniques for individual markets
    C. By identifying the position of individual markets with several technical indicators and relating them to each other as a cross-check
    D. None of the above

9. Fill in the blank: When stocks and bonds are bullish and commodities are bearish, this is Stage _____

10. Which industry groups or sectors have a tendency to do well in Stages IV and V?
    A. Earnings driven
    B. Liquidity driven
    C. All sectors
    D. Sectors sensitive to interest-rate movements

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FINANCIAL MARKETS AND THE BUSINESS CYCLE

Answers

1. **D.**

2. **A.**

3. **B.** Because the speculative positions are being unwound very quickly due to margin calls. However, a sustainable commodity rally does not develop until the economy tightens sufficiently to result in a fundamental increase on the demand side.

4. **B.** Each cycle has its own characteristics, in that distortions develop in different sectors. For example, in 1970, it was housing; 1973 in the commodity arena; in the mid-1980s in the S&Ls; in 2000, the tech boom; in 2007 housing; and so forth.

5. **B.** Growth recessions (double cycles) still experience the financial market rotation.

6. **B.** This is because the long lead time indicates a weak economy in which substantial cost reductions result in lower breakeven points. When the economy expands, the increase in revenues goes straight to the bottom line. When profits rise, so normally do stock prices.

7. **D.**

8. **C.** B is correct as far as it goes, but C is a more complete answer because it uses the weight-of-the-evidence approach.

9. **Stage II**

10. **A.**

3

DOW THEORY

Questions

Subjects to Be Covered

The concept
The tenets of the theory
Who developed the Dow theory
How turning points are recognized
The theory's limitations

1. Which of the following statements are correct?
    A. Dow theory is not concerned with the direction of a move, only its duration.
    B. Dow theory is not concerned with the duration of a move, only its direction.
    C. Dow theory is concerned with both the direction and duration of a move.
    D. None of the above

2. Which of these statements is incorrect?
    A. Dow was concerned with forecasting stock prices.
    B. Dow developed and called the Dow theory after himself.
    C. Dow was concerned with forecasting business conditions through the use of stock prices.
    D. A and B

3. What is the signal that triggers a primary bull trend?
   A. A series of rising intermediate peaks and troughs by either average
   B. A dividend yield in the Dow Jones Industrial Average in excess of 6 percent
   C. Both averages confirming a series of rising intermediate peaks and troughs
   D. A and B

4. Which of the following are basic tenets of Dow theory?
   A. The averages discount everything.
   B. The Dow Jones Industrial Average must yield less than 3 percent before a top can be signaled.
   C. Price action determines the trend.
   D. Lines form market tops, but only after the Dow Jones Industrial Average yields less than 3 percent.
   E. The averages must confirm.
   F. Volume must expand on declines.
   G. A, B, E, and F
   H. A, C, and E

5. Who developed Dow's principles and organized them into something approaching the theory as we know it today?
   A. Dow himself
   B. Robert Rhea
   C. William Peter Hamilton
   D. Gartley

6. True or false: When compared to the buy-hold approach, Dow theory works just as well in secular bull markets as in multiyear trading ranges.
   A. True
   B. False

7. Looking at the following chart featuring intermediate rallies and reactions, what is happening at point A?
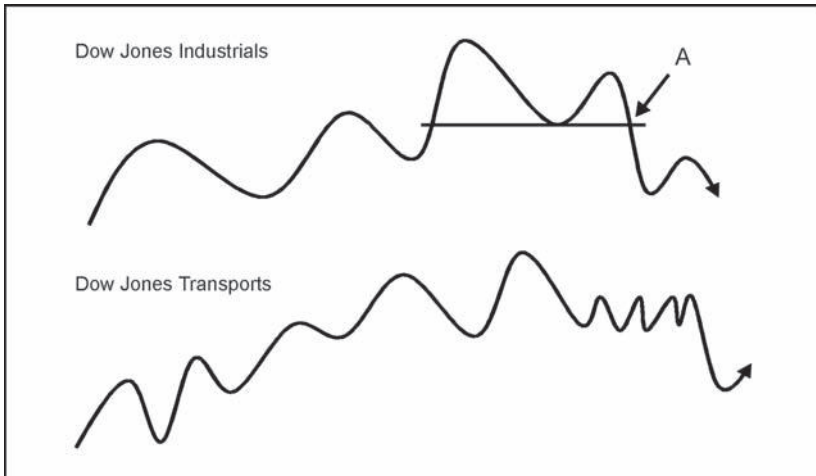
A. A Dow theory buy signal
B. A Dow theory sell signal
C. A sell signal by the Industrials that is unconfirmed by the Transports
D. A sell signal by the Transports that is unconfirmed by the Industrials

8. Which of these statements is correct?
A. Dow theory is easy to interpret if you follow the rules exactly.
B. Dow theory often leaves the analyst in doubt because it is sometimes difficult to identify intermediate price movements.
C. Because Dow theory has beaten the buy-hold approach for most of the twentieth century, it will continue to do so in the twenty-first.
D. None of the above

9. Which of the following are not tenets of Dow theory?
A. The averages discount everything.
B. The averages must confirm.
C. Volume is an integral part of the theory.
D. Price action determines the trend.
E. A, B, and C
F. A and B

10. If Dow theory unequivocally signals a primary trend reversal, this:
   A. Guarantees that the primary trend has reversed
   B. Is one piece of evidence, and a very important one, that the primary trend has reversed
   C. Is unlikely to result in a bear market because the theory is outdated
   D. Means that the size of the previous primary trend can be used as a basis for forecasting the duration and magnitude of the next primary trend
   E. B and D

3

DOW THEORY

Answers

1. **B.**

2. **D.**

3. **C.**

4. **H.**

5. **C.**

6. **B.** Dow theory tends to give whipsaws in strong secular bull markets.

7. **C.** The Industrials trigger a sell signal, but the Transports continue to trace out a line formation. When the price breaks below the lower level of the line, a confirmation is given and a Dow theory bear market is confirmed.

8. **B.**

9. **C.** Volume is a background factor used to help interpret market turning points; it is not an integral part of the theory.

10. **B.** Dow theory offers just one piece of evidence that the trend has reversed. It certainly does not guarantee that a new primary trend is unfolding, and definitely does not forecast the magnitude and duration of the next one. This is because there is no known method of accurately and consistently forecasting the magnitude and duration of a forthcoming price trend.

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4

TYPICAL PARAMETERS FOR INTERMEDIATE TRENDS

Questions

Subjects to Be Covered

The relationship between intermediate and primary trends
The importance of intermediate trends
Differentiating between pro- and countertrends
Reasons for intermediate trends
The nature of intermediate trends

1. Why is it helpful to have an understanding of the character and duration of a typical intermediate trend?
    A. To help asses when the next short-term trend will begin
    B. To help assess when the next primary trend is likely to begin
    C. To improve success rates in trading
    D. B and C

2. Recognizing that there are numerous exceptions to this rule, in classic technical theory, how many intermediate trends does a primary trend comprise?
    A. 7
    B. 3
    C. 5
    D. None of the above

3. A bear market intermediate rally:
   A. Typically lasts for 2 weeks
   B. Is a countercyclical trend
   C. Sometimes develops at the end of a bull market
   D. None of the above applies

4. Which of the following apply to intermediate corrections in a bull market?
   A. They can be extremely treacherous.
   B. They are usually easy to short and can therefore be extremely profitable.
   C. They last longer than an intermediate price movement.
   D. A and C

5. Which of the following are legitimate causes for an intermediate correction in a bull market?
   A. Deteriorating political climate
   B. Falling interest rates
   C. Rising interest rates
   D. Reduced expectations for corporate profits
   E. Traders covering short positions
   F. A, B, and E
   G. A, B, C, and D
   H. A, C, and D

6. Based on Gartley's observation for the stock market between 1895 and 1935, how many phases of liquidation is the norm for an intermediate correction in a bull market?
   A. 1
   B. 2
   C. 3
   D. None of the above

7. True or false: A secondary correction must be an upward or downward price movement.
   A. True
   B. False

8. Which statement best describes the difference between a primary intermediate price movement and a secondary reaction?
   A. A secondary reaction develops in a bull market, and a primary intermediate price movement develops in a bear market.
   B. A primary intermediate price movement develops in a bull market, and a secondary reaction develops in a bear market.
   C. A primary intermediate price movement develops in the direction of the main trend, and a secondary reaction is a countercyclical price movement.
   D. None of these answers is correct.

9. Intermediate trends in security prices are determined by:
   A. The attitude of market participants to the emerging fundamentals
   B. The level of interest rates
   C. Corporate profits and other fundamentals
   D. None of the above

10. As a general tendency, which statement is correct?
    A. The bigger the preceding intermediate rally, the larger the retracement.
    B. The smaller the preceding intermediate decline in a bear market, the smaller the bear market rally.
    C. The larger the intermediate rally in a bull market, the smaller the retracement move.
    D. None of the above

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4

TYPICAL PARAMETERS FOR INTERMEDIATE TRENDS

Answers

1. **D.** Correctly identifying intermediate trends has a dual function. First, it serves as evidence that the prevailing primary trend is about to or has just reversed. Since intermediate price movements last for many weeks or even months, they also provide useful trading opportunities.

2. **C.** Three is the established norm, but there are numerous exceptions to this rule.

3. **B.** Typically, an intermediate bear market rally will last for a much shorter period than an intermediate rally in a bull market. The average for the former between 1932 and 1982 was 7 weeks, and that of the latter was 24 weeks.

4. **A.** Contratrend moves are more liable to end up as whipsaws than pro-trend price movements.

5. **G.** At any one time there are four major influences on prices: psychological, technical, monetary, and economic. All represent legitimate reasons that justify a correction. Three were included in the answer.

6. **B.** This is not true in every case, but the second wave of liquidation often heralds in the "give up" phase when participants are so disgusted with the security in question that they are willing to throw in the towel at any cost.

7. **B.** Secondaries can also take the form of a sideways price movement.

8. **C.** Primary intermediate price movements tend to last much longer and experience greater magnitude than secondary corrections.

9. **A.** Although the level of interest rates and other fundamental factors are important, it is the attitude of market participants that is crucial. Often, they will ignore factors that would previously have been the cause for an intermediate price movement and vice versa.

10. **C.** This is not always the case, but generally speaking, the stronger the rally, the weaker the retracement. Often, toward the end of a secondary reaction in a bull market, commentators reflect the view of many that prices are expected to correct much further—after all, they have only retraced a fraction of the previous advance. If this view is widespread, you can rest assured that the correction is probably over and that a new upleg is about to begin.

5

HOW TO IDENTIFY SUPPORT AND RESISTANCE ZONES

Questions

Subjects to Be Covered

Support and resistance defined

Determining likely support and resistance points

Establishing the significance of potential support/resistance areas

1. True or false: Support is a concentration of supply sufficient to halt a rally temporarily.
   A. True
   B. False

2. True or false: The price is likely to find resistance at the black line in the following chart if it falls any further.
   A. True
   B. False
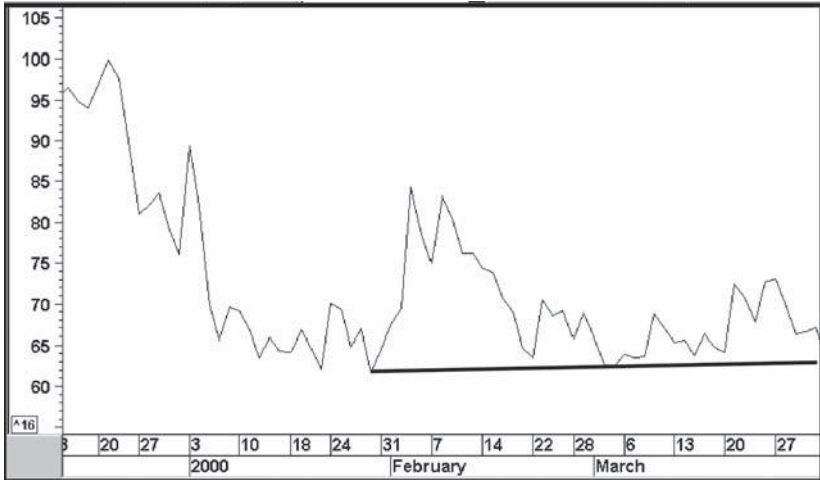
3. Name technical characteristics described in the text that could result in a support or resistance point.
   i. Round numbers
   ii. Emotional points
   iii. Significant trendlines
   iv. Moderate overbought levels
   v. Proportionate retracement and projection levels
  A. i, ii, and v
  B. i, ii, iii, and v
  C. i, ii, iii, iv, and v
  D. iv and v

4. A support/resistance area gains its significance from:
  A. The amount of activity at a specific point
  B. The speed of the previous move
  C. The number of people who were previously stopped out at that level
  D. A and B

5. Fill in the blanks: Support is a concentration of d_____ sufficient to t_____ halt a decline.

6. When the copper price declines, where would the next support level likely reside?

A. A

B. B

C. C

D. D

E. A and B

7. Which statement is correct?

A. Support reverses its role to resistance when the price bounces from that support level.

B. Resistance reverses its role to support on the way up.

C. Neither is correct.

8. True or false: Up trendlines and rising moving averages represent dynamic levels of support when the price falls to their vicinity.

A. True

B. False

9. If the price rallies and then experiences a 61.8 percent Fibonacci retracement, you should:
   A. Sell because a new downtrend is under way
   B. Buy without question because such retracements guarantee a support level and therefore a rally
   C. Expect the probability of a rally because it could be a support level, but always consider what the other indicators are doing as well
   D. None of the above

10. True or false: The significance of a support or resistance zone depends upon the amount of an asset that previously changed hands in that area, the speed and extent of the previous price move, and the period of time that has elapsed since the zone was last encountered.
   A. True
   B. False

5

HOW TO IDENTIFY SUPPORT AND RESISTANCE ZONES

Answers

1. **B.** The question defines resistance.

2. **B.** It will find support. Support develops on the way down, resistance on the way up.

3. **B.** Moderate overbought levels do not hold a great amount of significance. Besides, the question asked for descriptions in the text and there were no references to "moderately overbought conditions."

4. **D.**

5. **demand, temporarily**

6. **D.** That's because D represents two previous minor lows and previous highs and lows represent potential support levels.

7. **C.** Support reverses its role to resistance when penetrated on the downside. Resistance reverses its role to support when penetrated on the upside.

8. **A.**

9. **C.** Retracements are only intelligent places to expect a reversal, and certainly not a guarantee. Always adopt a "weight of the evidence" approach for superior results.

10. **A.**

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6

TRENDLINES

Questions

**Subjects to Be Covered**

Trendlines
Types of trendline breaks
Determining their significance
Ratio versus arithmetic scaling
Extended and exhaustion trendlines

1. How many times must a line be touched to qualify as a trendline?
   A. Once
   B. Three times
   C. Twice
   D. None of the above

2. Which trendline has the greatest significance?
   A. A 10-minute trendline
   B. A 5-year trendline
   C. A 2-year trendline
   D. A 10-year trendline

3. What are the two types of trendline breaks? Please write in the answer.
   A. R_____
   B. C_____

4. Construct a trendline on the following chart that best reflects the underlying downtrend.
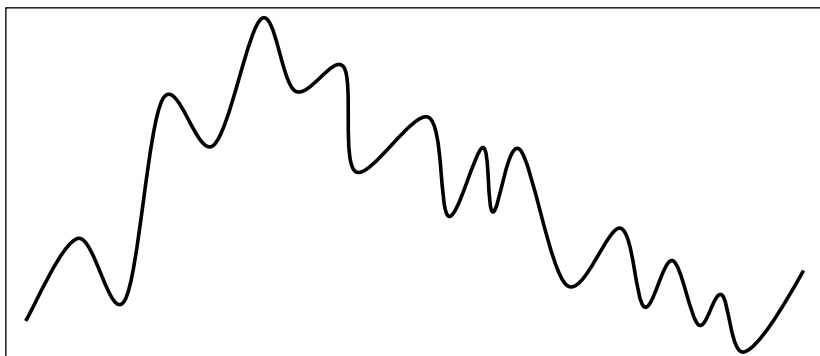
5. If a trendline is violated and a reversal price pattern is completed at roughly the same time, what can you conclude?
A. That prices will consolidate around the prevailing trend
B. That the prevailing trend will extend
C. That the trend will reverse
D. That the trend will initially reverse and then continue in its previous direction

6. Which is the most significant trendline on this chart based on the principles outlined in the text? Tip: The correct line is not necessarily the one followed by the biggest move.
A.
B.
C.
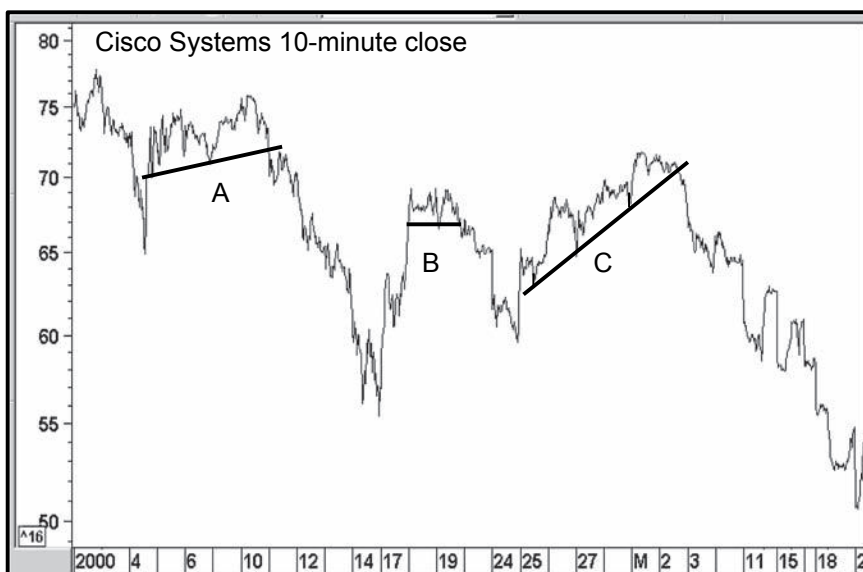
7. Which statement is correct?
   A. Up trendlines are violated quicker on a ratio scale, and down trend-
      lines are violated quicker on an arithmetic scale.
   B. Down trendlines are violated quicker on a ratio scale, and up trend-
      lines are violated quicker on an arithmetic scale.
   C. Up trendlines are violated quicker on a ratio scale and on an arith-
      metic scale.
   D. Down trendlines are violated quicker on a ratio scale and on an
      arithmetic scale.

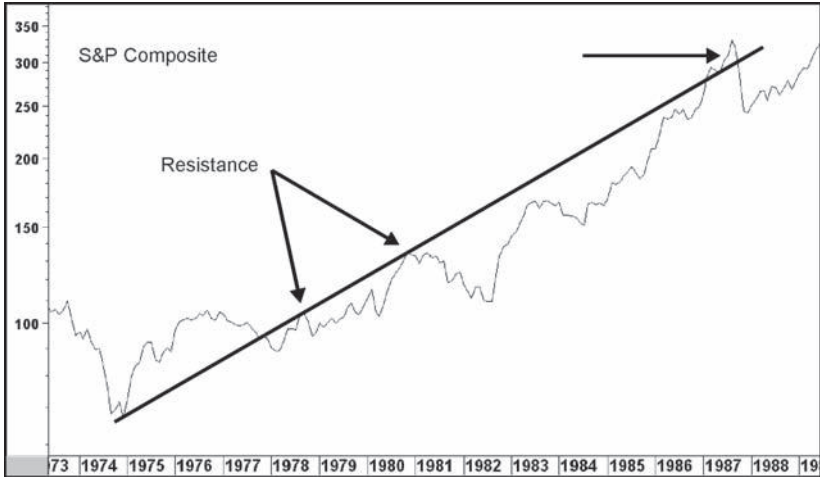8. In this chart, is the measuring objective drawn correctly?
   A. Yes
   B. No

9. Fill in the missing blanks: When two down trendlines can be drawn in
   parallel fashion, this is known as a trend c_____. In a rising market, the
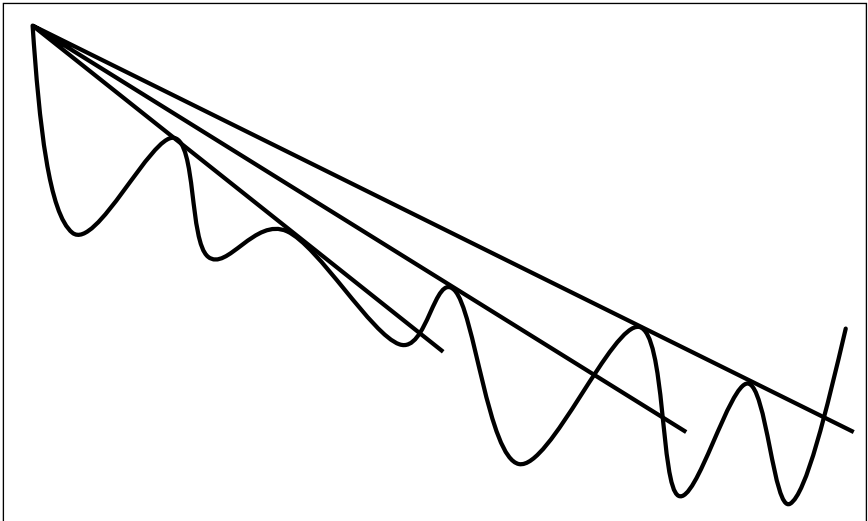   upper line is known as a r_____ line.

10. What is the characteristic being represented in this chart of the S&P Composite?

E_____

11. What is the principle being reflected in this diagram?

12. Once a trendline has been violated:
   A. You can forget about it
   B. Draw another line
   C. Extend it to look for future support/resistance levels
   D. None of the above

13. A trendline that touches only one point is:
   A. A good trendline
   B. A poor trendline
   C. Likely to be penetrated soon
   D. Not a trendline

14. Trendlines obtain their significance from three things. What are they?
   A. The l_____ of the line
   B. The number of times it has been t_____ or approached
   C. The a_____ of ascent or descent

15. Fill in the blanks: A trendline is a dynamic area of s_____ and r_____.

16. True or false: A trendline violation with an extremely sharp angle of ascent is more likely to be followed by a reversal than a consolidation.
   A. True
   B. False

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TRENDLINES

Answers

1. **C.** A trendline that has only been touched once is not a real trendline because it could be drawn at virtually any angle and would not reflect the underlying trend.

2. **D.** The longer the line, the greater its significance.

3. **Reversal and continuation or consolidation**

4. This line is touched or approached on numerous occasions. The one false break, flagged by the right-pointing arrow at the 1987 peak, adds to its significance because the price was unable to hold above the line, thereby demonstrating its importance as a resistance area. Too many breaks of this nature would reduce the significance of the line.
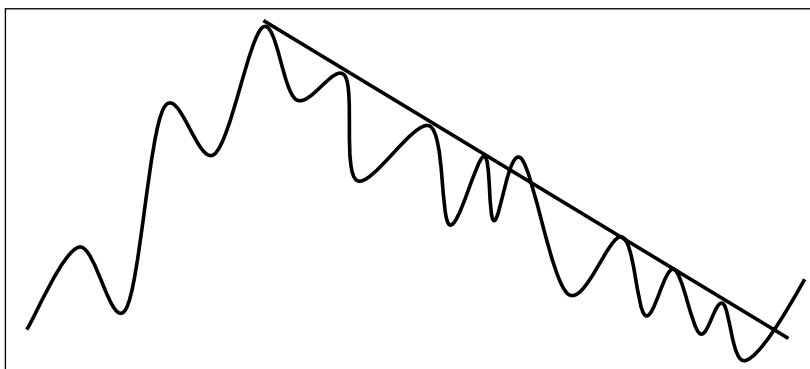
5. **C.** The completion of the price pattern indicates that a reversal is likely.

6. **C.** Because it is longer, has been touched or approached on several occasions, and is not too steep.

7. **A.**

8. **B.** The measuring objective is calculated by taking the maximum distance between the price and the trendline. In this case, the bull market peak in March 2000 would have been the place to take the measurement.

9. **channel, return**

10. An **exhaustion** move (score correct if you used the word "exhaustion")

11. **The corrective fan principle** (score correct even if you missed "corrective")

12. **C.** An extended line can often be of great significance. If the price ever returns to it, the trendline's former role is then reversed. What was support now becomes resistance and vice versa.

13. **D.** A trendline that touches one point is a line drawn in space and is unlikely to reflect the underlying trend.

14. The **length** of the line
The number of times it has been **touched** or approached
The **angle** of ascent or descent

15. **support, resistance**

16. **A.** Because an extremely sharp uptrend or downtrend is unsustainable, a trendline violation is likely to be followed by an extension of the trend, but at a slower rate.

7

BASIC CHARACTERISTICS OF VOLUME

Questions

Subjects to Be Covered

Volume characteristics in rising trends

Volume characteristics in falling trends

Volume characteristics at turning points

1. Based on current trends of volume and price, what is likely to happen next in the following diagram in terms of the next major move?
   A. The price will rise.
   B. The price will consolidate.
   C. The price will soon fall.
   D. The price is guaranteed to fall.
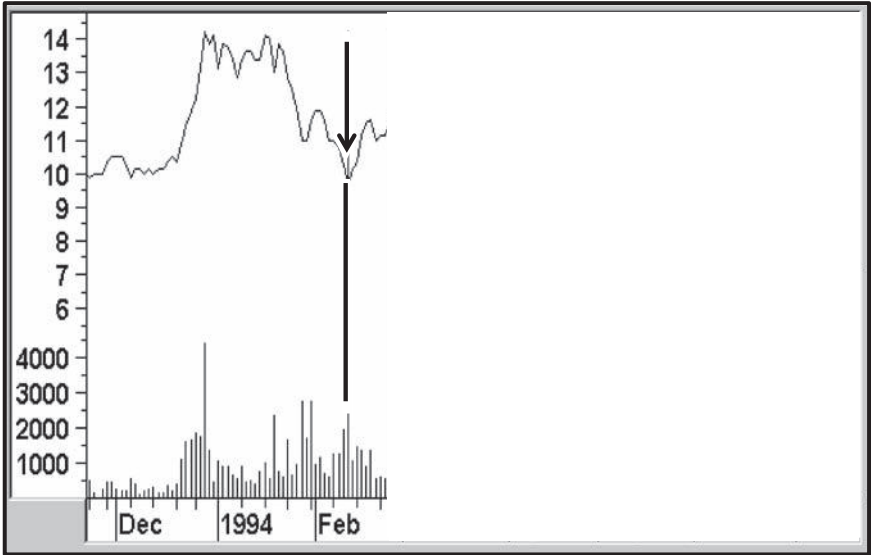
2. True or false: In all situations when the price rises and volume falls, this is bearish.
   A. True
   B. False

3. Which is generally the strongest and more reliable signal?
   A. A selling climax
   B. Record volume
   C. Declining volume
   D. Rising volume

4. What is likely to happen next in the following diagram?
   A. The price will rally.
   B. The price will decline.
   C. A trading range
   D. None of the above
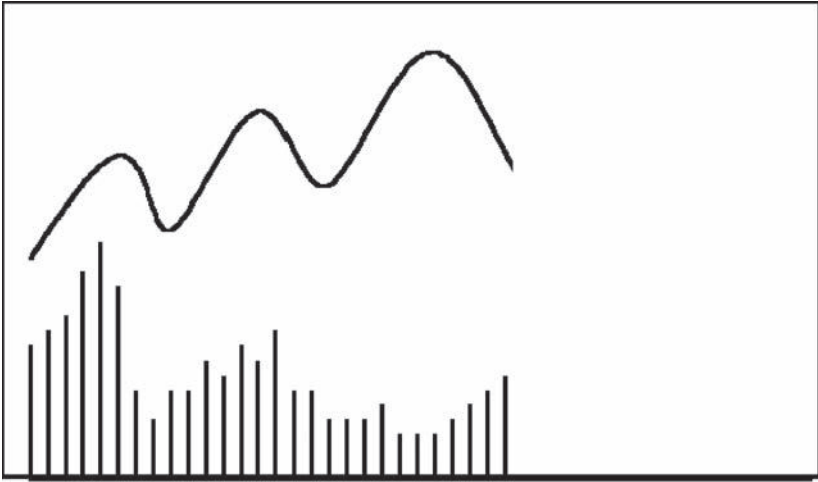
5. What best describes the volume price relationship in the following chart?
   A. A Selling climax
   B. Exhaustion
   C. Rising price and falling volume
   D. Rising volume and falling price
   E. Nothing unusual
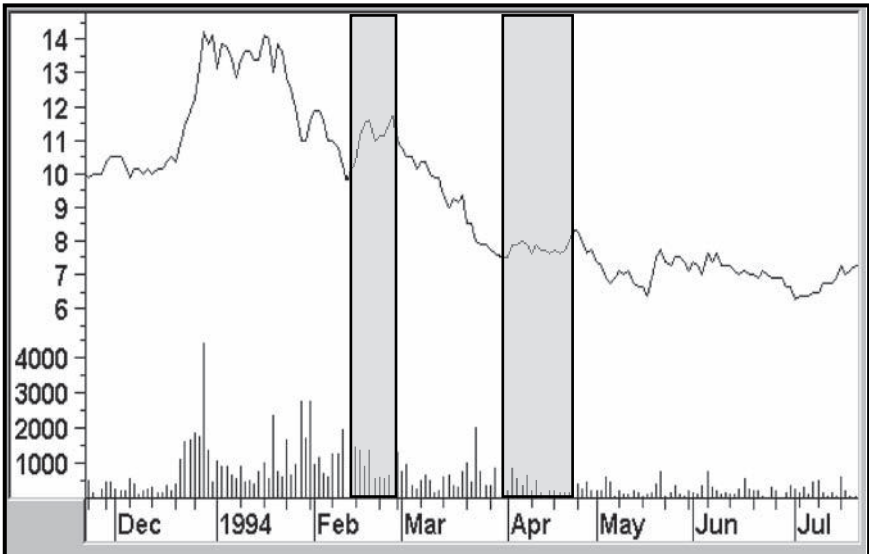
6. Using the right part of each chart that follows, i.e., the most recent data, please match the chart with the description by filling in the blank with the appropriate chart letter.
   A. Selling climax _____
   B. Buying climax _____
   C. Negative volume divergence _____
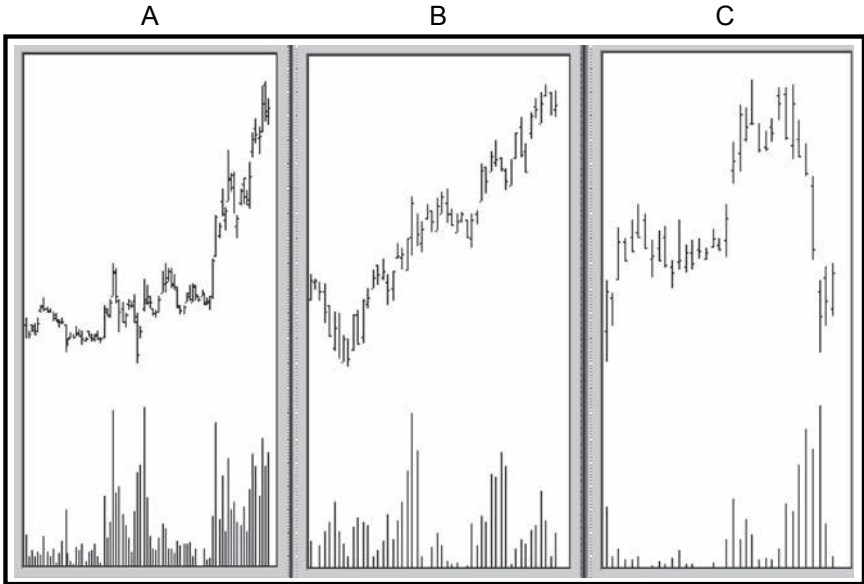
7. Which is the normal situation?
   A. Volume goes with the trend.
   B. Volume leads price.
   C. Volume contracts when prices decline.
   D. All of the above

8. If price rises and volume contracts and then price falls and volume expands:
   A. This is bearish.
   B. This is bullish.
   C. This is normal action.
   D. There is no indication of whether this is bullish or bearish.

9. When a rally culminates in a parabolic blow-off of volume, it is:
   A. A certain sign of a top
   B. A sign of exhaustion and therefore the odds favor a top
   C. A sign that one more rally to a new high on low volume should be expected
   D. None of the above

10. Which of the following statements is true?
    A. Volume usually goes with the trend.
    B. Volume often leads price.
    C. Volume is a totally independent variable from price, and this helps our ability to interpret charts.
    D. Volume does not "speak" to us all the time.
    E. All of the above
    F. A and B

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7

BASIC CHARACTERISTICS OF VOLUME

Answers

1. **C.** When volume falls and the price rises, the trend is suspect and usually results in a decline. While the odds favor such an outcome, there is certainly no guarantee that this will happen.

2. **B.** When the price rises from a selling climax on falling volume, this is normal. Since selling climaxes are normally bullish, this represents an exception. Also, we find situations in the charts when the rising price/falling volume rule does not work, even though this is the norm.

3. **B.** While not a perfect indicator, record volume is usually a strong and reliable signal.

4. **B.** Because rising volume and falling prices is a bearish characteristic.

5. **C.** This is usually a bearish characteristic.

6. **C, A, and B.**

7. **D.**

8. **A.** A rising price and falling volume is abnormal and bearish. So, too, is declining price and rising volume.

9. **B.** A parabolic blow-off is normally associated with a top. Since it is an exhaustion characteristic, it is highly unlikely that a new high would be seen immediately after the blow-off. **A** is wrong because there are no certainties in technical analysis.

10. **E.**

8

CLASSIC PRICE PATTERNS

Questions

Subjects to Be Covered

Transitional phases in markets

Identification of price patterns

Ratio and arithmetic scaling

Significance of price patterns

Measuring implications

Determining the validity of a breakout

1. To the market technician, the transitional phase has great significance because:
   A. It is easy to spot.
   B. It always takes the form of a V formation.
   C. It marks the turning point between a rising and a falling market.
   D. A and B

2. How are transition phases signaled in the markets?
   A. By monitoring stories in the media
   B. By adopting the Dow theory
   C. By quiet market action
   D. By clearly definable price patterns or formations

3. The "line" formation developed from Dow theory is similar to:
   A. A triangle
   B. A flat head-and-shoulders top
   C. A rectangle
   D. None of the above
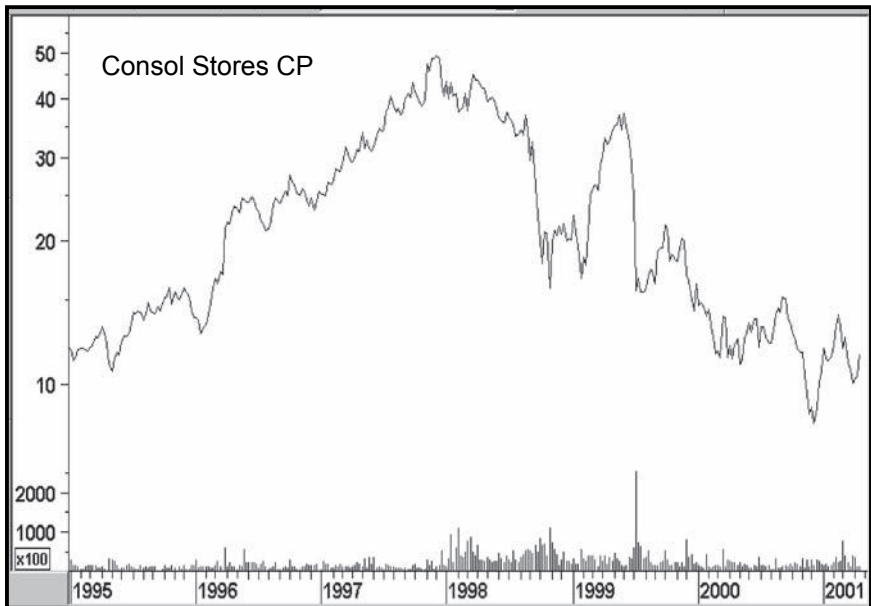
4. Please circle a head-and-shoulders top in this chart.

Consol Stores CP
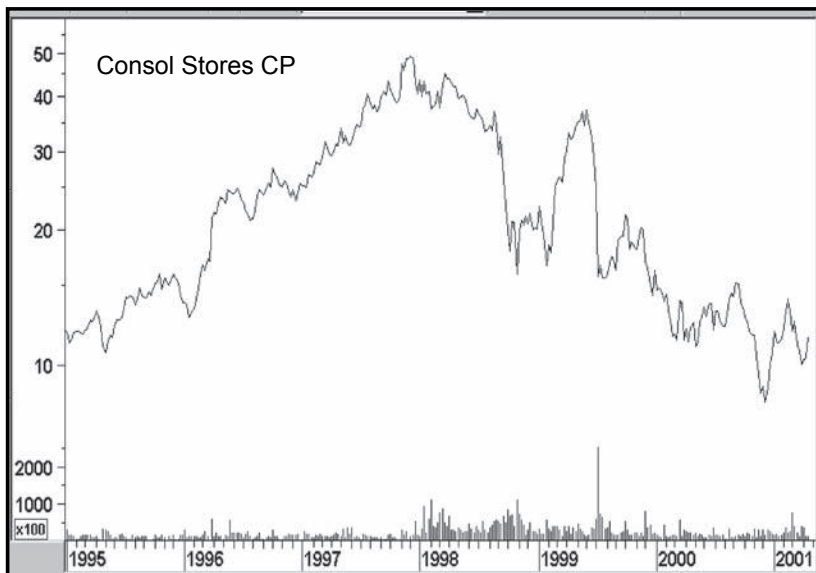
5. Please circle a double bottom in this chart.

Consol Stores CP
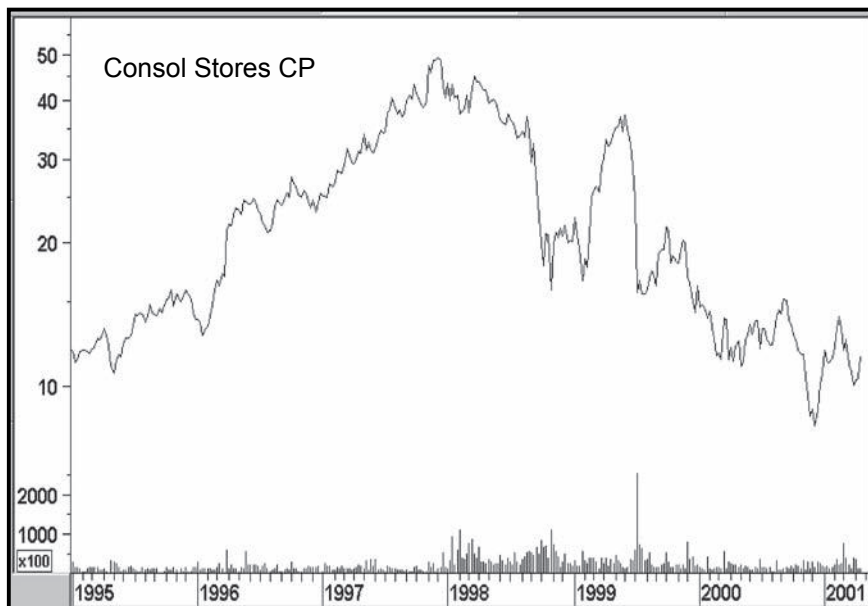
**6.** Please circle a failed reverse head and shoulders in this chart.

7. Why do you think the inverse head and shoulders in the chart failed?
   A. Because volume shrank a bit on the breakout
   B. Because it was a countercyclical move
   C. The pattern was too small
   D. A and B

8. Match the opposites. For example, A = D, B = F, etc.
   A. Distribution   A. Accumulation
   B. Head-and-shoulders top   B. Descending right-angled triangle
   C. Resistance   C. Inverse head and shoulders
   D. Valid breakout   D. Contratrend move
   E. Pro-trend move   E. Whipsaw
   F. Ascending right-angled triangle F. Support

9. True or false: With a ratio scale, each vertical inch represents a doubling in the price.
   A. True
   B. False

10. What advantage does the ratio scale have over arithmetic scaling?
    A. All moves are measured proportionately and prices tend to move in proportion because they reflect human psychology.
    B. On long-term charts, price swings at lower levels are visible.
    C. Measuring objectives from downside pattern completions are more accurate.
    D. All of the above

11. During the formation of a price pattern, the direction of the breakout is not known.
    Therefore, you should assume:
    A. That the price will break in the direction of the prevailing trend
    B. That toppy-looking formations will break to the downside
    C. That formations that look like bases will break to the upside
    D. B and C

12. Which are the two most important determinants of the significance of a price pattern?
    A. The strength of the rally or reaction preceding it
    B. Its size and depth
    C. The amount of volume on the breakout
    D. A and B

13. Draw the trendlines for the patterns in the ellipses and name these formations starting with the one on the left.
    A. _____
    B. _____
    C. _____
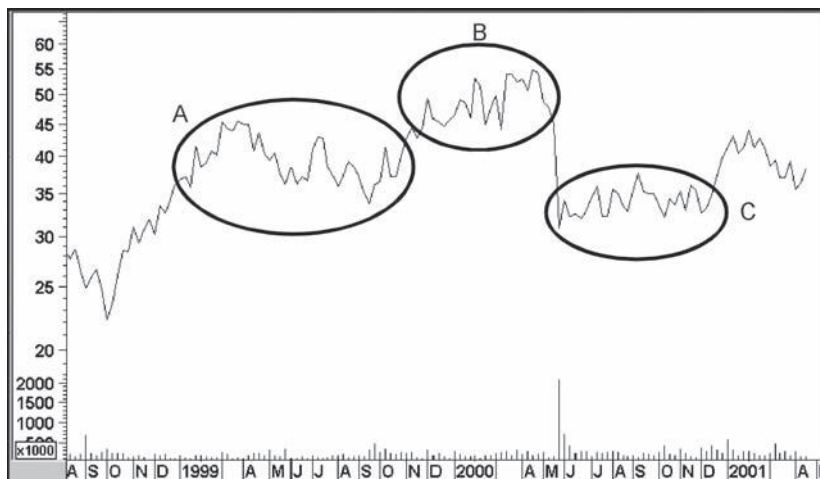
14. What is the difference in the measuring implication for a consolidation rectangle and a reversal rectangle? Both are drawn on a ratio scale and have the same depth.
    A. The consolidation rectangle will have a greater price objective.
    B. The reversal rectangle will have the larger price objective.
    C. There is no difference.
    D. The rectangle that took the longest to form will have the greater price objective.

15. Some of the factors that you should consider in determining the validity of a breakout are:
    A. The volatility of a security
    B. Whether the breakout holds for more than two sessions
    C. The time frame of the chart (daily, intraday, weekly, etc.)
    D. A and B
    E. B and C
    F. A, B, and C

16. True or false: The level of volume on an upside breakout is important.
    A. True
    B. False

17. True or false: The level of volume on a downside breakout is critical.
    A. True
    B. False

18. A head-and-shoulders top consists of:
    A. A final rally and two smaller rallies
    B. A final rally and at least three smaller rallies
    C. A final rally separated by two smaller rallies
    D. Two small rallies that precede a large rally

19. What are the distinguishing characteristics of an H&S top?
    A. Heavy volume on the right shoulder and head
    B. Light volume on the right shoulder and heavy volume on the downside breakout
    C. Heavy volume on the left shoulder and/or head, light volume on the right shoulder
    D. Heavy volume on the left shoulder and heavy volume on the breakout

20. What are the distinguishing characteristics of an H&S bottom?
  A. A final decline separated by two smaller declines
  B. A noticeable expansion of volume during the formation of the right shoulder
  C. A noticeable expansion of volume during the breakout
  D. A and C

21. Ideally, the volume level during the formation of the second top and second bottom in a double top and double bottom formation should be:
  A. More volume for the second top and less volume for the second bottom
  B. Less volume for the second top and more volume for the second bottom
  C. Significantly less volume in both instances than the initial top or bottom
  D. None of the above

22. True or false: Triangles are generally more reliable than H&S tops.
  A. True
  B. False

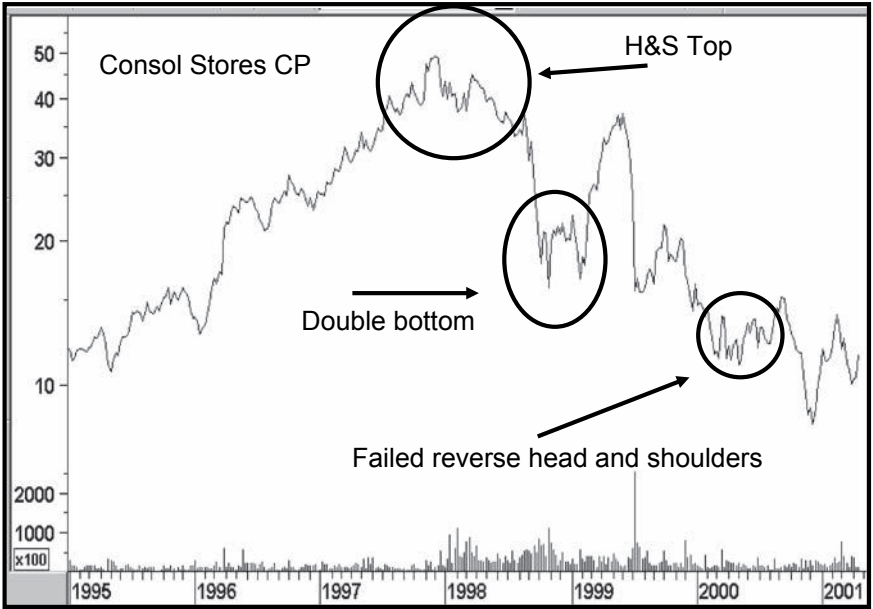**23.** From which direction is the breakout likely to come?
  A. Up
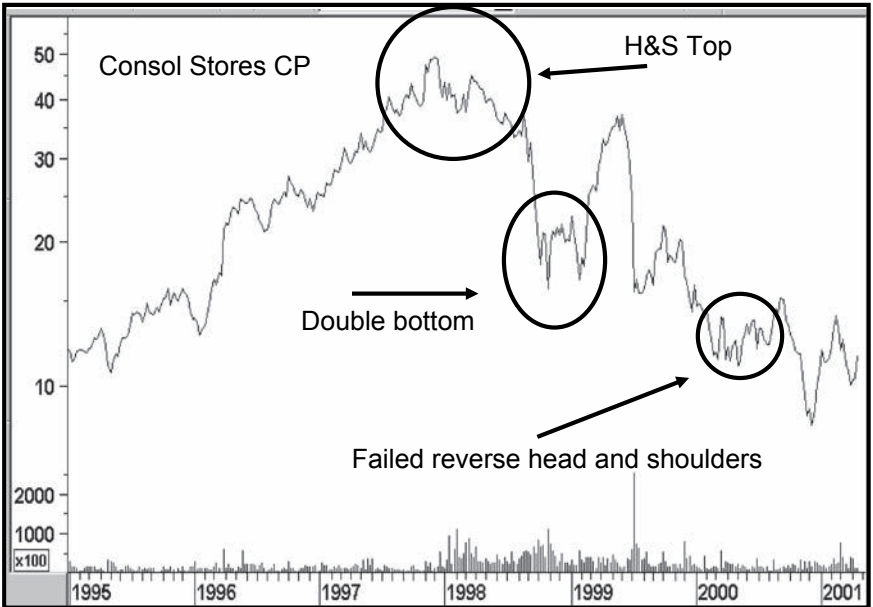 B. Down
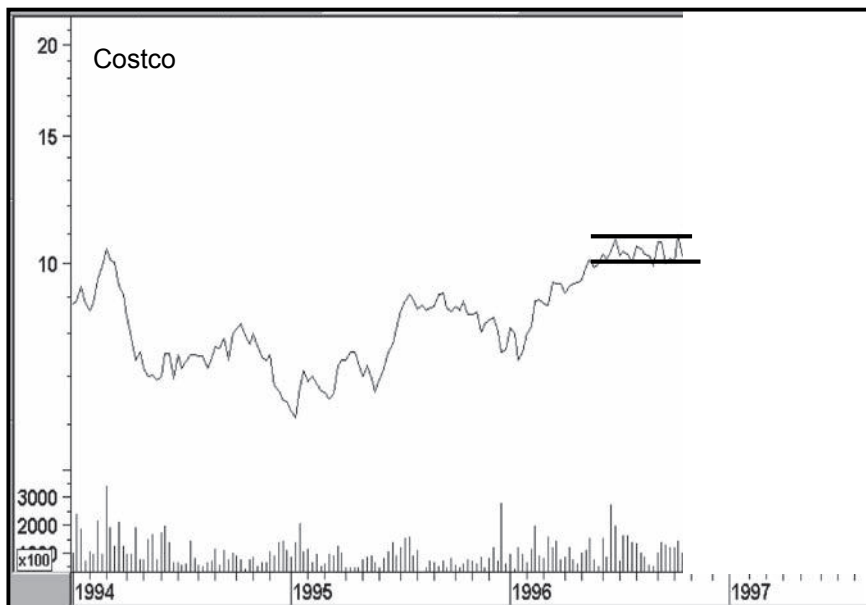
CLASSIC PRICE PATTERNS

Answers

1. **C.** These transitional periods typically show up on the charts as price formations or price patterns.

2. **D.** This is not always so, but it is usually the case.

3. **C.**

4.
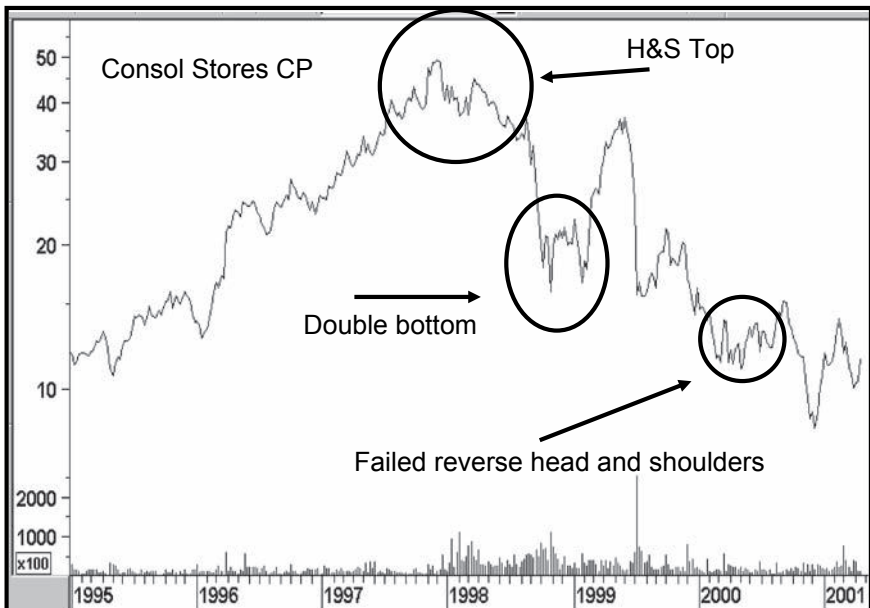
5.

6.

7. **D.**

8. **A = A**
   B = C
   **C = F**
   D = E
   E = D
   F = B

9. **B.** With a ratio scale, each vertical distance represents the same proportionate move. It would depend on the scaling how much an inch represented. It could be anything—a doubling, a 10 percent move, a 25 percent move, etc.

10. **D.**

11. **A.** It should always be assumed that the prevailing trend is intact until the weight of the evidence proves otherwise.

12. **B.** The longer a pattern takes to form, the greater the battle between buyers and sellers and, therefore, the more significant the outcome. The depth also reflects the degree of psychological swing taking place between buyers and sellers.

13.
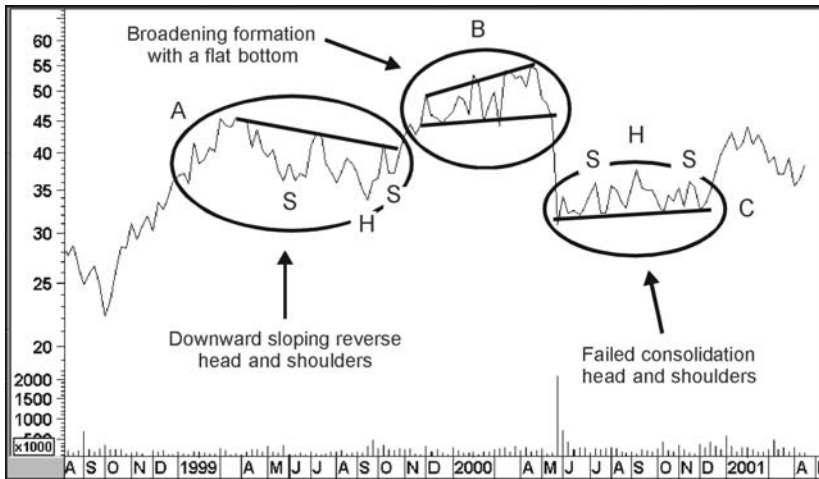
14. **C.** The measuring objective comes from the depth, not the size, of the pattern. Since both have the same depth, their measuring objectives will be identical.

15. **D.** The time frame has no influence on the validity of a breakout, only its significance. A breakout on a daily chart is not as important as one on a monthly chart, etc.

16. **A.** If volume is decreasing on the breakout, it is suspect. If it is increasing substantially, this expanded volume gives credence to the breakout.

17. **B.** Price can fall on contracting or expanding activity, and the breakout is valid in either case. However, if it is expanding, this gives greater weight to the signal.

18. **C.**

19. **C.** The level of volume on a downside breakout is not important, but relatively light volume on the formation of the right shoulder is.

20. **D.**

21. **C.**

22. **B.** An H&S is usually more reliable than triangles. The reliability of triangles will increase the more times the boundary lines have been touched or approached.

23. **A.** Up because it is always assumed that the prevailing trend is in force until proven otherwise. The answer is on the chart.
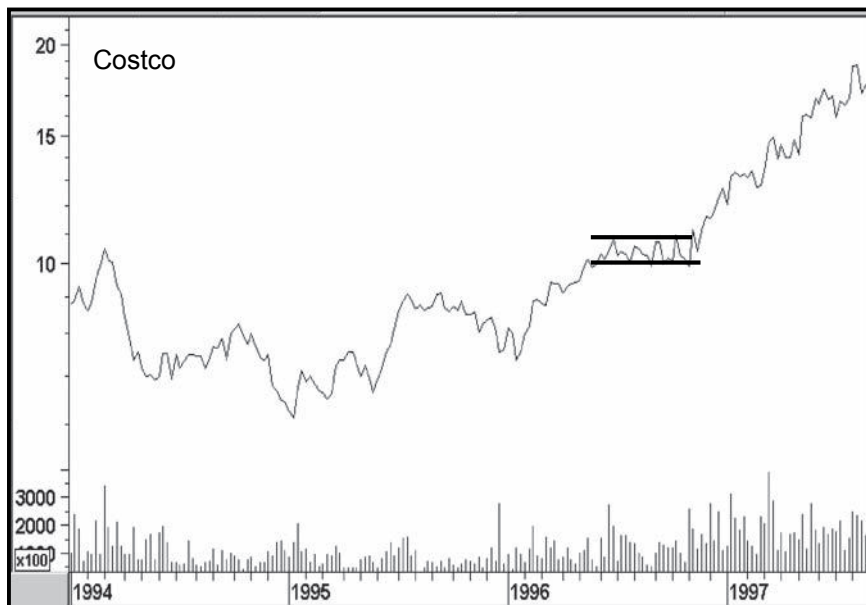
9

SMALLER PRICE PATTERNS AND GAPS

Questions

**Subjects to Be Covered**

Differentiation between patterns

Pattern recognition

Types of gaps and their significance

1. How long does a typical flag take to form on a daily chart?
   A. 1 week
   B. 10 weeks
   C. 3 weeks
   D. 3 months

2. A pennant is formed with:
   A. Two converging trendlines
   B. Two diverging trendlines
   C. Two parallel lines
   D. Two parallel lines that slope down in a downtrend and up in an uptrend

3. None of the patterns shown in this chart are perfect. Based on the description in Chapter 9, which does pattern B most closely resemble?
   A. A pennant
   B. A flag
   C. A wedge
   D. None described
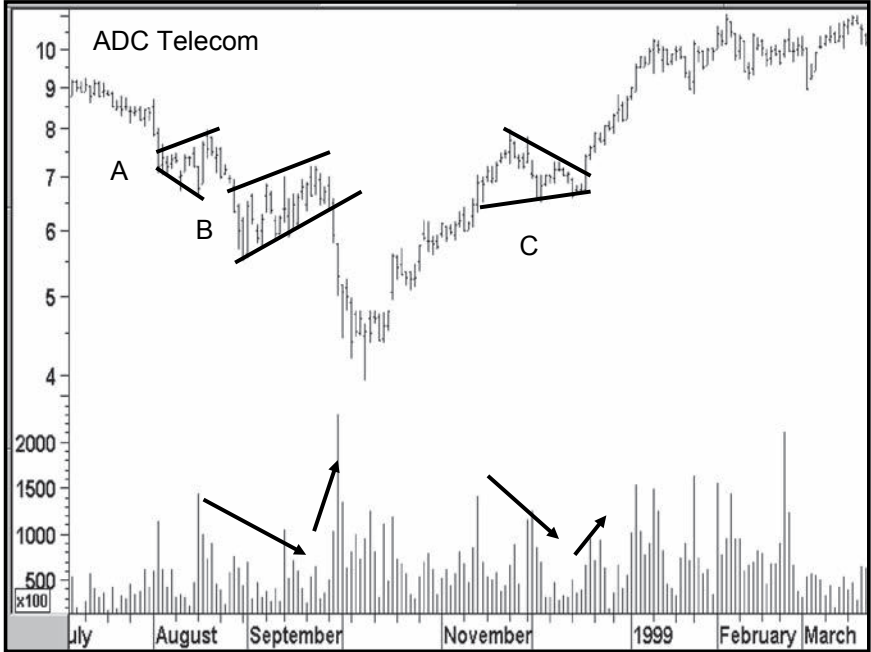
4. None of the patterns shown in the preceding chart are perfect. Based on the description in Chapter 9, which does pattern A most closely resemble?
   A. A pennant
   B. A flag
   C. A wedge
   D. None described

5. None of the patterns shown in the preceding chart are perfect. Based on the description in Chapter 9, which does pattern C most closely resemble?
   A. A pennant
   B. A flag
   C. A wedge
   D. None described

6. If a wedge develops in a bear market, what should you expect to see on the breakout in order to see a sharp price move?
   A. A noticeable expansion of volume and a decisive price break
   B. No expansion of volume and an indecisive break
   C. No noticeable pick up in volume, but a decisive price break
   D. None of the above

7. What pattern has the characteristics in which the price action is bounded by two rising converging lines that meet some way after the apex? The pattern develops over a 3-week period on shrinking volume.
   A. A bearish flag
   B. A bullish wedge
   C. A bearish pennant
   D. None of the above
   E. A bearish wedge

8. True or false: The volume action of a rounded top and a saucer bottom are vastly different.
   A. True
   B. False

9. Which of the following statements are correct?
      i. Gaps on intraday charts are always filled.
      ii. Gaps on all charts are usually filled.
      iii. Gaps are more common on weekly than daily charts.
      iv. Gaps are more common on intraday than daily charts.
   A. i and iv
   B. ii and iv
   C. i and iv
   D. i and iii

10. Please match the following, e.g., A = C; B = A, etc.

A. Breakaway gaps   A. develop at the end of a trend

B. Area gaps   B. develop during a trend

C. Exhaustion gaps   C. develop during a trading range

D. Continuation gaps   D. develop as a price is breaking out from a trading range

11. Please fill in the blanks: A gap is an e_____ point on a chart. The upper and lower points of a gap often become future s_____ and r_____ points.

12. Gaps are most common on:

A. Daily charts

B. Weekly charts

C. Intraday charts

D. They are equally common on all charts

SMALLER PRICE PATTERNS AND GAPS

Answers

1. **C.** This is because it is a period of controlled profit- or loss-taking. Anything longer than 3 to 4 weeks is usually indicative of something else.

2. **A.** One line slopes up, the other down.

3. **B.** Ideally, a flag should be formed when the trend of volume is noticeably declining and shrinks to almost nothing, thereby indicating a fine balance between buyers and sellers. That's not true in this case, though volume certainly expands on the downside break.

4. **D.** These trendlines are diverging and do not correspond with any of the patterns described in Chapter 9. If anything, this is a small broadening formation.

5. **D.** C is very close to a pennant, but a pennant consists of two converging lines that slope in the same direction. This is a small triangle where the lines slope in different directions.

6. **A.** An expansion of volume on a downside break is not mandatory, but if it does take place, it emphasizes the strength of the violation because it indicates selling pressure as opposed to a lack of buyers.

7. **E.** The description is of a bearish wedge, not a bullish wedge where the two converging lines are declining.

8. **B.** The volume patterns are more or less identical. It is the price action that is totally different.

9. **B.** Gaps are usually, but not always, filled. Since opening and classic gaps both appear on intraday charts, and only classic gaps appear on daily charts, intraday charts experience more gaps.

10. **A = D**
    B = C
    C = A
    D = B

11. **emotional, support, resistance**

12. **C.**

10

ONE- AND TWO-BAR PRICE PATTERNS

Questions

Subjects to Be Covered

Preconditions for one- and two-bar price patterns

Differentiating between the various patterns

How they should be interpreted

1. True or false: To qualify as an outside bar, it must contain all of the following elements:
    i. It should be preceded by a strong price trend.
    ii. It should totally encompass the previous bar's trading range.
    iii. It should gap up or down on the previous bar.
    A. True
    B. False

2. Which of the following is not true?
    A. One- and two-bar patterns have only short-term significance.
    B. They must be preceded by a strong price trend.
    C. When all of the characteristics are present, they can always be relied upon to signal strong trend reversals.
    D. One- and two-bar patterns should be interpreted in terms of shades of gray rather than black or white.

3. Is this chart correctly labeled?
    A. Yes
    B. No
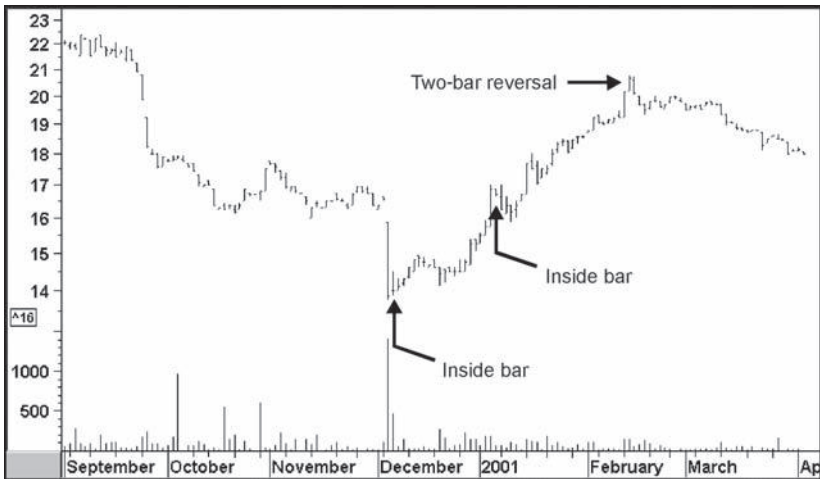
4. What is the difference between a one-bar island reversal and an exhaustion bar?
    A. The one-bar island reversal has a wider trading range.
    B. The exhaustion bar has a gap to the right of the bar.
    C. The one-bar island reversal only develops at tops.
    D. The one-bar island reversal leaves a gap on both sides; the exhaustion bar leaves a gap to the left.

5. What is the correct name for the two bars in the rectangle?
  A. An outside bar
  B. An inside bar
  C. A key bar reversal
  D. A two-bar reversal
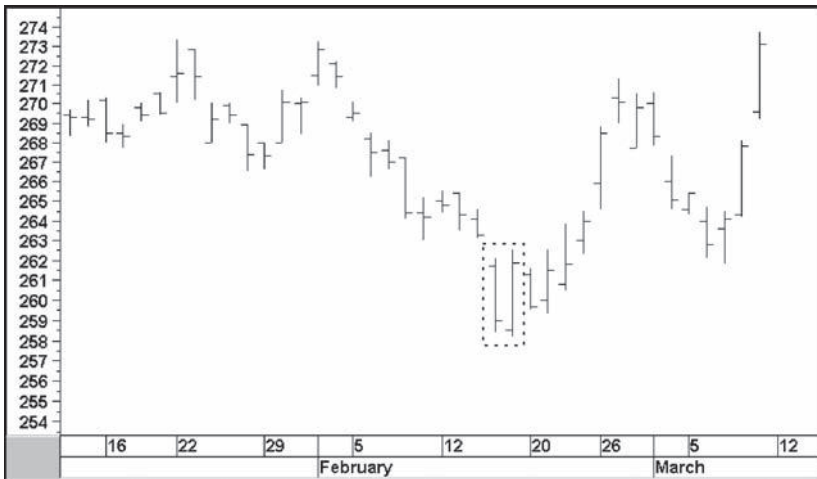
**6.** Other things being equal, which pattern is likely to be followed by the largest price move?
  A. A key reversal on a 10-minute bar chart
  B. A two-bar reversal with all the correct characteristics on a 5-minute bar chart
  C. An inside bar on a daily chart
  D. An exhaustion bar with all the correct characteristics on a 30-minute bar chart

7. Name the pattern with the following characteristics: (1) The first bar is long following a sustained uptrend or downtrend. (2) It closes at, or extremely close to, its low in a downtrend or at, or extremely close to, its high in an uptrend. (3)The second bar is much shorter. Its trading range is totally within that of the first bar.
  A. Outside bar
  B. Inside bar
  C. Love reversal
  D. Key reversal

8. Please identify the 1-day reversal bar patterns in this chart.

    A. _____

    B. _____
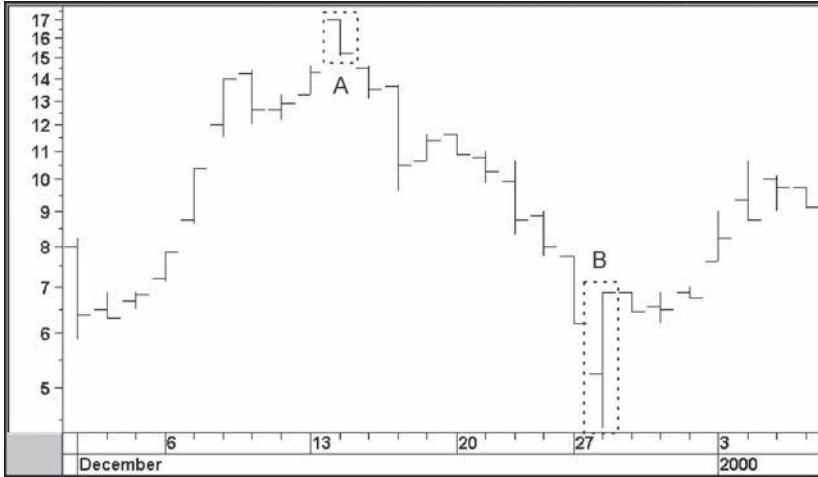
9. Two-bar reversals differ from inside bars in which of the following ways?

    A. There is no essential difference.

    B. An inside bar is generally larger than the bars in two-bar reversals.

    C. The two bars in two-bar reversals form at approximately the same level; inside bars form with a gap.

    D. None of the above

10. True or false: Since one- and two-bar price patterns are only of short-term significance, they never form at bull market peaks or bear market lows.

    A. True

    B. False

ONE- AND TWO-BAR
PRICE PATTERNS

Answers

1. **B.** III is not a requirement.

2. **C.** This is a false statement because technical analysis deals in probabilities, never certainties.

3. **A.**

4. **D.**

5. **D.**
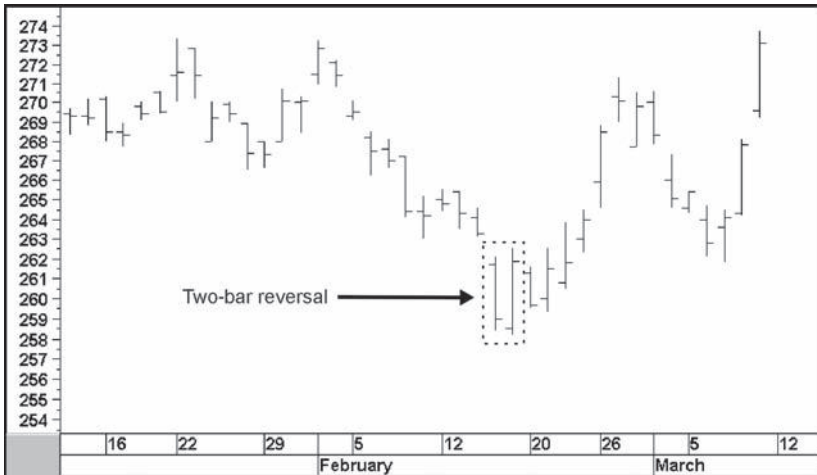
6. **C.** Because a pattern derives its significance from the amount of time taken to complete it.

7. **B.**

8. **A. 1-day island reversal**

   B. Key reversal bar

9. **D.**

10. **B.** They may have short-term significance, but there is no reason why they cannot appear at major peaks and troughs. In fact, they often do.

11

MOVING AVERAGES

Questions

Subjects to Be Covered

Types of moving averages
Centering averages
Determining the significance of a crossover
Establishing the validity of a crossover
The importance of time spans
Advancing averages
Comparing more than one average

1. Fill in the blanks: A weighted moving average f_____ loads the data. A s_____ moving average treats all the data equally. And an e_____ moving average front-loads the data.

2. Which of the following statements is true?
   A. A centered moving average is more accurate in reflecting trend changes, but less timely in triggering signals.
   B. A noncentered moving average triggers buy and sell signals when it experiences a price crossover.
   C. The shorter the time span, the greater the sensitivity of a moving average.
   D. All of the above
   E. B and C

3. Other things being equal, which is likely to result in the most reliable signal?
   A. A crossover that takes place when the MA is rising sharply
   B. A crossover that develops when the average is relatively flat
   C. A crossover that develops when the MA is falling sharply
   D. A and C

4. Which of the following statements is true?
   A. The shorter the time span, the more significant the signal.
   B. The longer the time span, the more significant the signal.
   C. Changes in direction of a moving average are more significant than crossovers, but less timely.
   D. None of the above
   E. B and C

5. The 3 percent crossover rule is more suited to an MA with a time span of:
   A. 10 days
   B. 10 weeks
   C. 40 weeks
   D. 120 hours

6. If you were going to plot two averages on a chart, which combination would make sense?
   A. A 10- and 11-day SMA
   B. A 3- and 65-week EMA
   C. A 10- and 25-day SMA
   D. A 30- and 31-hour SMA

7. An advanced moving average often avoids whipsaws, but what is the trade-off?
   A. There is none.
   B. Some signals are less timely.
   C. There are too many signals.
   D. B and C

8. True or false: Trendlines can make moving average analysis more effective.
   A. True
   B. False

9. When three moving averages of a relatively different time span converge, what does this indicate?
   A. The balance between buyers and sellers is evenly matched.
   B. The price is poised for a relatively big move in either direction.
   C. They will soon cross each other.
   D. A and B
   E. A and C

10. Which of the averages in the following chart is likely to be a weighted moving average (WMA)?
    A. The dashed line
    B. The solid line

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11

MOVING AVERAGES

Answers

1. **front**, **simple, exponential**

2. **D.**

3. **B.**

4. **E.**

5. **C.**

6. **C.** All other combinations are either too close or spaced too widely to be of any use.

7. **B.** Generally speaking, advancing a moving average results in fewer whipsaws, but some signals are less timely. By and large, if the time span and the number of periods to be advanced are selected carefully, this is a good approach.

8. **A.** When a trendline and moving average are penetrated at around the same time, the two events reinforce each other.

9. **D.**

10. **B.** The solid line turns faster because it is front-loaded. Both averages in the chart have a time span of 50 days.

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12

ENVELOPES AND BOLLINGER BANDS

Questions

Subjects to Be Covered

Characteristics of envelopes

Varying the Bollinger band parameters

Interpreting Bollinger bands

1. Two factors influence where an envelope should be drawn. What are they?
   A. The volume associated with the security in question
   B. The volatility of the security
   C. The time span of the moving average from which the envelope is constructed
   D. A, B, and C
   E. B and C

2. This envelope for the Goldman Sachs software ETF is:
   A. Really useful for pointing out potential support and resistance areas
   B. Drawn too far apart to be useful on a regular and consistent basis
   C. Too closely drawn because of the substantial August 2011 downside penetration

Goldman Sachs Software ETF
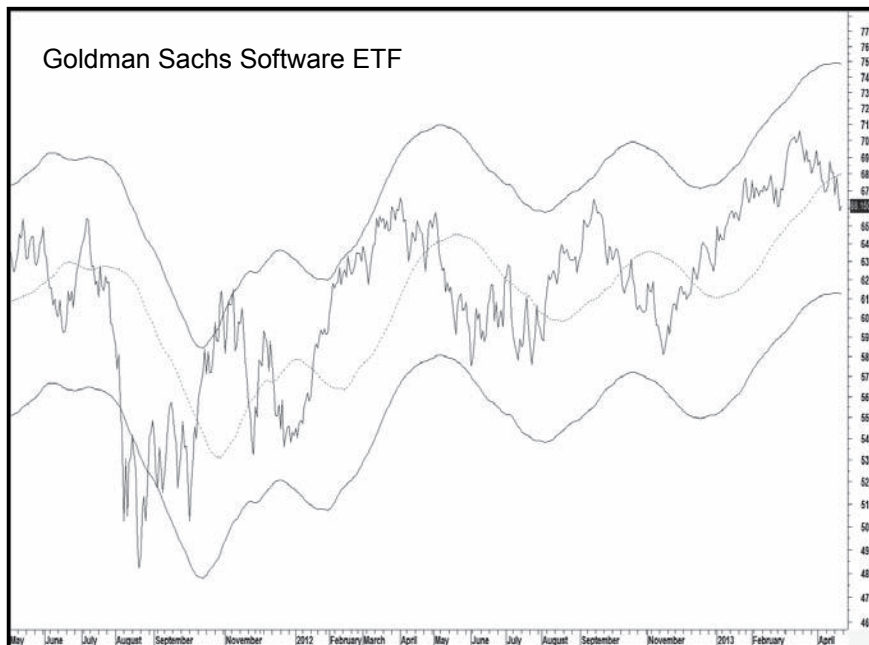
3. As described in the text, what's the best way to construct envelopes?
   A. By trial and error and studying the past history of the security in question
   B. By establishing the beta of a security
   C. By always using exponential moving averages

4. Bollinger bands:
   A. Widen as prices become less volatile
   B. Narrow after a big move
   C. Widen as prices become more volatile
   D. None of the above

5. A high standard deviation factor for Bollinger bands:
   A. Makes them diverge from the price unduly, so they are of little practical use
   B. Results in more signals
   C. Does not have any effect on their appearance because the choice of moving average time span is more important
   D. A and C

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ENVELOPES AND BOLLINGER BANDS

Answers

1. **E.**

2. **B.** In about 19 months of data, the upper envelope is only useful once as a resistance area. If anything, it is constructed too widely to be of any practical use.

3. **A.**

4. **C.**

5. **A.**

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13

MOMENTUM I: BASIC PRINCIPLES

Questions

Subjects to Be Covered

Terminology

Broad categories of interpretation

Differentiating between price and breadth momentum

Limitations of oscillators

Mega overboughts and oversolds

Extreme swings

Price discrepancy divergences

Complex divergences

Methods of ROC calculation

1. Match up the following:

    A. Rate of change_____   A. Smooth and deliberate indicator con-
                                  fined between 0 and 100
    B. RSI_____   B. A form of trend deviation indicator
    C. Overbought/oversold___ C. Sign of a potential top
    D. Stochastics_____   D. Jagged indicator with no upside finite
                                  boundaries
    E. MACD_____   E. Not to be confused with comparative
                                  relative strength

F. Positive divergence_____   F. Sign of a potential bottom
G. Negative divergence_____   G. Measures extreme moves
H. Momentum is a_____   H. Generic term

2. If you spot a negative divergence, you should:
   A. Sell immediately
   B. Watch to see if the divergence is confirmed by a trend break in the price and then sell
   C. Buy more
   D. None of the above

3. What are the two broad categories of momentum interpretation?
   A. Momentum c_____
   B. Momentum t_____ r_____

4. The interpretation of price and breadth momentum is:
   A. More or less identical
   B. Totally different
   C. Depends on the time span
   D. None of the above

5. When a security's price is in a linear uptrend:
   A. It indicates that the momentum indicator will operate more accurately than normal.
   B. It will always experience numerous divergences.
   C. A and B
   D. Momentum indicators will normally fail to operate, which is why we need to await some kind of confirmation from the price.

6. Which conditions does a mega overbought require?
   A. To be preceded by a primary bull market and reach a multiyear overbought reading
   B. To be preceded by a mega oversold condition and reach a multiyear overbought condition
   C. To reach a multiyear overbought condition and diverge positively with the price
   D. To be preceded by a primary bear market and reach a multiyear overbought condition

7. Name the momentum phenomenon at point A in this chart.
   A. Mega oversold
   B. Negative price discrepancy divergence
   C. Bullish extreme swing
   D. Bearish extreme swing
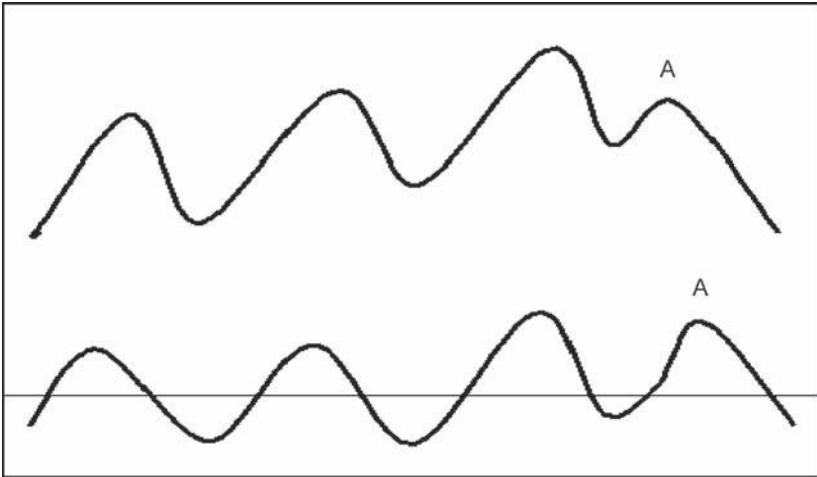
8. Name the momentum phenomenon that begins at point A in this chart. *Tip: The price action leading up to point A takes at least a year.*
   A. Mega oversold
   B. Negative price discrepancy divergence
   C. Bullish extreme swing
   D. Bearish extreme swing
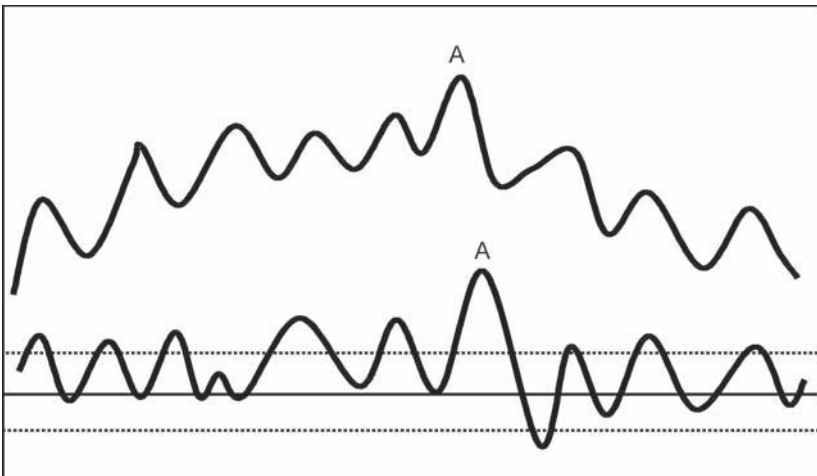
9. Name the momentum phenomenon at point A in this chart.
  A. Mega oversold
  B. Price discrepancy divergence
  C. Bearish extreme swing
  D. None of these answers
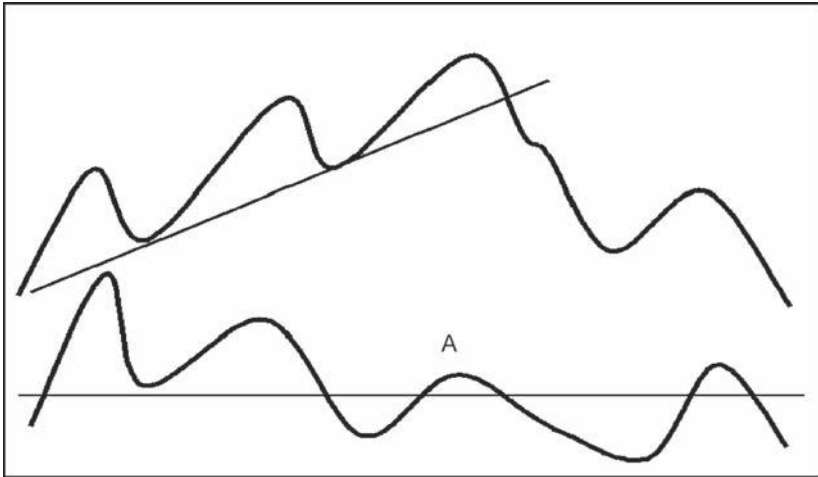
10. Fill in the blank: When an oscillator is constructed from price, it is known as price momentum; when constructed from a basket of items, it is known as b_____ momentum.

11. True or false: Divergences signal that a trend has reversed.
  A. True
  B. False

12. In order to spot a complex divergence:
  A. It's first necessary to plot two different indicators using identical time spans.
  B. Two indicators where the time spans are very similar should be identified in order to make sure that they confirm each other.
  C. Three indicators are plotted with widely differing time spans.
  D. Two indicators are plotted with widely differing time spans overlaid on each other.

13. True or false: If the price and momentum simultaneously violate trendlines, the resulting price move is likely to be weaker.
  A. True
  B. False

14. If prices are not experiencing their normal cyclic rhythm, then:
    A. The interpretation of oscillators is much easier.
    B. The price is experiencing a linear uptrend.
    C. Momentum interpretation will not work as well as normal.
    D. The price is in a linear downtrend.
    E. None of these statements are correct.

15. The ROC is best calculated over very long periods using the:
    A. Subtraction method
    B. Division method

16. Which statement best describes a mega oversold?
    A. It is an extreme overbought following a bull market that is then followed by an extreme oversold.
    B. It is a multiyear overbought reading that follows a primary bear market.
    C. It is a multiyear oversold reading that follows a primary bull market.
    D. It is a multiyear overbought reading accompanied by expanding volume following a primary bear market.

17. Which statement is incorrect?
    A. An ROC lends itself to trendline construction, but should not be used with MAs.
    B. An ROC lends itself to price pattern construction.
    C. An ROC lends itself to trendline construction, price pattern construction, and divergences.

18. True or false: Zero crossovers by oscillators should never be used because they throw up too many whipsaws.
    A. True
    B. False

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MOMENTUM I: BASIC PRINCIPLES

Answers

1. **A = D; B = E; C = G; D = A; E = B; F = F; G = C; H = H**

2. **B.** It is important to await a price confirmation because you do not know if another divergence will develop.

3. **A.** Momentum **characteristics**
    B. Momentum **trend reversals**

4. **A.**

5. **D.**

6. **D.**

7. **B.**

8. **D.**

9. **D.** This is an example of the oscillator barely rising above the equilibrium level following a negative divergence. Such action, when confirmed by the price, is usually followed by an above-average decline.

10. **Breadth**

11. **B.** Only price can signal a trend reversal. Divergences merely tell us whether the underlying momentum is getting weaker or stronger. False is, therefore, the correct answer.

12. D.

13. B. When a simultaneous break develops, the signal is usually much stronger.

14. C. The use of oscillators assumes that the price is undergoing a normal cyclic rhythm. Oscillators do not work well in linear uptrends or downtrends, or any other trend where normal cyclical activity is not being experienced.

15. B. It does not matter much over the very short-term which method is adopted. However, over long periods of time, when prices advance or decline significantly, the subtraction method will distort the indicator's readings.

16. C.

17. A. This statement is incorrect because ROCs can be used in conjunction with MAs.

18. B. Most of the time, zero crossovers will throw up too many whipsaws to be of any practical use. However, there are exceptions, especially when long-term time frames are used. Reference should always be made to a long-term historical record to ensure that this approach works for the security and time frame selected.

14

MOMENTUM II: INDIVIDUAL INDICATORS

Questions

Subjects to Be Covered

RSI versus the ROC

Overbought/oversold lines for the RSI

Interpreting the RSI

The CMO versus the RSI and RMI

Calculating the trend-deviation indicator

Interpreting the MACD

The concept behind the construction of the stochastic

Differentiating between the %K and %D

1. Name some useful advantages that the RSI has over the ROC.
    i. It is smoother.
    ii. It is confined between 0 and 100.
    iii. It is easier to compare the momentum of different securities.
    iv. It always throws up actionable divergences.
    v. It is useful for zero crossovers.
    A. i and v
    B. i, ii, and iii
    C. ii, iii, iv, and v
    D. i, iv, and v

2. What are the default overbought/oversold bands for a 14-day RSI?
    A. 80 to 20
    B. 60 to 40
    C. 20 to 30
    D. None of the above

3. True or false: The RSI becomes more volatile as the time span becomes shorter.
    A. True
    B. False

4. Which letter in the following chart corresponds with a bearish failure swing?
    A.
    B.
    C.
    D.
    E. None of the above
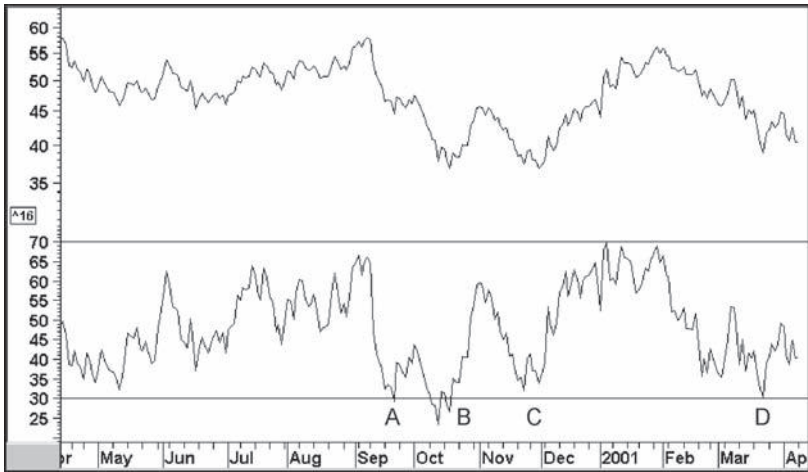
5. Name one advantage that the CMO has over the RSI.
    A. It reaches overbought/oversold extremes more often.
    B. It is extremely smooth and deliberate in its trajectory.
    C. It never gives false signals.
    D. A and B

6. In the following chart, which of the two RSIs is more likely to be plotted from a 6-day time span?
  A. The one in the center panel
  B. The one in the lower panel
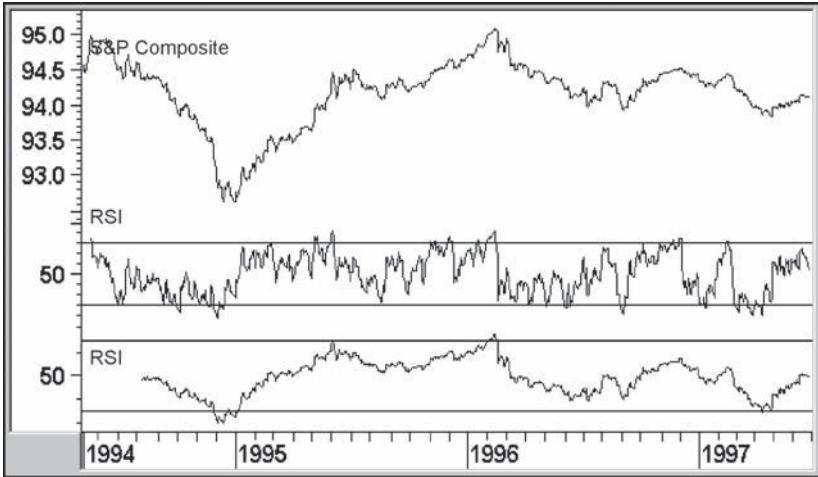
7. Please match the following answers:

A. RSI_____	A. Relative strength indicator
B. Bearish failure swing_____	B. Relatively smooth and deliberate trading band
C. Chande Momentum Oscillator_____	C. Relative momentum index
D. 9-day RSI_____	D. 70/30 overbought/oversold defaults
E. 45-week RSI_____	E. Associated with a reversal from an uptrend to a downtrend
F. RSI 14-day time span_____	F. Volatile trading range
G. RMI_____	G. CMO

8. True or false: The RSI can be interpreted by using peak-and-trough progressions.
  A. False because it is too volatile
  B. True
  C. Yes, but only on monthly charts because intraday, daily, and weekly charts are too volatile
  D. Only after a failure swing

9. The following momentum interpretive techniques can be used with the RSI.
   A. Trendline and price pattern analysis
   B. Moving-average analysis
   C. Failure swings
   D. Overbought/oversold analysis
   E. A, B, and C
   F. A, B, C, and D

10. A trend-deviation indicator is calculated by:
    A. Comparing two simple moving averages
    B. Comparing two exponential moving averages
    C. Expressing the closing price as a deviation of a weighted moving average
    D. A and B
    E. A, B, and C

11. True or false: There is no difference between the MACD and a trend-deviation indicator.
    A. True
    B. False

12. According to the text, an MACD is best interpreted using:
    A. The signal line
    B. Trendline violations and overbought/oversold crossovers
    C. Complex divergences
    D. Mega reverse divergences

13. The calculation of the stochastic indicator assumes the price closes:
    A. Close to the middle of its trading range in the middle of a trend
    B. Close to the low at the start of an uptrend and close to the high at the end
    C. Close to the low at the end of an uptrend and close to its high at the end of a downtrend
    D. Close to the open at the end of a downtrend

14. Which is the faster and more volatile of the stochastic indicators?
    A. %D
    B. %K

MOMENTUM II: INDIVIDUAL INDICATORS

Answers

1. **B.**

2. **D.** 70/30 are the correct defaults.

3. **A.**

4. **E.** B happens to be a *bullish* failure swing, but the question asked for a *bearish* one.

5. **A.** It reaches overbought and oversold extremes more often and therefore lends itself better to overbought/oversold analysis.

6. **A.** This is because it is more volatile. The shorter the time span, the more volatile the indicator.

7. **A = A; B = E; C = G; D = F; E = B; F = D; G = C**

8. **B.**

9. **F.**

10. **E.**

11. **A.** An MACD is a form of trend-deviation indicator.

12. **B.** Signal-line crossovers are considered by many to offer good signals, especially if the chosen parameters result in a smoothed indicator, but the text indicates that numerous whipsaws are triggered from this approach using the default values on the daily charts. There is no such concept as mega reverse divergence.

13. **C.**

14. **B.**

15

MOMENTUM III: INDIVIDUAL INDICATORS

Questions

Subjects to Be Covered

Terminology for the directional movement system

Suitable time frames and interpretation of the ADX

DI interpretation

Calculation of the KST

Interpretation of the KST

Basics of the Special K

Parameter requirements for the parabolic

1. +DI stands for:
   A. Positive distance indicator
   B. Positive directional movement
   C. Directional Indicator
   D. None of the above

2. If you know the probabilities favor directional movement increasing, it's okay:
A. To buy
B. To sell
C. To look at other indicators to see which direction the price trend is likely to move in and then take action
D. To buy calls

3. The following chart features two ADXs. Which one is calculated from the shorter time span?
A. The one in the center panel
B. The one in the lower panel
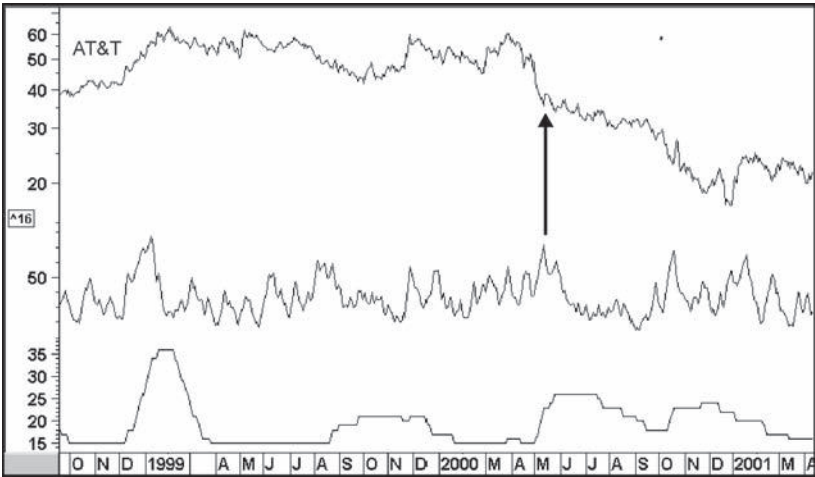
4. At point A in the following chart, what factors suggest the rising price trend will continue?
A. The breakout from the inverse head and shoulders in the price
B. The breakout by the ADX
C. The +DI remains above the –DI
D. A and B
E. B and C
F. A, B, and C
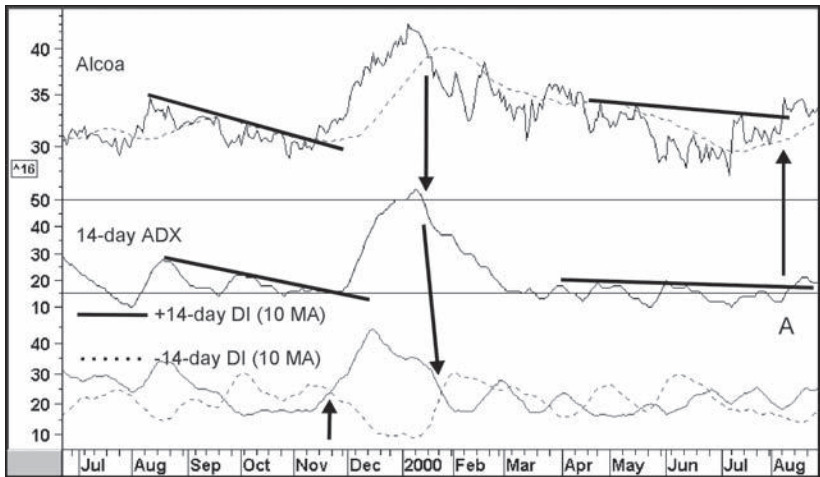
5. An ADX reading that peaks from above 40 tells you:
   A. Nothing except that it has peaked
   B. Directional movement has now peaked and we should look for a significant change in trend
   C. Directional movement has peaked, but we do not know the significance
   D. None of the above

6. The +DI crosses below the –DI and the price completes a head-and-shoulders top. We should:
   A. Do nothing until we can observe a peaking in the ADX
   B. Sell
   C. Wait for the smoothed DIs to cross
   D. A and C

7. The text indicates that a stochastic with the correct parameters can be used as a substitute for the KST. However, it suffers from a disadvantage. What is that?
   A. It never reaches an extreme overbought/oversold reading.
   B. It reaches overbought/oversold extremes too many times to be of use.
   C. The KST typically leads the stochastic at major turning points, but does not unduly suffer from whipsaws as a result.
   D. A and B
   E. A, B, and C

8. True or false: According to the text, the MACD on the monthly chart is a suitable substitute for the KST, but suffers in that it is subject to many whipsaws.
    A. True
    B. False

9. What do the letters KST stand for?
    K_____ S_____ T_____

10. True or false: Prices are determined by the interaction of a number of different time cycles.
    A. True
    B. False

11. Which one of the following statements is relevant to the assumptions made in calculating the long-term KST?
    A. Prices are going to revolve around the secular trend.
    B. The primary trend can be split into intermediate price movements.
    C. Intermediate price movements can be split into short-term price swings.
    D. None of the above

12. Which letter in the chart points to the intermediate trend?
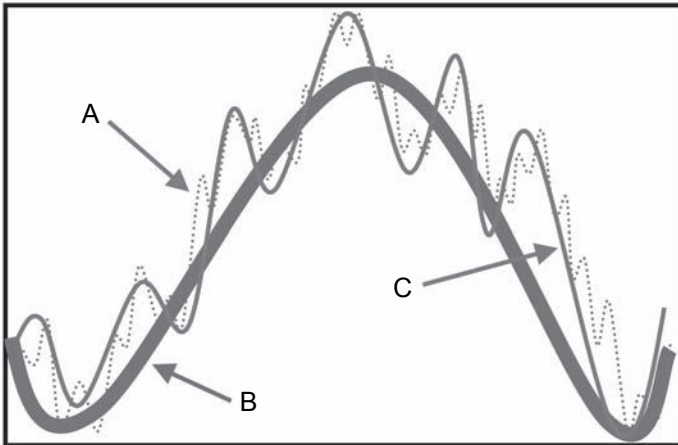
13. Long-term trends vary in length, but which range would capture the majority of these moves without including outliers?
   A. 3 months to 12 months
   B. 9 months to 2 years
   C. 1 to 8 years
   D. 9 to 14 months

14. Does this chart reflect the principle of commonality?
   A. Yes
   B. No
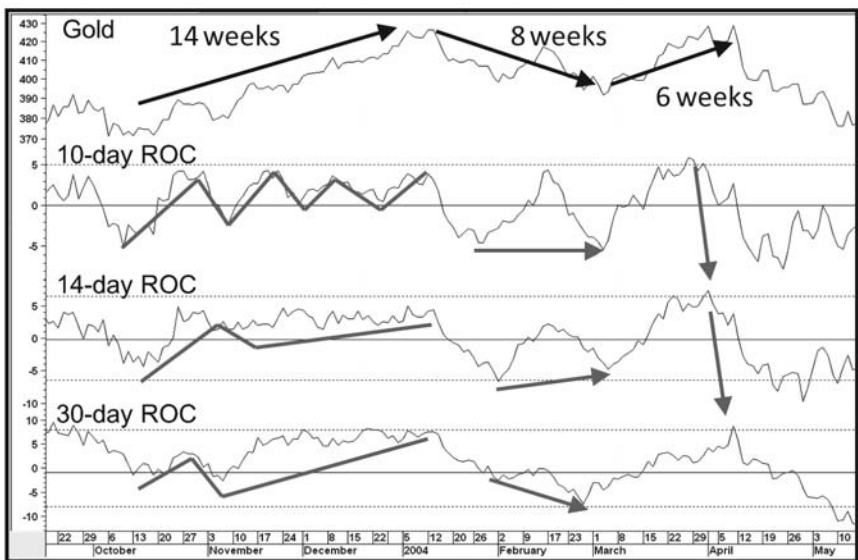
15. Which of the following techniques are not used in interpreting the KST?
   A. MA crossovers
   B. Trendline analysis
   C. Divergences
   D. Complex crossovers

16. Other things being equal, which signal is likely to be followed by the largest trend reversal?
    A. A short-term KST buy signal and a trendline violation by the intermediate KST
    B. A long-term KST buy signal from a reading way above zero
    C. A price-confirmed long-term KST buy signal from below zero
    D. A short-term KST buy, an intermediate KST buy, and a trendline break

17. How many ROCs are included in the calculation of the long-term KST?
    A. Two
    B. Five
    C. Four
    D. Three

18. Why is the longest time span in the KST calculation smoothed with a longer MA than the other three?
    A. Because that makes the indicator turn faster
    B. To avoid whipsaw signals
    C. Because that time span has the biggest weighting
    D. To better reflect the underlying trend

19. The KST tends to work reasonably consistently because:
    A. It is constructed from four different time spans that reflect different cycles.
    B. It is weighted to give more dominance to the longer cycles.
    C. It has been rigorously tested.
    D. A and B
    E. A, B, and C

20. Which statement *best* describes a valid sell signal in the classic way?
    A. A reversal by the KST itself to the downside
    B. A reversal in the MA of the KST to the downside
    C. A positive KST MA crossover confirmed by the price through an MA crossover or valid trendline break
    D. A negative KST MA crossover confirmed by the price through an MA crossover or valid trendline break
    E. None of the above

21. If a 9-month MA of a 24-month ROC reflects the long-term trend quite consistently, why bother to include shorter-term time frames in the KST calculation?

A. Shorter-term spans help to turn the indicator quicker at tops and bottoms. As long as this keeps whipsaws to a minimum, it's a good thing.

B. To better reflect the long-term trend.

C. It makes the indicator a better trading vehicle.

D. It gives the KST greater credibility.

E. None of the above

22. Does the Special K give us a clue as to the maturity of the prevailing primary trend?

A. Yes

B. No

23. Which statement is correct?

A. The Special K gives us true summed cyclicality as the short-term, intermediate, and long-term KSTs are combined into one all-encompassing series.

B. The Special K gives us true summed cyclicality as the short- and long-term KSTs are combined into one all-encompassing series.

C. The Special K gives us true summed cyclicality as the intermediate and long-term KSTs are combined into one all-encompassing series.

D. The Special K gives us true summed cyclicality as the short-term, intermediate, secular, and long-term KSTs are combined into one all-encompassing series.

24. True or false: It is abnormal for the SPK to peak and trough with primary trend turning points in the security it is monitoring.

A. True

B. False

25. When is the SPK unlikely to peak or trough with the price series it is monitoring?

A. Pretty well all the time

B. When the primary trend cycle being monitored is substantially greater or smaller than normal

C. When the primary bull and bear cycle being monitored is normal

D. During the course of an extended linear uptrend or downtrend

E. B and D

26. Why is it helpful to include the daily KST on the daily SPK template?
   A. Because the SPK tells us when the short-term trend is up or down but not when it is overstretched in either direction; the KST does.
   B. Because the short-term KST is great at indicating short-term reversals.
   C. Because the short-term KST is more accurate than the SPK.
   D. None of the above

27. By what method are the weekly and daily SPK indicators constructed?
   A. By calculating the sum of the short- and long-term KSTs
   B. By combining four different ROCs smoothed with their respective MAs and weighted accordingly
   C. Through the summed cyclicality of the short-, intermediate-, long-term, and secular KSTs
   D. By adding the short-, intermediate-, and long-term KSTs and producing one indicator

15

MOMENTUM III: INDIVIDUAL INDICATORS

Answers

1. **B.**

2. **C.** Since you do not know which direction the price is likely to trend, it's important to check out other indicators such as the +DI and –DI, so C is the correct answer.

3. **A.**

4. **F.**

5. **C.** Since each security has different levels of volatility, we do not know the significance of the 40 level unless we can look at past history. All we know is that directional movement has peaked, but we do not know the significance. Therefore, C is the correct answer.

6. **B.** The DI crossover is a momentum sell signal, and the head and shoulders is the price trend confirmation; therefore, based on this information, the correct thing to do is sell. Therefore, B is the correct answer.

7. **C.**

8. **A.**

9. **Know Sure Thing**

10. **A.**

11. D.

12. C.

13. B.

14. B. No, it does not, as the principle states that when several cycles are moving in the same direction, we should expect to see a stronger move. This chart features the exact opposite, where each indicator is behaving in a different way.

15. D. Complex crossovers do not exist as a technique as described in the text.

16. C. Because it is a classic primary bull trend signal.

17. C.

18. D.

19. D. A and B were partially correct, but the question asked for the "best" description.

20. D.

21. A.

22. A.

23. A.

24. B. Because the SPK in the vast majority of situations does peak and trough simultaneously with the price series it is monitoring.

25. E.

26. A.

27. D.

16

CANDLESTICK CHARTING

Questions

Subjects to Be Covered

Candle construction

Differentiating between and recognizing the various patterns

Advantages of candlestick volume charts

1. Candlestick charts consist of:
   A. Opening bars
   B. Closing bars
   C. A real body
   D. Two wicks
   E. A and C
   F. C and D

2. If I only have price data for the high, low, and close, which patterns will not show up correctly in candlestick charts?
   A. Engulfing patterns
   B. Dojis
   C. Meeting lines
   D. All of the above

3. Fill in the blanks: In candlestick charting, the greatest emphasis is placed on the o_____ and c_____ price.

4. What is the shaded candlestick pattern in the following chart?
   A. A bearish engulfing
   B. A piercing line
   C. Dark cloud cover
   D. None of the above

Advanced Micro

5. True or false: A hammer appears at a bottom and a hanging man at a top.
   A. True
   B. False

6. Fill in the blanks: A candlestick where the real body is small and develops at the high end of the session's trading range is called an u_____ line.

7. Are the patterns in the following chart labeled correctly? Please fill in the blank with a "yes" or "no."
   A. _____
   B. _____
   C. _____

Aegean Marine Petroleum

Bullish engulfing pattern

C Dark cloud cover

Dark cloud cover
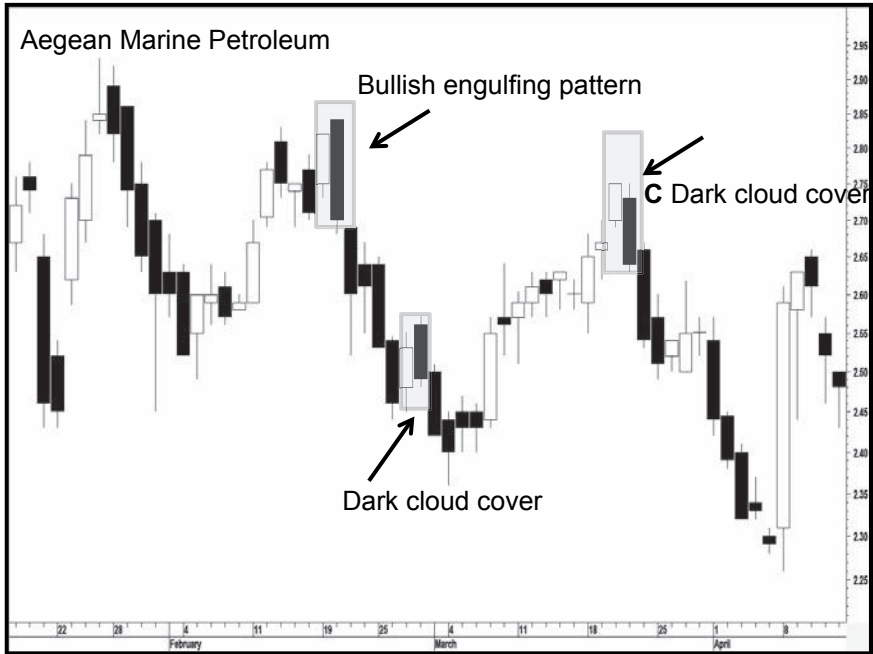
8. Which of the following, if any, are reversal patterns?
   A. Rising three methods
   B. Falling three methods
   C. Upside gap (tasuki)
   D. Shooting star

9. Candlestick volume charts are helpful because:
   A. It's easy to spot candlesticks where volume is heavy or light and then relate these characteristics to the price action
   B. It's possible to display more candlesticks in the same space
   C. More reversal candle patterns are displayed
   D. A and C

10. Which of the following statements is not true?
   A. Candlesticks can be plotted for any time frame.
   B. Candlestick charting cannot be used with Western charting techniques.
   C. Candlestick charting is enhanced when used with Western charting techniques.
   D. None of the above

11. Following a rally, two white candlesticks have identical closing prices. Is this a tweezer top?
   A. Yes
   B. No
   C. It will depend on whether the closes represented the highs for the session.

12. Which of the following correctly describes a counterattack line?
   A. Two candlesticks with long real bodies following an advance of differing colors with identical closing prices
   B. Two candlesticks with long real bodies following a decline where the first is black, the second is white, and their opening prices are identical
   C. Two candlesticks with long real bodies following a decline where the first is white, the second is black, and their opening prices are identical
   D. Two candlesticks with long real bodies following a decline where the first is black, the second is white, and their closing prices are identical

13. Which answer best describes a bullish belt hold?
   A. A long white line
   B. A small real body that develops after a decline
   C. A long white line that develops after a decline
   D. An unusually long white line that develops after a decline

14. Please match these patterns with the letters on the IBM chart.
   Piercing line
   Belt hold
   Window
   Harami
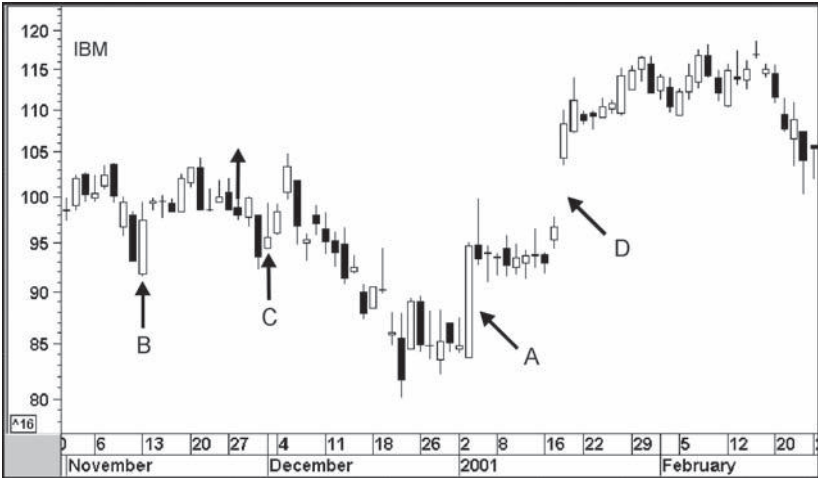
15. Please match these patterns with the letters on the Agrium chart.
    Dark cloud cover
    Hammer
    Window

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16
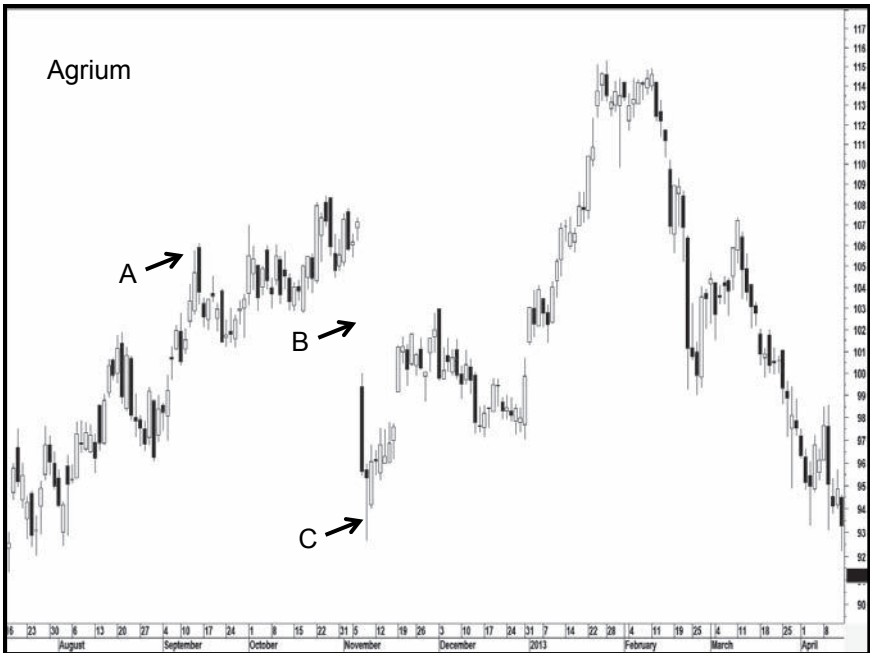
CANDLESTICK CHARTING

Answers

1. **F.**

2. **D.** Candlesticks also require the opening price. Since this was not available, it would not be possible to plot a correct candlestick chart, so none of these patterns could be plotted.

3. **opening, closing**

4. **A.** In an engulfing pattern, the second real body totally engulfs the first. A piercing line is the bullish equivalent of a dark cloud cover.

5. **A.**

6. **Umbrella**

7. **A = No; B = Yes; C = No**

   Remember that dark cloud patterns require the opening of the second candlestick to exceed the high of the previous candlestick and for the close to develop more than halfway below that white real body of the first candlestick.

8. **D.**

9. **A.**

10. **B.**

11. **C.** A tweezer top requires the highs of two candlesticks to be identical.

12. **D.**

13. **D.**

14. **Piercing line = B**

   Belt hold = A

   Window = D

   Harami = C

15. **Dark cloud cover = A**

   Hammer = C

   Window = B

17

POINT AND FIGURE CHARTING

Questions

Subjects to Be Covered

Point and figure versus bar charts

Setting up box amounts

Measuring objectives

Time as an element

1. How do bar charts and point and figure charts differ?
   A. Point and figure charts are plotted at specific time intervals.
   B. Point and figure charts record all time periods.
   C. Point and figure charts can never be plotted for intraday intervals.
   D. None of the above

2. If a box is set at price movements of 5 points, this means that:
   A. All fluctuations less than 5 will be recorded.
   B. Only fluctuations greater than 5 will be plotted.
   C. Price fluctuations of 5 points will be recorded.
   D. None of the above

3. Fill in the blanks: In point and figure charts, _____ are plotted for rising markets and _____ for declining ones.

4. For stocks trading above $20, the accepted norm for the box is:
   A. 1 dollar
   B. 50 cents
   C. 5 dollars
   D. 2 dollars

5. Fill in the blanks: When plotting a point and figure chart, there are two decisions to be made. The first is the b_____ size and the second is whether to use a regular point and figure formula or a r_____ chart.

6. True or false: A reversal chart in point and figure jargon is the same as a reversal pattern in bar charts.
   A. True
   B. False

7. True or false: Time is an important element in point and figure charting.
   A. True
   B. False

8. Fill in the blanks: Measuring objectives for bar charts is achieved with a v_____ count, but with point and figure, it is done with a h_____ count.

9. One disadvantage of point and figure charts is:
   A. They do not reflect support and resistance areas very well.
   B. Measuring objectives from irregular formations can be confusing to determine.
   C. They do not emphasize the amount of price swings that take place within a given congestion zone.
   D. All of the above

10. The smaller the box size:
   A. The greater the number of price fluctuations.
   B. The bigger the reversal amount will be.
   C. The shorter the period that can be reasonably plotted and studied.
   D. A and C

17

POINT AND FIGURE CHARTING

Answers

1. **D.** The principal difference is that point and figure charts ignore time. Time intervals are plotted at the base of point, and figure charts merely act as a reference point. They have no analytical significance.

2. **B.**

3. **X's and O's**

4. **A.**

5. **box, reversal**

6. **B.** They are different. The reversal chart refers to a plotting technique; the reversal pattern is a price formation derived from any plotting technique, the completion of which signals a reversal in trend.

7. **B.** Time is totally ignored in point and figure charting, though dates may be placed at the foot of the chart for reference purposes.

8. **vertical, horizontal**

9. **B.** The other answers outline pluses for point and figure charting; for example, they do reflect support and resistance well.

10. **D.**

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MISCELLANEOUS TECHNIQUES FOR DETERMINING TRENDS

Questions

Subjects to Be Covered

Proportion

Speed resistance lines

Fibonacci concepts

Ichimoku cloud charts

1. What is the name of the known technique that can consistently fore-cast the magnitude and duration of any price move?
   A. Price pattern objectives
   B. Trendline projection
   C. Proportionate retracements
   D. Fibonacci retracements
   E. A and B
   F. A, B, and C
   G. None of the above

2. True or false: A way to explain the principle of proportion is to say that crowd psychology, as reflected in market prices, has a tendency to move in specific proportional amounts that have a habit of repeating, but unfortunately not in a predictable pattern.
   A. True
   B. False

3. Which of the following are examples of proportion in practice?
   A. The measuring implications of price patterns on arithmetic charts
   B. The measuring implications of trendlines on ratio scale
   C. The measuring implications of moving averages (MAs) on logarithmic scale
   D. None of the above
   E. All of the above
   F. B and C

4. According to the text, the 50 percent rule is:
   A. The best-known principle of proportion
   B. A rule that says if you lose 50 percent, you need to exit the market for a while
   C. A rule that says if you gain 50 percent on your capital, you should take profits
   D. All of the above

5. Which best describes the application of the principles of proportion?
   A. The principles of proportion are best used on arithmetic charts.
   B. Always use projections using the principles of proportion in conjunction with other indicators, and make sure proportionate moves are always based on ratio charts.
   C. Always wait for a 50 percent or a 66 percent retracement before buying.
   D. All of the above

6. Who developed the idea of speed resistance lines?
   A. W. D. Gann
   B. Leonardo Fibonacci
   C. Leonardo da Vinci
   D. Edson Gould

7. Which of the following is not a Fibonacci number?
   A. 3
   B. 6
   C. 144
   D. 1

8. If the price falls back to a Fibonacci fan line, which course of action is legitimate?
   A. Buy, because it's a great opportunity.
   B. Consider buying, but also consider other indicators.
   C. Go short if the line is penetrated.
   D. Consider going short if the line is penetrated, but review the other indicators before taking any other action.
   E. B and D
   F. A and D

9. True or false: If the price retraces more than two-thirds of a rally, it is safe to conclude that the trend has reversed.
   A. True
   B. False

10. If the angle of a line drawn from a pivotal point is 45 degrees and the chart measures price and time equally, what is the true rise and run?
   A. 1×1
   B. 2×1
   C. 3×1
   D. 1×2

11. Which of the following are not Fibonacci numbers?
   A. 23.6
   B. 38.2
   C. 50
   D. 8
   E. 161.8
   F. All are Fibonacci numbers

12. True or false: The relationship between price and the Ichimoku cloud identifies basic uptrends and downtrends, and the relationship between two other indicators in the system generates short-term buy and sell signals under that context.
   A. True
   B. False

13. True or false: The arrows at A and B point to leading span A and B.
  A. True
  B. False
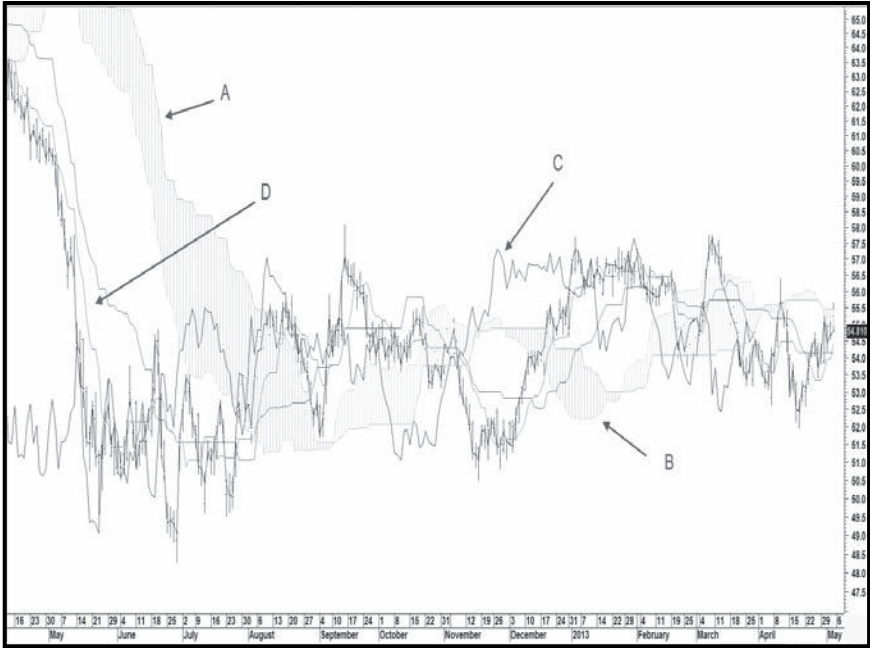
14. If this chart was colored, what color would the area at B be represented by according to the text?
  A. Red
  B. Green
  C. Purple
  D. Black
  E. None of the above
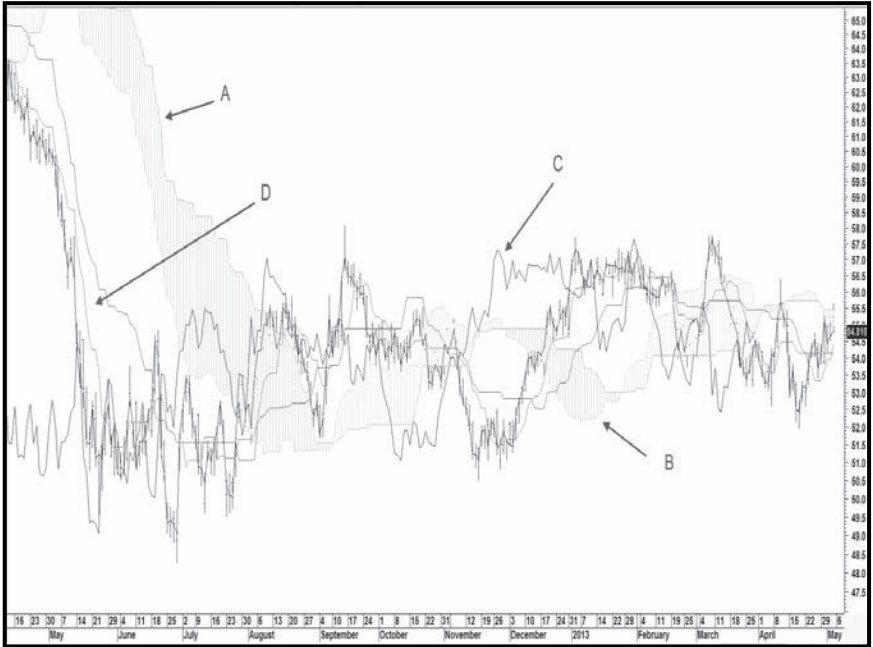
15. True or false: Future cloud action indicates potential support/ resistance areas.

    A. True

    B. False

16. The quality of the uptrend is strengthened when:

    A. The leading span B is rising and is above the leading span A.

    B. The lagging line is above both leading spans.

    C. The leading span A (thick cloud border) is rising and is above the leading span B (thin cloud border).

    D. None of the above

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18

MISCELLANEOUS TECHNIQUES FOR DETERMINING TRENDS

Answers

1. **G.** There is no known technique that will enable consistent forecasting of the magnitude and duration of a price move in freely traded markets.

2. **A.**

3. **F.** Prices do not move proportionately in arithmetic charts. Therefore, A is incorrect.

4. **A.** B and C may be good advice, but they were not covered in the text.

5. **B.** The principles of proportion should be applied to ratio, not arithmetic, charts.

6. **D.**

7. **B.**

8. **E.** Fibonacci only represents an intelligent place to anticipate a reversal. Therefore, a review of other indicators is mandatory. When the line is penetrated, you can expect lower prices, but you must review the other indicators. For example, the price may be oversold at that point and so on.

9. **B.** Sometimes a price will retrace 100 percent of a move and more. This does not in and of itself signal that the trend has reversed. The two-thirds retracement concept is merely a guideline to indicate that we should expect to see most retracements fall within the two-thirds rule.

10. **A.**

11. **C.**

12. **A.**

13. **A.**

14. **A.**

15. **A.**

16. **C.**

19

THE CONCEPT OF RELATIVE STRENGTH

Questions

Subjects to Be Covered

What is relative strength?

Interpreting relative strength

Comparing relative strength to the absolute price

Using trendlines with relative strength

Comparing the relative action of two different stock markets

1. Which of the following statements is true?
   A. Relative strength measures the relationship between two securities.
   B. The relationship between a stock and a market average is the only useful way of using relative strength.
   C. Comparative relative strength includes the RSI.
   D. A and B

2. When the RS trend reverses to the downside, it is safe to conclude:
   A. That the price will sooner or later follow suit
   B. That it is probably a whipsaw since the price has not confirmed
   C. That you should be on the lookout for vulnerability in the stock because weakening RS often precedes a top in the absolute price
   D. None of the above

3. Please draw in a head-and-shoulders top in the following chart where the moving average is violated at approximately the same time as the neckline. An example (without the MA crossover) has already been constructed to offer you some guidance.
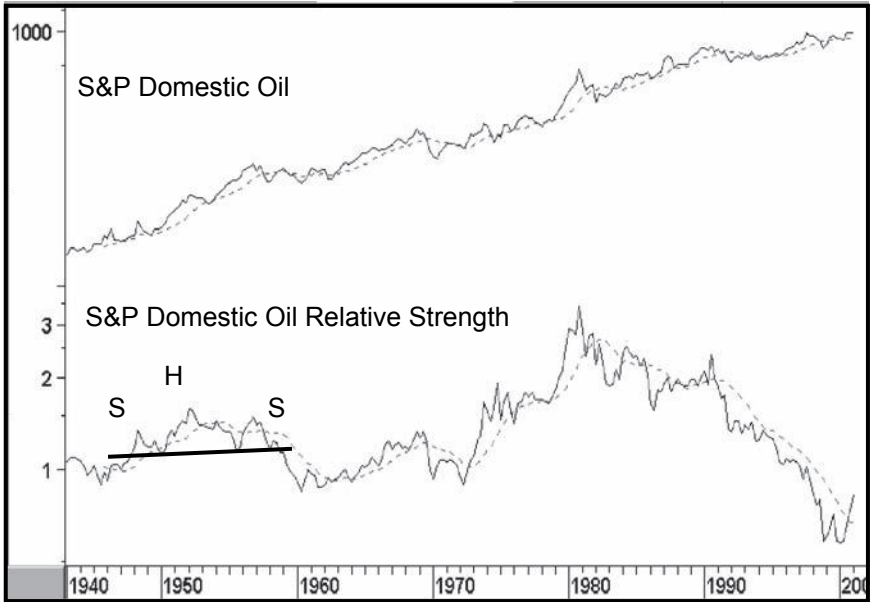
4. When a positive RS divergence develops for a stock, you should conclude:
   A. That the RS trend is now up and that it's safe to buy the stock
   B. Nothing
   C. That the technical position is improving but you need to see more evidence of a trend reversal in the RS before buying the stock
   D. None of the above

5. Please draw two trendlines between 1997 and 1999 that would have signaled a trend reversal in price and RS. Tip one is a 4-year; the other is a 2-year line.
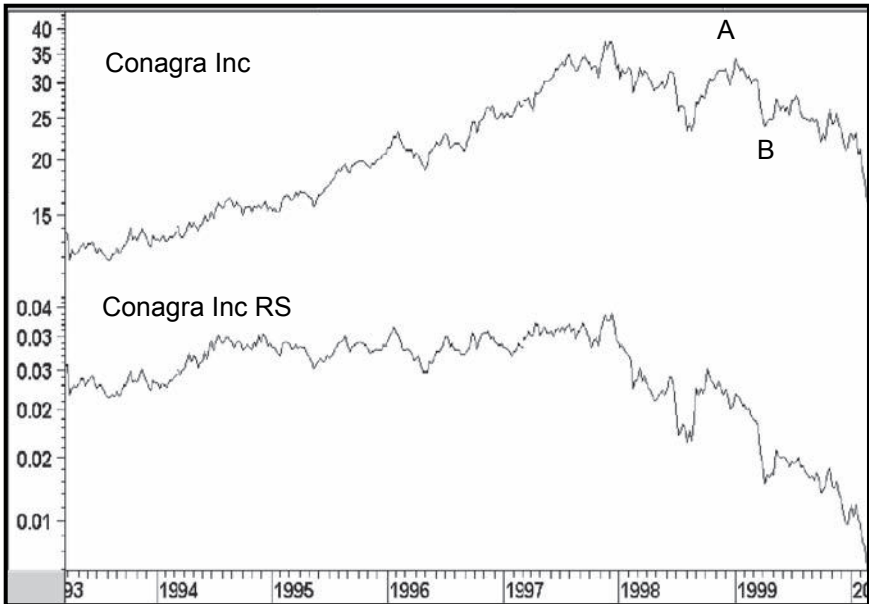
6. What was the piece of conclusive evidence that suggested the rally at A in the chart for Question 5 was going to fail?
   A. There was a series of declining peaks and troughs in the price.
   B. The RS line was already falling sharply.
   C. There was no strong evidence.

7. What price action suggested that the low in the absolute price at B in the chart for Question 5 would be taken out on the downside?
   A. The price was already falling.
   B. Gut feel.
   C. The RS line had already broken below its previous low.
   D. There is no evidence.

8. The price of corn is divided by the S&P Composite and the result plotted as a continuous line. Is this an RS relationship?
   A. Yes.
   B. No, because one is a commodity and the other is a market index.

9. A strong up trendline in the NASDAQ/S&P ratio is violated and a head-and-shoulders top is completed. You should:
   A. Buy the NASDAQ
   B. Sell the NASDAQ
   C. Sell the S&P
   D. Short the NASDAQ and buy the S&P
   E. Short the S&P and buy the NASDAQ

10. If the RS line for the UK FTSE breaks out to the upside against the World Stock Index but that for the Swedish market does not, ignoring currency fluctuations, which is the better buy based on this relationship alone?
    A. The FTSE
    B. The Swedish Index
    C. The World Index
    D. None of the above

19

THE CONCEPT OF RELATIVE STRENGTH

Answers

1. **A.** B is incorrect because there are many ways to use the concept of relative strength. Comparative relative strength should never be confused with the relative strength indicator.

2. **C.**

3.
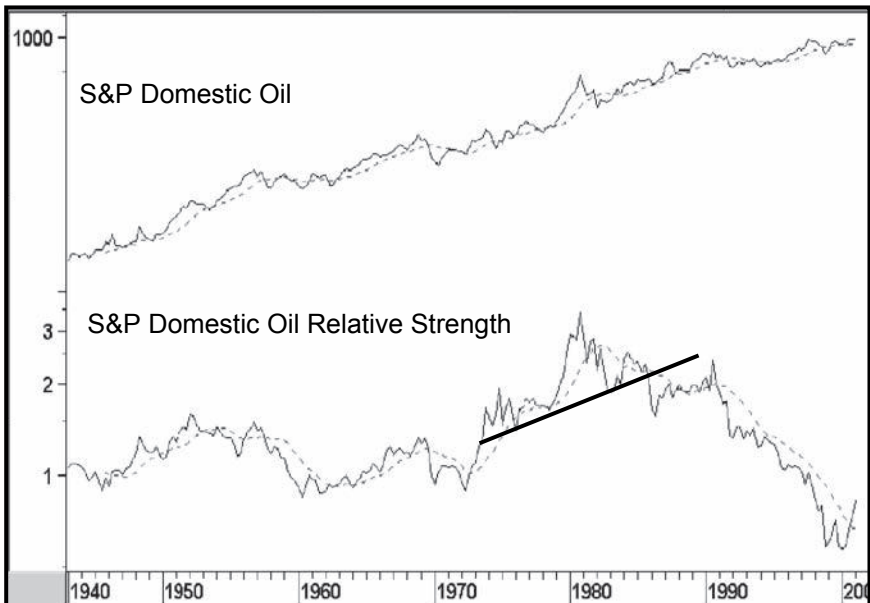
4. **D.** Because you need to see more evidence that the RS has turned, but more importantly, evidence that the stock itself is now in an uptrend.

5.
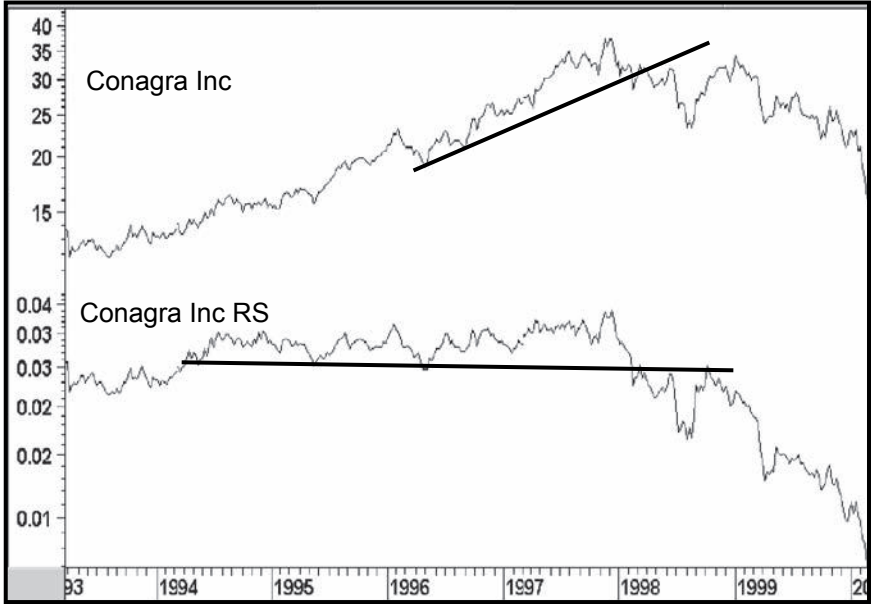
6. **C.** The declining RS line was evidence, but not *conclusive* evidence as asked in the question. For example, there was no evidence of an actual reversal in the absolute price trend at that point.

7. **C.** The RS line was already below its previous peak and was leading the price.

8. **A.** Because comparative RS compares one security with another, so it's a valid RS relationship.

9. **D.** There is no evidence that either of the components has reversed trend; therefore, choices A through C are not appropriate. Since the break indicates that the S&P will now outperform the NASDAQ, the S&P should be bought and the NASDAQ shorted.

10. **A.**

21

PRICE: THE MAJOR AVERAGES

Questions

Subjects to Be Covered

Types of averages and indexes

Dow Jones Utilities and their relationship to the Industrials

The Value Line as a market indicator

Nature of the Russell Indexes

Global indexes (ETFs) and bond ETFs

1. True or false: The S&P Composite is an unweighted index.
   A. True
   B. False

2. The DJIA:
   A. Is a composite index
   B. Is a measure of 30 different stocks from all the principal industries
   C. Uses a divisor in its calculation
   D. All of the above

3. Fill in the blanks: The DJ Utility Average is i_____ sensitive. This means that it often l_____ the Industrials.

4. Which moving average did William Gordon use in his calculation for the DJIA?
   A. 25-week
   B. 12-month
   C. 45-week
   D. 40-week

5. Why is the relationship between the DJIA and the DJ Utilities often overlooked?
   A. Because it doesn't work very well
   B. Because there is usually a lot of excitement elsewhere when they are diverging
   C. Because brokers are better indicators
   D. All of the above

6. If the Value Line Arithmetic diverges negatively with the S&P Composite:
   A. Be on the lookout for a decline when the S&P confirms with a trend break
   B. Sell immediately
   C. Buy the S&P because it has superior relative strength
   D. Ignore the whole thing

7. Which is the most comprehensive average?
   A. The DJIA
   B. The Russell 3000
   C. The S&P Composite
   D. The Wilshire 5000

8. What year were the DJ Rails renamed the DJ Transports?
   A. 1987
   B. 1898
   C. 1970
   D. 1955

9. Which of the following statements concerning the Barclay's Aggregate Bond (AGG) is not true?
   A. It holds bonds across the spectrum.
   B. It holds treasuries.
   C. It holds corporate bonds.
   D. About 40 percent of its holdings at the end of 2012 were bonds with a maturity in excess of 5 years.
   E. B and C
   F. A and D
   G. None of the above

10. What is the symbol of the ETF used to calculate a ratio between the S&P (SPY) and the rest of the world as described in the text?
A. ACWI
B. EWA
C. EFA
D. EEM

11. When several closely related securities are being led by one of the group and that leader fails to signal a new high (or low in the case of a declining trend), what is likely to happen?
A. New leadership takes over.
B. The leading group quickly regains composure and explodes to new highs (implodes to new lows) because of short covering (margin liquidation).
C. This is usually a sign of exhaustion and is followed by a trend reversal.
D. This is usually a sign of exhaustion and, if confirmed, is usually followed by a trend reversal.

12. The ratio between the Russell 2000 and 1000 measures the trend of the relationship between:
A. Good- and poor-quality stocks
B. Good- and poor-quality bonds
C. Small- and large-cap stocks
D. Small- and medium-cap stocks

13. According to the text, why does the NASDAQ not normally have leading characteristics like, say, the utilities?
A. Because it is dominated by technology companies, some of which, like semiconductors, tend to lag the market
B. Because it is a speculative index, and speculation usually lags the overall market.
C. Because it does not include utilities and financials, which lead the market
D. None of the above

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21

PRICE: THE MAJOR AVERAGES

Answers

1. **B.** The S&P is weighted by capitalization.

2. **C.** The DJIA excludes utilities and transports and is not, therefore, a composite index.

3. **interest, leads**

4. **D.**

5. **B.**

6. **A.** The divergence warns that the technical position is suspect, but requires a confirmation from the S&P in the form of a trend-reversal signal before you can make a final conclusion that the odds favor a decline.

7. **D.**

8. **C.**

9. **G.** All the statements were correct, and the question asked for incorrect statements.

10. **C.** This is the symbol for the MSCI Europe Australasia Far East Index. The ACWI is the symbol for the MSCI World ETF, but the question asked for the rest of the world. The remaining symbols are those for individual countries.

11. **D.**

12. **C.**

13. **A.** The NASDAQ does include leading sectors such as financials, but has a higher weight in technology, some sectors of which have lagging tendencies.

PRICE: SECTOR ROTATION

Questions

Subjects to Be Covered

Characteristics of early-cycle (liquidity-driven) sectors

Characteristics of late-cycle (earnings-driven) sectors

Sectors that fall between early- and late-cycle leaders

1. True or false: Since the business cycle moves from a deflationary to an inflationary phase, groups sensitive to inflationary conditions have a tendency to lead the market.
   A. True
   B. False

2. Which of the following statements is true?
   A. Inflation-sensitive sectors do well when interest rates are declining.
   B. Occasionally, unusual fundamentals for a sector or industry group will override the normal rotational process.
   C. Liquidity-driven groups do well when commodity prices are rising sharply.
   D. None of the above

3. Fill in the blanks: Steels often bottom out at the same time as the S&P Composite, but they tend to put in their best relative performance at the e_____ of the cycle. Electric utilities have a tendency to l_____ the S&P at market tops.

4. Which of the following falls under the term "liquidity driven"?
   A. Steels, papers, chemicals, insurance companies
   B. Retailers, computers, oils
   C. Utilities, tobacco, soft drinks, property casualty insurers
   D. None of the above

5. Which of the following falls under the term "earnings driven"?
   A. Mines, oils, chemicals
   B. Steels, retailers, personal care
   C. Papers, mines, electric utilities
   D. Electric utilities, life insurers, retailers

6. If the technical position indicates a switch favoring inflation-sensitive sectors, it's okay to buy:
   A. Mines
   B. Oils
   C. Electric utilities
   D. Insurance companies
   E. C and D
   F. A and B, provided their technical position is positive as well

7. If the market is peaking, which industry groups have probably already started their primary bear markets?
   A. Mines
   B. Oils
   C. Electric utilities
   D. Insurance companies
   E. C and D

8. As described in the text, a bull market is:
   A. An extended period, usually lasting between 9 months and 2 years, in which most stocks move down most of the time
   B. A rising trend in the indexes that lasts, on average, between 9 months and 2 years
   C. A period lasting between 9 months and 2 years in which it is difficult to lose money on the long side
   D. An extended period, usually lasting between 9 months and 2 years, in which most stocks move up most of the time

9. True or false: There is a precise relationship between the equity market and the business cycle.
   A. True
   B. False

10. In a broad sense, the S&P Composite is:
    A. A leading indicator of the economy and of the stock market
    B. A coincident indicator for the market, as it lags some sectors and leads others
    C. A lagging indicator of the economy
    D. A coincident indicator for the economy
    E. A and D
    F. A, B, and C
    G. None of the above

11. True or false: An industry group can be split into sectors.
    A. True
    B. False

12. Dividing a group of inflation-sensitive industry groups by a similar measure constructed from deflation-sensitive issues correlates reasonably well with the trend of industrial commodity prices and interest rates. The text also describes a simpler way to calculate a ratio from two ETFs. Which of the following accomplishes that?
    A. XLP/IGE
    B. XLP/SPY
    C. IGE/DIA
    D. IGE/XLP
    E. GDX/IGE

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22

PRICE: SECTOR ROTATION

Answers

1. **B.** It is the deflation- or liquidity-sensitive groups that lead the market at bottoms, not the inflation- or earnings-driven groups.

2. **B.** Sometimes, specific changes in the fundamentals will cause it to move out of sequence.

3. **end, lead**

4. **C.**

5. **A.**

6. **F.**

7. **E.**

8. **D.** B and C are technically correct, but are not bull markets as described in the text.

9. **B.** As described in this chapter, there is a close relationship between the two, but not a precise one. Sometimes, the market ignores the economy, as it did during 2002 when the economy came out of recession but the market declined. Normally, it advances under such conditions.

10. **B.**

11. **B.** It's the other way around. Sectors can be split into industry groups.

12. **D.** The Goldman Sachs Natural Resource ETF (IGE) by the Spider Consumer Staple (XLP)

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TIME: ANALYZING SECULAR TRENDS FOR STOCKS, BONDS, AND COMMODITIES

Questions

Subjects to Be Covered

The long (Kondratieff) wave

The characteristics of secular trends

Causes of secular trends in equities

Characteristics of primary trends change according to the secular trend direction

1. Recognizing that duration varies considerably, what represents a reasonable range for the length of the average secular trend for bonds, stocks, or commodities?
   A. 5 to 10 years
   B. 30 to 40 years
   C. 15 to 20 years
   D. 9 months to 2 years

2. True or false: The duration of a complete Kondratieff wave is typical of a secular trend.
   A. True
   B. False

3. Fill in the blank: Under the Kondratieff scenario, an up wave begins after the structural overbuilding of the previous cycle has been substantially worked off, but a t_____ war event often develops at that time to act as a catalyst.

4. True or false: Technical tools used to identify secular reversals are completely different from those used in intraday charts.
   A. True
   B. False

5. Secular trends in equity prices are best monitored through the lens of:
   A. Nominal prices
   B. Prices adjusted for changes in bond prices
   C. Inflation-adjusted prices
   D. B and C

6. Which of the following *best* describes the causes of secular bear markets in equity prices?
   A. Changing psychology in the form of long-term price earnings swings
   B. Rapid rises in commodity prices
   C. Overbuilding in the economy
   D. Changing psychology in the form of contracting price earnings ratios as investors gradually become more discouraged due to frequent recessions caused by structural and financial imbalances in the economy
   E. None of the above

7. In any secular bull market, you would expect to see:
   A. Primary bear markets limited in scope
   B. Primary bull markets of significant magnitude and duration
   C. Severe primary bear markets
   D. No primary bear markets
   E. A and B

8. What's the best way to describe one of the causes of secular bear markets in equity prices?
   A. Unstable commodity prices on both the upside and downside
   B. Sharply rising commodity prices
   C. Sharply falling commodity prices
   D. The Fed draining reserves from the system

9. Which of the following signs, if any, indicate that a secular bull market in equities is or may be about to get under way?
   A. A long-term momentum of commodity prices that reflects secular trends peaks out
   B. A Shiller P/E in the 7 to 8 times range
   C. Dividend yields in the 6 to 7 percent range
   D. A, B, and C
   E. A and B
   F. None of the above

10. What are the difficulties of using technical analysis to identify secular trend reversals in any market?
    A. Technical analysis does not work when identifying long-term trend reversals.
    B. There are not many data points, so reliability of signals is undermined.
    C. Kondratieff was wrong with his theory of the long wave.
    D. Long-term trends do not lend themselves to trendline construction, and 52-week MA crossovers result in too many whipsaws.

11. What's a good MA crossover combination for monitoring secular swings in yields as described in the text?
    A. 10-month by 12-month
    B. 24-month by 36-month
    C. 9-month EMA by 96-month EMA
    D. All of the above

12. The text states that "surprises typically come in the direction of the trend." What does that mean?
    A. You should not be surprised to see primary trends experience above-average duration when they move in the same direction as the secular trend.
    B. We should not be surprised when bear markets in secular uptrends experience an above-average decline.
    C. Bear markets in secular uptrends rarely experience an above-average decline.
    D. B and C
    E. A bear market in a secular uptrend could be surprisingly limited on the downside.
    F. A and E

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TIME: ANALYZING SECULAR TRENDS FOR STOCKS, BONDS, AND COMMODITIES

Answers

1. **C.**

2. **B.** The Kondratieff wave lasts approximately 50 to 54 years and really consists of two secular trends separated by an 8- to 10-year plateau period.

3. **trough**

4. **B.** Peak trough analysis, trendlines, moving averages, price patterns momentum, etc., are tools that can be used for any time frame. Their parameters may differ and the signals are much more significant, but the principles of interpretation are identical for both time periods. To say that tools differ for these trends is, therefore, a false statement.

5. **C.** Over a relatively short period of time, inflation has a minimal effect on equity prices, but taken over the kinds of long periods covered by secular trends, inflation can have a devastating effect on real returns.

6. **D.** All the answers are technically correct, but the question asked for the best description.

7. **E.**

8. A.

9. D.

10. B. Technical tools work very well. You just have to change the parameters to better suit the data, e.g., a 96-month MA being substituted for a 52-week one, etc.

11. C.

12. F. Since both answers reflect the idea of surprise developing in the direction of the dominant trend. Choice A offers an upside one of greater duration and E a downside one of a very limited sell-off.

TIME: CYCLES AND SEASONAL PATTERNS

Questions

Subjects to Be Covered

Cycle names and lengths

Characteristics of cycles

Principles such as summation and variation

Seasonal patterns

1. Please match the following
   A. Juglar   ————   A. Business cycles
   B. Kitchin   ————   B. Decennial cycle
   C. Kondratieff   ————   C. Foundation for the study
                                         of cycles
   D. Edgar Lawrence Smith ————   D. 7- to 11-year cycle
   E. Edward Dewey   ————   E. 50- to 54-year cycle
   F. Joseph Schumpeter   ————   F. 41-month cycle

2. Fill in the blanks: Time is concerned with a_____, because the l_____ a trend takes to complete, the greater its psychological acceptance and the greater the necessity for prices to move in the o_____ direction and adjust accordingly.

3. Fill in the blanks: Prices move in periodic fluctuations known as c_____. C_____ can operate for periods ranging from a few days to

many decades. At any given moment, a number of c_____ are operating simultaneously, and since they are exerting different forces at different times, the interaction of their changing relationships often has the effect of distorting the timing of a particular c_____.

4. True or false: The principle of variation states that while stocks go through similar cycles, the price magnitudes and durations of these nominal cycles will be different because of fundamental and psychological considerations.
   A. True
   B. False

5. A magnitude failure:
   A. Occurs in a bull market where a cyclic high develops below its predecessor
   B. Occurs in a bear market where a cyclic high develops below its predecessor
   C. Both A and B
   D. Neither A nor B

6. Fill in the blank: When a number of cycles are combined into one, this is known as the principle of s_____.

7. Please match these answers:

   The most bearish month based ——— A. Last two and first three
   on % gain or loss   days

   The most bullish month based ——— B. December
   on % gain or loss

   The most bullish year   ——— C. Monday

   The most bearish year   ——— D. Years ending in a 7

   The most bullish time of the ——— E. September
   month

   The most bearish day of the   ——— F. Years ending in a 5
   week

8. Recognizing that all cycles fail from time to time, which has proved to be the most reliable, relatively speaking?
   A. The Kondratieff wave
   B. The 18-year cycle
   C. The 9.2-year cycle
   D. The 4-year cycle

9. Pre-holiday trading sessions tend to be bullish for equities. Which was the most bullish between 1963 and 1982?
   A. Presidents' Day
   B. Thanksgiving Day
   C. Independence Day
   D. Christmas Day

10. Research between 1897 and 1986 has shown that the 4 days preceding the third trading session of a new month offer superior returns than the average trading day for equities. That means:
    A. You can buy on the last trading day and cash in on the third day of the month.
    B. You should look at the position of the short-term oscillators before making a trade.
    C. A and B
    D. Use this as one indicator in the weight of the evidence approach.
    E. C and D

11. Fill in the blank: The idea of a reaction commensurate with the previous action is known as the principle of p_____.

12. Fill in the blank: Since it occurs only rarely that two cycles are of identical length, an average, or n_____, period is calculated. This theoretical time span is used as a basis for forecasting.

13. Which are the worst performing 6 months of the year?
    A. October to April
    B. January to June
    C. May to October
    D. December to May

14. According to Sam Stovall at S&P Capital IQ, and as described in the text, what sectors offer above-average returns in the bearish May–October period?
    A. Gold and financials
    B. Materials and industrials
    C. Consumer staples and health care
    D. Materials and health care

15. Is the maxim developed by Yale Hirsch that "as goes the S&P in January, so does the whole year" basically accurate?
    A. Yes
    B. No

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TIME: CYCLES AND SEASONAL PATTERNS

Answers

1. Juglar   D. 9.2-year cycle

   Kitchin   F. 41-month cycle

   Kondratieff   E. 50- to 54-year cycle

   Edgar Lawrence Smith   B. Decennial cycle

   Edward Dewey   C. Foundation for the study of cycles

   Joseph Schumpeter   A. Business cycles

2. **adjustment, longer, opposite**

3. **cycles, cycles, cycles, cycles**

4. **A.**

5. **A.** B is a normal phenomenon in a bear market where it is expected that each succeeding peak will be lower than its predecessor. This type of characteristic is not expected in a bull market; hence the expression "failure."

6. **summation**

7. The most bearish month based on % gain or loss is   E. September

The most bullish month based on % gain or loss is   B. December

The most bullish year is   F. Years ending in a 5

The most bearish year is   D. Years ending in a 7

The most bullish time of the month is   A. The last two and first three trading days

The most bearish day of the week is   C. Monday

8. D.

9. B.

10. E.

11. proportionality

12. nominal

13. C.

14. C. These are defensive groups and, therefore, tend to do better in weaker environments for equities. These are average numbers and certainly do not repeat every year.

15. A. Most of the time, this is true.

25

PRACTICAL IDENTIFICATION OF CYCLES

Questions

Subjects to Be Covered

Cycles defined

How the timing of cycle peaks indicates strength or weakness

The importance of a confluence of cycles

Integrating cyles with other technical tools

1. Fill in the blank: A c _____ is a recognizable price pattern or movement that occurs with some degree of regularity in a specific time period.

2. True or false: Successive lows that are higher or lower than their predecessor are of great importance in identifying cycles.
   A. True
   B. False

3. Fill in the blanks: When the cycle high develops shortly after the cycle low, the implications are that the upward part of the cycle is w_____

and that its overall strength lies on the d_____. In this situation, each cycle low is normally l_____ that of its predecessor.

4. A cycle high that is "late" in arriving, i.e., that arrives well after the halfway point of the idealized cycle, is:
   A. Likely to reflect a stronger-than-average rally
   B. Likely to be developing in a bull market
   C. Going to be followed by a sharp correction to catch up with the bearish side of the cycle
   D. All of the above
   E. A and B

5. When a cycle high develops at the time when a low is expected, the cycle is said to be:
   A. Broken
   B. Invalid
   C. Inverted
   D. Inadvertent

6. Which of the following statements are incorrect?
   A. The more cycles that are bottoming simultaneously, the more significant the low is likely to be.
   B. The longer the cycle, the greater its significance.
   C. It is possible to observe cyclic highs that develop at regular intervals.
   D. None of the above

7. Which of the following statements are correct?
   A. Cycles should always be used in conjunction with other indicators.
   B. Cycles should only be used with oscillators.
   C. Cyclic highs that develop halfway along a cycle are perfect.
   D. None of the above

PRACTICAL IDENTIFICATION OF CYCLES

Answers

1. **cycle**

2. **B.** It is the distance between the lows that is important, not their level.

3. **Weak, downside, lower.** Substitute words that have the same meaning are acceptable as answers, e.g., soft for weak, below for lower, etc.

4. **E.** Cycle highs that are late in arriving are usually a sign of a very strong trend.

5. **C.**

6. **D.** All of these statements are correct.

7. **A.** Cycles are just another technical tool and, as such, are far from perfect. It therefore makes sense to always use them in conjunction with other indicators.

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VOLUME II: VOLUME INDICATORS

Questions

Subjects to Be Covered

Interpreting the rate of change of volume

The volume oscillator

The calculation and interpretation of the Demand Index

The assumptions underlying the calculation of the Chaikin Money Flow

Interpreting the Chaikin Money Flow

Construction and interpretation of the Arms Index

On Balance Volume

Upside/downside volume interpretation

1. A high reading in a volume ROC indicates:
   A. A high level of volume
   B. An overbought market
   C. An oversold market
   D. A and B

2. What is likely to happen when both trendlines in the following chart are violated? The series in the upper window is the price, and that in the lower one is a volume oscillator.
   A. The price will rally.
   B. The price will fall.
   C. The price will move sideways.
   D. There is not enough information to make a reliable forecast.
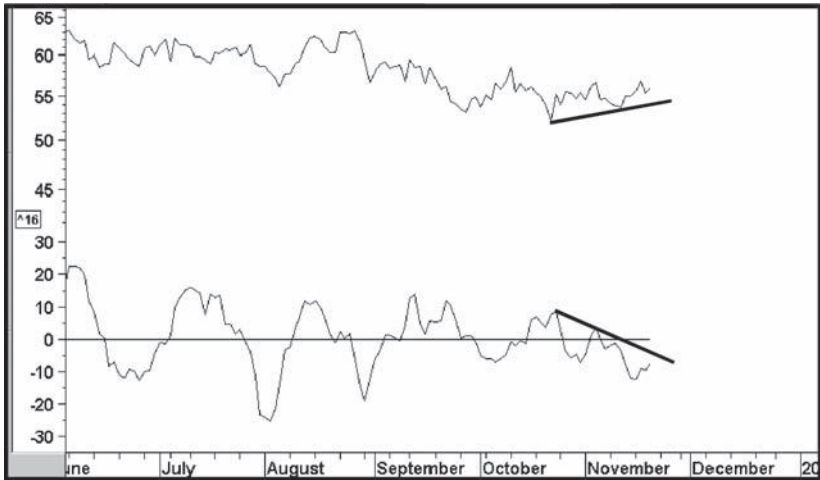
3. When the volume oscillator reaches a peak and starts to reverse, this indicates:
   A. A top
   B. A bottom
   C. A probable trend reversal
   D. None of the above

4. True or false: Volume usually leads price during rallies.
   A. True
   B. False

5. True or false: The Demand Index combines price and volume into one indicator.
   A. True
   B. False

6. A high reading in the Demand Index indicates:
   A. An overbought or oversold condition with the price
   B. An overbought condition
   C. An oversold condition
   D. A and C

7. The Demand Index is interpreted:
   A. Using overbought/oversold levels
   B. With trendline breaks
   C. Using divergence analysis
   D. All of the above

8. What does the Chaikin Money Flow assume in its calculation?
   A. That prices close near their low on decreasing volume at the end of a rally
   B. That prices close near their high at the end of a decline on rising volume
   C. That prices close near their high on rising volume in an advance and near their low on rising volume during a decline
   D. None of the above

9. What is the strongest interpretive technique for the Chaikin Money Flow as described in the text?
   A. Moving-average analysis
   B. Overbought/oversold crossovers
   C. Trendline analysis
   D. Divergences

10. On Balance Volume is best interpreted with:
    A. Overbought/oversold conditions
    B. Divergences
    C. Trendline analysis
    D. B and C
    E. A, B, and C

11. What statements are true of the Arms Index?
    A. It moves inversely with price.
    B. It is constructed from volume and breadth data.
    C. A reading in the 10-day series in excess of 1.5 is bearish.
    D. A and B
    E. A, B, and C

12. What best describes the situation at point A in this chart of the Barclays 20-year Trust?
  A. A selling climax
  B. Nothing special
  C. A small buying climax
  D. A volume price oscillator divergence

Barclays 20-year Trust (TLT)
Price Oscillator
A
B
Volume
Oscillator
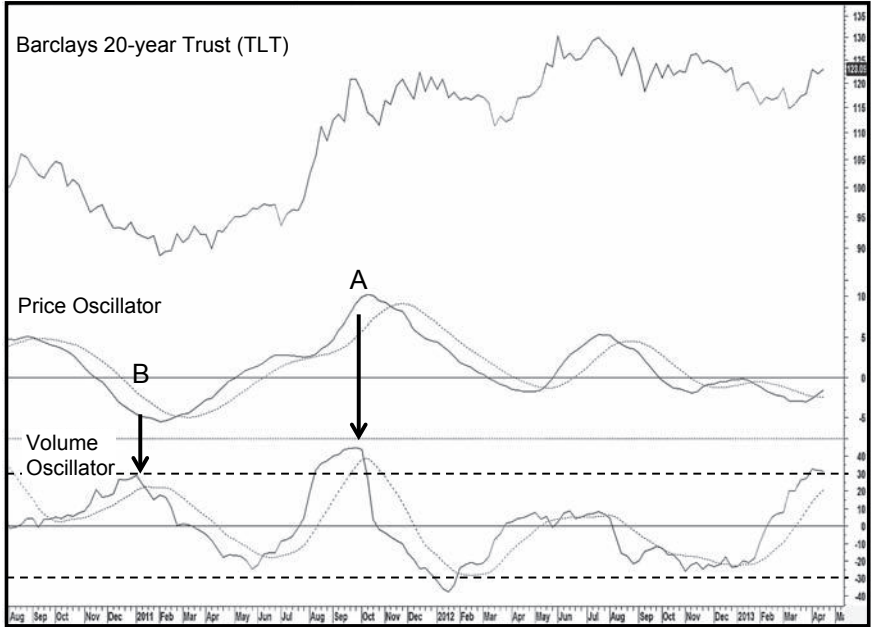
13. What best describes the situation at point B in the chart of the Barclays 20-year Trust?
   A. A selling climax
   B. Nothing special
   C. A small buying climax
   D. A volume price oscillator divergence

Barclays 20-year Trust (TLT)

Price Oscillator
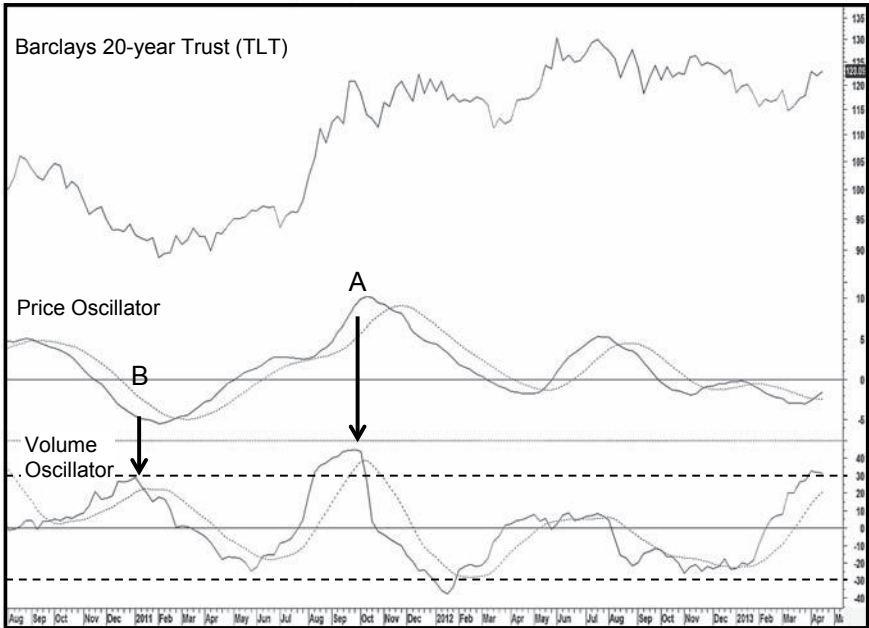
Volume Oscillator

14. This chart of the Peritus High Yield ETF shows that the volume oscil-
lator has violated a down trendline and crossed above its MA. This
means that the odds favor:
A. Rising prices
B. Falling prices
C. That volume will expand and support higher prices
D. That volume will expand and support lower prices
E. That volume will expand

Peritus High Yield

Volume Oscillator

26
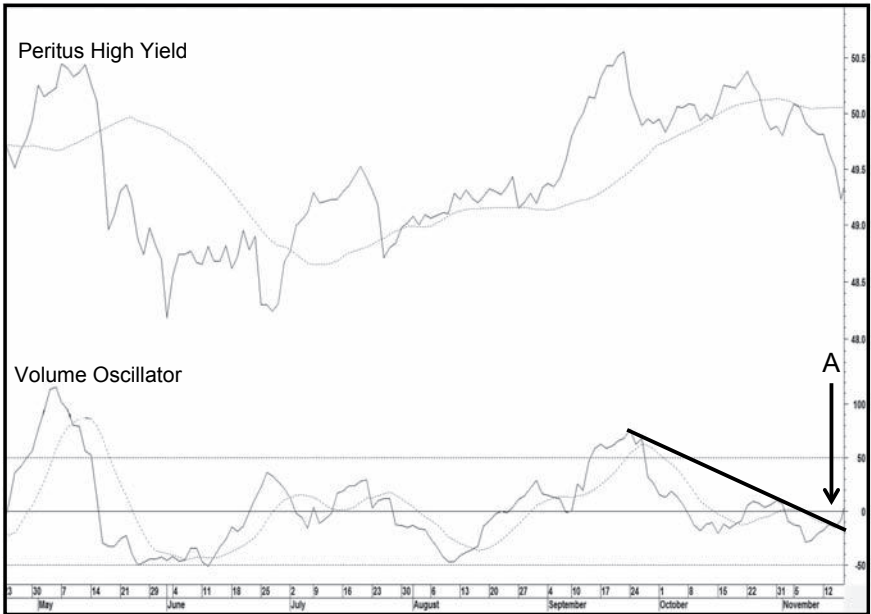
VOLUME II: VOLUME INDICATORS

Answers

1. **A.** A high reading merely indicates a high level of volume. This could come during a rally or a decline.

2. **B.** When the price falls and volume rises, as is happening in the chart, this is bearish.

3. **C.** A peaking in the oscillator indicates a probable exhaustion move in volume, which is often followed by a trend reversal or trading range.

4. **A.**

5. **A.**

6. **B.** The Demand Index, unlike the volume ROC and oscillator, always moves in the same direction as the price.

7. **D.**

8. **C.**

9. **D.** All of the choices are legitimate interpretive techniques, but the strongest characteristic of this indicator is its ability to point up divergences.

10. **D.** The OBV is not an oscillator and does not experience overbought/oversold conditions.

11. **D.** A reading in excess of 1.5 is bullish, not bearish.

12. **C.** It's a buying climax because both oscillators are overbought.

13. **A.** It's a mild selling climax because the price oscillator was moderately oversold and the volume series overbought.

14. **E.** All we know is that the odds favor volume expanding. We are given no clues in the chart as to the direction of any forthcoming price move.

27

MARKET BREADTH

Questions

Subjects to Be Covered

Methods of A/D line construction

Interpretation of breadth oscillators

The concept of diffusion indicators and their interpretation

The concept of seasonal momentum and its interpretation

The concept of net new highs

The McClellan Oscillator and Summation Index

1. What are the ways in which an A/D line can be calculated?
   A. By cumulating the daily plurality of advances and declines
   B. By cumulating the difference between advances and declines divided by unchanged issues
   C. By cumulating the daily difference between the daily new highs and lows
   D. A and B

2. What is the most common method for interpreting the A/D line?
   A. Overbought/oversold conditions
   B. Divergences
   C. Reverse price patterns
   D. A and C

3. True or false: Advance decline lines can be constructed for any market that contains a basket of components.
   A. True
   B. False

4. Before using any A/D line for comparative purposes, it is first necessary to:
   A. Calculate an EMA
   B. Plot it with an oscillator
   C. Calculate winter momentum
   D. Check to see if the line has a historical downward bias

5. Fill in the blanks: Breadth data may be expressed as an A/D l_____ or an o_____. Both forms may be used to identify positive and negative d_____.

6. Which description best describes how the McClellan Oscillator is calculated?
   A. From advancing minus declining issues
   B. By comparing two simple moving averages
   C. By comparing two EMAs of the daily A/D line for a specific market
   D. By calculating a smoothed ROC of an A/D line

7. Which, if any, are correct statements if the McClellan Oscillator is above zero?
   A. The Summation Index will also be above zero.
   B. The Summation Index will be rising.
   C. The Summation Index will be above its MA.
   D. None of the above

8. The A/D line tends to lead the market at peaks because:
   A. Many issues are interest sensitive, and interest rates lead equities
   B. Market participants tend to lose confidence in smaller companies before they lose confidence in larger ones.
   C. They all have a downward bias.
   D. A and B

9. When using the concept of seasonal momentum, a high and reversing level in which season often signals major buying opportunities?
   A. Winter
   B. Spring
   C. Summer
   D. Fall

10. Fill in the blank: A d_____ indicator measures the percentage of a basket of securities that are experiencing a positive trend.

11. Fill in the blanks: Under the concept of seasonal momentum, major declines are sometimes avoided when f_____ moves into s_____ instead of into winter.

12. Which is a better bellwether for the general market?
    A. The A/D line
    B. The DJIA
    C. The S&P Composite
    D. The NASDAQ Composite

13. True or false: The net new high data should always be calculated with a 52-week time span.
    A. True
    B. False

14. Fill in the blanks: A new high indicator based on the c_____ plurality of daily net new high data is a useful addition to the breadth indicator family. The text suggests that it can be successfully used with a ____day MA to signal bullish and bearish environments.

15. When a diffusion indicator reverses direction from an extreme reading, the index it is monitoring usually reverses as well. If it does not and the diffusion indicator continues to correct, it is a sign that:
    A. Many of the securities from which the diffusion indicator is constructed are themselves correcting.
    B. The index is guaranteed to reverse as well.
    C. The index will drag the diffusion indicator up.
    D. None of the above

16. True or false: A net new high indicator based on cumulative daily data could realistically be constructed from a basket of gold shares.
    A. True
    B. False

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MARKET BREADTH

Answers

1. **D.** There are actually several other ways in which the line can be calculated, but these are the two most common.

2. **B.** There are many ways to interpret A/D lines, such as trendline violations, price pattern completions, and MA crossovers, but the most common is divergences, both negative and positive.

3. **A.**

4. **D.**

5. **line, oscillator, divergences**

6. **C.**

7. **B.** If the oscillator is above zero, it will add to the total for the Summation Index, which means that it will be rising. The index itself could be above or below zero.

8. **D.** Some, but not all, A/D lines have a downward bias.

9. **A.**

10. **diffusion**

11. **fall, summer**

12. **A.** because it reflects strengths and weaknesses in the broad list of stocks traded.

13. **B.** The parameter for net new high time spans can be varied to suit the trend being monitored. Short-term trends, for example, could be analyzed with a 30-day parameter rather than 52 weeks, which is better for primary or intermediate price movements.

14. **cumulative, 100**

15. **A.**

16. **A.** Net new high oscillators or a cumulative line can be constructed for any time period for any representative basket of securities for any market.

INDICATORS AND RELATIONSHIPS THAT MEASURE CONFIDENCE

Questions

Subjects to Be Covered

Interpretation of confidence ratios

The importance of consumer staples

Bond market confidence ratios

Inflation-protected versus regular bonds

1. What is the common thread between negative divergent action from an A/D line and relationships such as the relative action of consumer staples?
    A. There is a broad measure of a subtle loss of confidence by market participants.
    B. There are a lot of stocks in the consumer staples sector, so it mimics the A/D line.
    C. The A/D line has nothing in common with consumer staples.

2. True or false: When a confidence ratio fails to confirm a new low in a market average, it is a sign of strength that, when confirmed by price action in the average, is usually followed by higher prices.
    A. True
    B. False

3. When the relative action of consumer staples is improving, that tells us:
   A. That consumer staples are underperforming the market
   B. That investors are losing confidence because these defensive stocks are outperforming
   C. That consumer staples are outperforming the market
   D. The market will definitely decline
   E. B and C
   F. C and D
   G. None of the above

4. Why do investors flock to foods and other consumer staples when they are worried?
   A. Their lack of cyclicality makes for more accurate earnings forecasts than, say, highly cyclical and volatile mining stocks.
   B. They tend to pay better dividends.
   C. They generally have a consistent record of earnings and dividend growth.
   D. Most of these companies have a solid balance sheet.
   E. A and D
   F. C and D
   G. All of the above

5. Based on the description in the text concerning the relationship between the SPY and consumer staple KSTs, what is likely to happen next in the following chart?
   A. The SPY rallies
   B. It declines
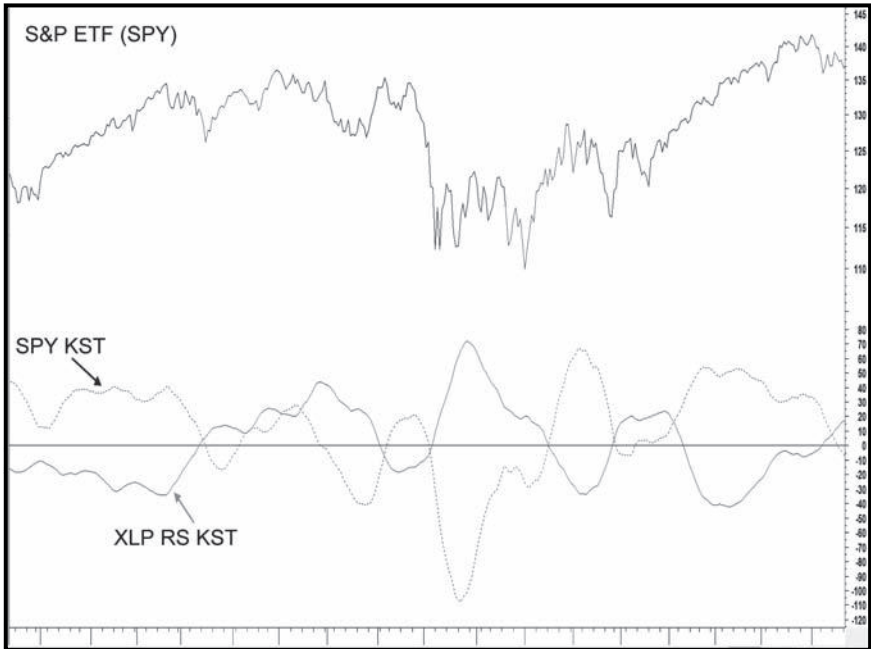
6. What are the symbols of two NYSE-listed bond ETFs as described in the text that reflect rising and falling confidence in the credit markets? H_____ and T_____

7. Does confidence in the bond market as reflected in the ratio between the government 20-year constant maturity and Moody's BAA yield to ratio help in identifying potential trend changes in the equity market?
   A. Yes
   B. No

8. True or false: The market generally discounts the economy and brokers generally discount the market.
   A. True
   B. False

9. Brokers have a tendency to lead the market because:
   A. During bull markets, volume and therefore brokerage commissions tend to increase because traders and investors find it easier to take profits than losses.
   B. When traders are making money, they also tend to make faster decisions, which inflates trading.
   C. More companies go public during the course of a bull market because they obtain a higher price for their stock, thereby bloating underwriting fees.
   D. Interest rates have a tendency to lead the stock market. That means that brokerage carrying costs decline at the start of an equity bull market, thereby enhancing profits.
   E. Researchers at brokerage houses do a better job of forecasting than other analysts.
   F. A, B, C, and D
   G. A, B, and E
   H. All of the above

10. Positive and negative divergences between the brokerage ETF, the IAI, or the Amex Brokers Index and an overall measure of the market such as the S&P Composite help to identify latent strengths or weaknesses. Does the size of the divergences have a consistent record of isolating the characteristics of a forthcoming trend reversal?
    A. Yes
    B. No

11. Which is better at forecasting trends in commodity prices?
    A. The prices of inflation-protected bonds
    B. The price of Treasury bonds
    C. The ratio between inflation-protected bonds (TIP) to government bonds (TLT)

28

INDICATORS AND RELATIONSHIPS THAT MEASURE CONFIDENCE

Answers

1. **A.**
2. **A.**
3. **E.**
4. **G.** All of the statements are correct.

5. B. As shown in the following chart.

Chart labels:
- S&P ETF (SPY)
- SPY KST
- XLP RS KST
- Consumer staple KST crosses above that for the SPY, which is bearish.
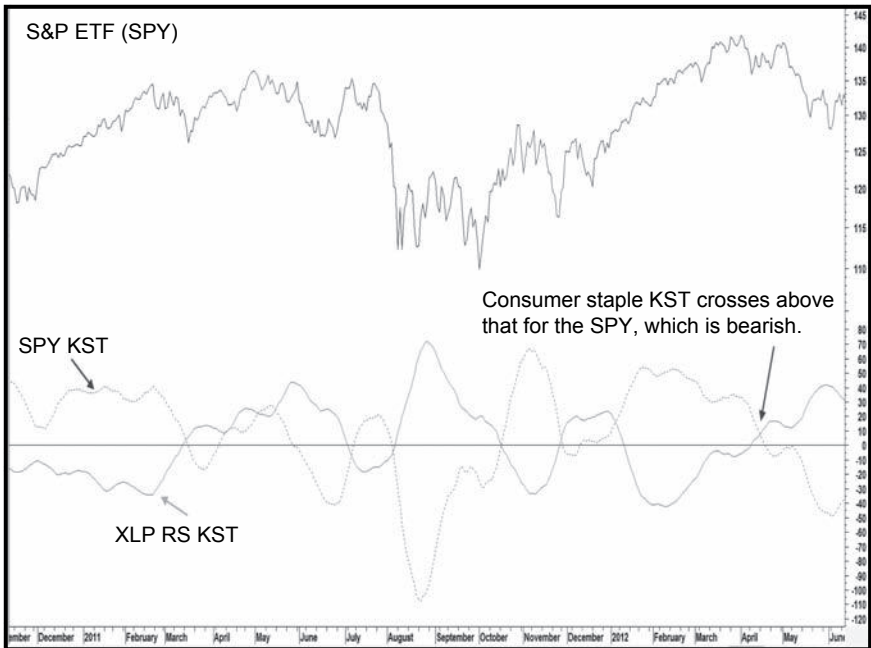
6. HYG and TLT. The IBOXX Corporate High Yield Bond Fund and the Barclays 20-Year Trust, a government-bond ETF.

7. A.

8. A.

9. F. There is no evidence that brokerage researchers are any better than others.

10. B. There appears to be no consistent relationship between the size of a divergence and the magnitude of the price move following it.

11. C.

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29

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THE IMPORTANCE
OF SENTIMENT

Questions

Subjects to Be Covered

Differentiating between savvy and less smart groups of market participants

Interpretation of sentiment indicators

Substitutes for sentiment indicators

1. Which of the following tend to act in a manner contrary to that of the majority, i.e., who is usually correct as a group?
   A. Market letter writers
   B. Traders
   C. Specialists
   D. Insiders
   E. C and D
   F. All of the above

2. Why is it probable that short interest numbers have become distorted?
   A. Because of the big bull market in the 1980s and 1990s
   B. Because of the advent of futures and options, which increase arbitrage opportunities
   C. Because it's easier to short now more than ever
   D. None of the above

3. True or false: When 90 percent of market letter writers are bearish, this is a bullish sign.
   A. True
   B. False

4. Which of the following statements is true?
   A. The trend of sentiment can be just as important as the level.
   B. All sentiment indicators are distorted and therefore should be used sparingly.
   C. Trendline violations in sentiment indicators occasionally give good buy and sell signals.
   D. A and C
   E. None of the above

5. Fill in the blank: When sentiment indicators are not available, it is possible to substitute a m_____ indicator since both series reflect mood changes in traders and investors.

6. Which is more likely to offer the stronger signal?
   A. An extremely low Market Vane bond bull reading in a bear market
   B. An extremely high Market Vane bond bull reading in a bear market
   C. An extremely high Market Vane bond bullish reading in a bull market
   D. B and C

7. When the level of margin debt crosses below its 12-month MA, this is usually:
   A. Bullish
   B. Bearish

8. What is an extreme reading in the Market Vane bullish bond numbers usually associated with?
   A. A short-term or intermediate-term turning point
   B. A primary-trend turning point

9. Mutual fund cash/asset ratios are:
   A. Sentiment indicators
   B. Flow-of-funds indicators
   C. Oscillators
   D. A and B

10. True or false: Bull market highs have a greater tendency to form when sentiment diverges more seriously in a negative way rather than from extremely high readings.
    A. True
    B. False

11. If a news event that would normally be expected to move the price does not do so, the likelihood is that all the news—good or bad:
    A. Will do so as investors drill down on the details
    B. Soon will be as investors adjust to it
    C. Is already reflected in the price

12. True or false: Fundamental indicators make poor sentiment indicators.
    A. True
    B. False

13. Which statement best describes the VIX?
    A. When prices are trending steadily upward, there is generally a declining level of volatility as complacency sets in.
    B. When a market is falling, a growing level of fear results in an expanding trend of volatility.
    C. A and B
    D. None of the above

14. As a contrarian indicator, the higher the VIX, the more bullish the market. Conversely, the lower the VIX, the more bearish the market. Is this statement true?
    A. Yes
    B. No

15. True or false: Put volume is usually greater than that of calls.
    A. True
    B. False

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THE IMPORTANCE
OF SENTIMENT

Answers

1. **E.**

2. **B.**

3. **A.** Newsletter writers as a group are contrary indicators.

4. **D.** When they do, it is always a good idea to get some kind of trend-confirmation signal from the price itself.

5. **momentum**

6. **B.** Contratrend signals are usually less powerful than pro-trend signals.

7. **B.** When margin debt is contracting, this indicates a lack of confidence and is bearish.

8. **A.** Because this is a short-term indicator, it signals less important turning points.

9. **D.** These indicators can be used as flow-of-funds or sentiment indicators.

10. **A.** Sometimes the sentiment numbers are unusually high at the final peak, but in most cases, divergences are more likely.

11. **C.**

12. **B.** Fundamental indicators of value, such as a P/E ratio, reflect sentiment because they tell us how much investors are prepared to pay for a stock. If they are prepared to pay a high P/E, that tells us that they are optimistic and vice versa.

13. **C.**

14. **A.**

15. **B.**

30

INTEGRATING CONTRARY OPINION AND TECHNICAL ANALYSIS

Questions

Subjects to Be Covered

Contrary opinion defined

Personalities who have written about crowd psychology

Why it is difficult to go contrary

1. Fill in the blanks: The guiding light of investment contrarianism is not that the majority view—the conventional or received wisdom—is always wrong. Rather, it's that the majority opinion tends to solidify into a d_____ while its basic premises begin to lose their original v_____ and so become progressively more m_____ in the marketplace.

2. As described in the text, the three steps to forming a contrary opinion might include:
   A. Reading popular magazines and jotting down notes
   B. Figuring out what the crowd thinks
   C. Talking to your friends
   D. Determining when the crowd reaches an extreme
   E. Forming alternative scenarios
   F. B, D, and E
   G. A, D, and E

3. Fill in the blanks: When the c_____ reaches an extreme, the question is not w_____, but w_____ and by h_____ much.

4. Please match the following
Le Bon   _____   A. Charles
Mackay   _____   B. John
Humphrey   _____   C. Neil
Schultz   _____   D. Gustave

5. True or false: When you see several bullish cover stories and the price has risen significantly over the previous 2 years, it is safe to buy.
A. True
B. False

6. Which of the following are reasons why it is difficult to go contrary?
A. Because most of us have a need to conform
B. There is a certain comfort gained by heeding the advice of an expert
C. We tend to believe that the establishment has all the answers
D. Because of the fear of being ridiculed
E. A, B, and D
F. A, B, and C
G. All of the above

7. A good contrarian should:
A. Not go contrary for the sake of going contrary
B. Learn to think in reverse
C. Turn bullish when everyone else is bearish
D. Try and be early, as the theory of contrary opinion is pretty precise
E. Creatively come up with alternative scenarios to that of the crowd
F. Try to figure out why the crowd may be wrong
G. D, E, F, and G
H. A, B, E, and F
I. All of the above

8. Politicians are a:
A. Leading indicator
B. Coincident indicator
C. Lagging indicator

9. Fill in the blank: Cover stories, best-selling books, reaction by politicians, extremes in sentiment indicators, and gross over- or undervaluations are all signs that the crowd has reached an e_____.

10. True or false: Contrary analysis should be used as one more indicator in the weight-of-the-evidence approach.
    A. True
    B. False

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INTEGRATING CONTRARY OPINION AND TECHNICAL ANALYSIS

Answers

1. **dogma, validity, mispriced**

2. **F.**

3. **crowd, whether, when, how**

4.   Le Bon   D. Gustave

       Mackay   A. Charles

       Humphrey   C. Neil

       Schultz   B. John

5. **B.** The crowd can sometimes move to an extreme, well beyond any-one's wildest expectations; therefore, it is better to make sure that this is confirmed by a technical signal.

6. **G.**

7. **H.**

8. **C.** Politicians as a group respond to public opinion; they rarely antici-
   pate crowd swings. Thus, the crowd has usually moved to an extreme
   by the time politicians take up the issue. When the crowd has reached
   an extreme, it's usually time to look for a new trend!

9. **extreme**

10. **A.**

WHY INTEREST RATES AFFECT THE STOCK MARKET

Questions

Subjects to Be Covered

The relationship between interest rates and equity prices

Credit market sectors

The discount rate

1. Which is usually more important as an influence on the economy and equity prices as described in the text?
   A. The level of short-term rates
   B. The level of long-term rates
   C. The rate of change of short-term rates
   D. The rate of change of long-term rates

2. True or false: Changes in the primary trend of short-term interest rates have led every stock market bottom between 1921 and 2009.
   A. True
   B. False

3. Changes in interest rates have an influence on stock prices because:
   A. Credit market instruments represent competition for equity money.
   B. Stocks are often bought on margin and changes in the cost of margin affect buying and selling decisions.

C. Changes in interest rates affect the level of economic activity and, therefore, indirectly affect corporate profits.

D. A, B, and C

4. Was the answer to the previous question a complete list as indicated in the text?

A. Yes

B. No

5. Please match the following:

A. The long end of the bond market	A. Maturity falling between 1 and 10 years
B. A maturity of a year or less	B. Money-market instruments
C. Intermediate maturities	C. A maturity of at least 10 years

6. Fill in the blanks: Federal funds, 3-month eurodollars, and 3-month T-bills are all m_____ m_____ instruments. The F_____ R_____ has a greater influence over these sectors than over long-term i_____ r_____.

7. If a short-term oscillator fails to reach an overbought condition over a period of several months and oversold conditions fail to signal a rally, this indicates:

A. A primary bull market environment

B. A primary bear market environment

C. A or B

D. None of the above

8. The "three step and stumble" rule states:

A. That if the discount rate had been raised three times, the top in the stock market has been seen

B. That if the discount rate has been raised three times, we should expect equity prices to immediately stumble

C. That if the discount rate has been raised three times, the clock has begun to tick for the bull market in equities

D. That if the discount rate has been lowered three times, stock prices are likely to stumble

9. Fill in the blanks: The three main sectors in the U.S. bond market are T_____ E_____, C_____, and G_____. Note: T and E are two words that describe one sector.

10. Do reversals in the direction of the discount rate offer reliable signals of primary trend reversals in short-term interest rates?

A. Yes

B. No

31

WHY INTEREST RATES AFFECT THE STOCK MARKET

Answers

1. **C.**

2. **B.** Interest rates almost always lead stock market bottoms, but there are rare exceptions, such as 1987. Since this was not associated with a recession, it could be argued that the relationship did not fall into the norm. However, the 1987 crash did meet the magnitude qualification for a bear market but not the duration.

3. **D.**

4. **B.** Changes in rates also affect the cost of capital and, therefore, affect corporate profits directly.

5. A = C
   B = B
   C = A

6. **money market, Federal Reserve, interest rates**

7. **B.**

8. **C.** Once the rate has been raised three times, the market becomes vulnerable, but the leads in each cycle since the inauguration of the Federal Reserve have varied considerably in each cycle.

9. **Tax Exempt, Corporate, Government**

10. **A.** Yes, they do because they reflect central bank policy and the central bank essentially controls the level of short-term interest rates.

USING TECHNICAL ANALYSIS TO SELECT INDIVIDUAL STOCKS

Questions

Subjects to Be Covered

Ownership stages of stocks

The importance of the secular trend

Relating absolute to relative price trends

Relating individual stocks to industry groups

Using ratios of early- to late-cycle industry groups

1. Fill in the blanks: When a stock has risen sharply in price, bullish news is widespread, and the media has fallen in love with it, the stock is said to be o_____. When the opposite circumstances are present, the stock is said to be u_____.

2. Which stocks *best* lend themselves to the buy/hold approach?
   A. Cyclicals
   B. Growth stocks
   C. Stocks with high betas
   D. All of the above

3. A secular price trend:
   A. Is a deeply religious one
   B. Lasts from 1 to 2 years
   C. Lasts over several business cycles
   D. Is more important than a primary trend
   E. B and D
   F. C and D

4. Fill in the blank: Stocks can be selected when the market conditions are right, the industry group to which it belongs looks positive, and the individual stock looks attractive, especially against the group. This approach is called t_____ d_____.

5. When the secular trend of the relative strength line reverses but the uptrend in the absolute price trend is still intact, what is the best strategy?
   A. Hold on until the secular trend for the absolute price reverses.
   B. Sell and move into cash.
   C. Provided the overall market conditions are positive, switch to a stock with positive absolute and relative price trends that are not overextended.
   D. None of the above

6. Looking at this chart, is it reasonable to anticipate a long-term KST buy signal?
   A. Yes
   B. No
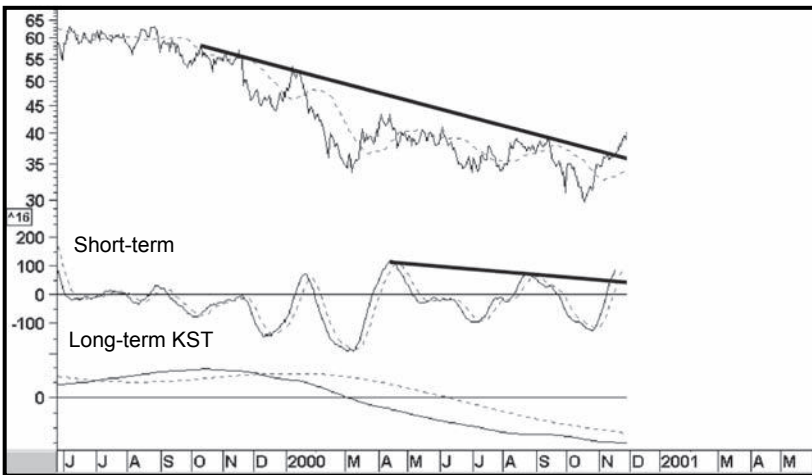
7. True or false: If the market and industry group have both turned positive, it is likely that some stocks in the group will outperform the others, but it is okay to buy any of them.
   A. True
   B. False

8. A ratio such as the aluminum/banks indicates that the cycle has moved to an inflationary stage. What does this mean?
   A. It is okay to buy late-cycle leaders.
   B. It is okay to buy early-cycle leaders, provided their technical condition is solid.
   C. It is okay to buy late-cycle leaders, provided their technical condition is sound.
   D. Early- and mid-cycle leaders should not be bought under any circumstances.
   E. C and D

9. True or false: If a stock is overowned, it should be immediately shorted.
   A. True
   B. False

10. True or false: When the stock market rallies off a bear market low, it is safe to by any stock.
    A. True
    B. False

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32

USING TECHNICAL ANALYSIS TO SELECT INDIVIDUAL STOCKS

Answers

1. **overowned and underowned**

2. **B.**

3. **F.** The secular trend lasts for several business cycles and is more dominant than the primary trend because it lasts longer.

4. **top down**

5. **C.** It's okay to hold on until the absolute price trend reverses, but better results will come from switching to a stock where the RS trend is positive.

6. **A.** Because the short-term KST has violated a down trendline and the price has broken above a 1-year down trendline, this should reverse the course of the delicately balanced long-term KST.

7. **B.** Each stock must be appraised on its own merits. The top-down approach is used merely as a shortcut filtering mechanism.

8. **C.** In general, it is better to stay with the late-cycle leaders since the probabilities favor their fortunes. However, there may be special

circumstances where some other groups can outperform the market. Provided their technical position is sound, there is no reason why they cannot be purchased.

9. **B.** The stock may remain overowned for some time before it reverses. It should only be shorted when the technical position warrants such action.

10. **B.** It is never safe to buy any stock. Each issue must be analyzed on its own merits.

33

TECHNICAL ANALYSIS OF INTERNATIONAL STOCK MARKETS

Questions

Subjects to Be Covered

The international 4-year cycle

Choice of world indexes

Applying breadth indicators to the global equity scene

Analyzing relative action

1. Which years represented a bottom in the 4-year business cycle?
   A. 1972, 1976, 1980, and 1984
   B. 1981, 1985, 1986, and 1992
   C. 1982, 1986, 1990, and 1995
   D. 1986, 1990, 1994, 1998, and 2002

2. The 4-year global stock cycle:
   A. Repeats exactly every 4 years
   B. Repeats approximately every 4 years
   C. Has worked consistently well since the 1960s, so it is guaranteed to work in the future
   D. B and C

3. Which statement is incorrect?
   A. All markets move in the same direction all the time.
   B. Diffusion indexes cannot be used with the World Index because there are not enough data.
   C. The MSCI World Index is the only one worth using.
   D. A, B, and C

4. True or false: The MSCI World Stock Index (ETF symbol ACWI) is weighted by market capitalization.
   A. True
   B. False

5. Based on the text, which are legitimate ways to interpret diffusion indicators constructed from a basket of individual country indexes?
   A. Divergence analysis
   B. Trendline analysis
   C. Relative action
   D. Overbought/oversold analysis
   E. A, B, and C
   F. A, B, and D
   G. A, B, C, and D

6. If fewer country indexes are making new highs as the World Index is rallying, what would you expect to happen?
   A. The World Index will decline.
   B. This is a negative sign, but not a signal to sell, until the World Index confirms with a negative trend reversal signal.
   C. The index will rally.
   D. None of the above

7. The 1987 crash:
   A. Was confined to the United States
   B. Was a worldwide affair
   C. Probably facilitated closer correlation between the stock markets of individual countries
   D. B and C

8. Fill in the blanks: When the 4-year cycle develops in a secular b_____ market, what would normally be a business cycle–associated bear market occasionally turns into a t_____ range market.

9. The following chart represents an individual country ETF together with its relative strength line against the ACWI. The long-term KSTs of these series are also included. Based on the evidence presented here, should the ETF be bought?
   A. Yes
   B. No
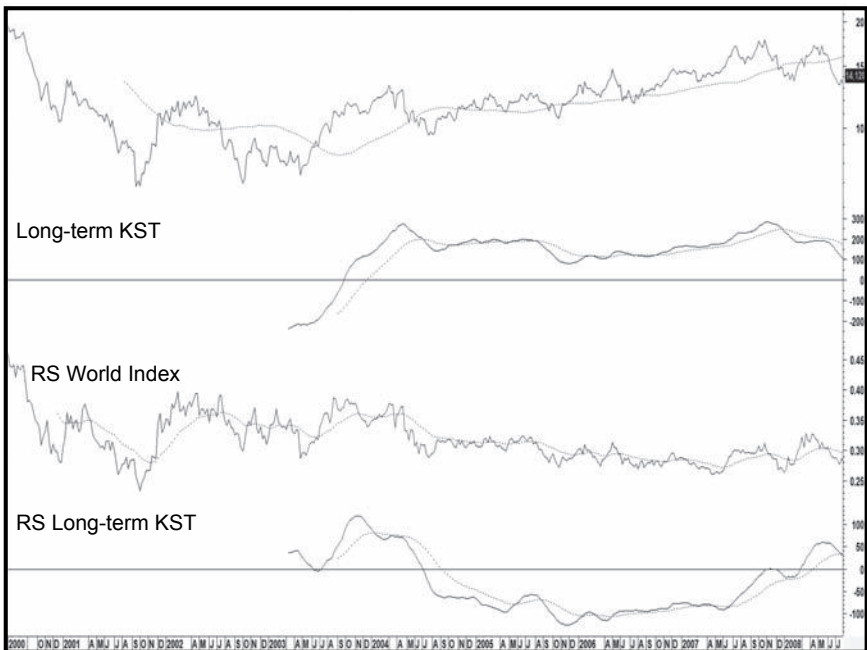
10. Would there be a reasonable chance that the price of this country's ETF would rise were it to close above $19.50?
   A. Yes
   B. No

RS World Index

11. It's possible to construct A/D lines for a basket of stocks in any country. What factors should we pay attention to?
   A. Whether it has a downward bias or not
   B. Whether it reflects movements in the country index and occasionally sets up divergences, etc.
   C. Whether it includes a wide variety of industries
   D. All of the above

TECHNICAL ANALYSIS OF INTERNATIONAL STOCK MARKETS

Answers

1. **D.**
2. **B.**
3. **D.**
4. **A.**
5. **F.** Relative action was not discussed in the text.
6. **B.**
7. **D.**
8. **bull, trading**
9. **B.** Both series are below their long-term MAs, and the KST for the absolute price is bearish. That for the relative action is in a declining mode.

10. **A.** First, a close above $19.50 would take the price above its MA and above the down trendline. Moreover, the relative line was very strong while the price was moving down. This suggests that the World Index was in a primary bear market, which actually was the case in 2002. Provided the relative action continues to remain positive when the primary trend turns up, this country's ETF will outperform the rest of the world.

11. **D.**

AUTOMATED TRADING SYSTEMS

Questions

Subjects to Be Covered

Advantages and disadvantages of automated systems

Appraising systems

Troubleshooting poorly performing systems

1. True or false: Mechanical systems can be used as a substitute for judgment and thinking.
   A. True
   B. False

2. Which is likely to be a better system?
   A. One that has a perfect fit with historical data with one security
   B. One that has a profitably consistent but imperfect historical fit over many securities
   C. One that has a huge profit based on one or two signals
   D. None of the above

3. What are some of the advantages of well-designed mechanical systems?
   A. They remove objectivity.
   B. They remove subjectivity.
   C. They allow the trader to participate in every worthwhile move.
   D. A and C
   E. B and C

4. What are the disadvantages of automated systems?
   A. Back-testing won't necessarily simulate what actually would have happened.
   B. Random events can jeopardize a badly conceived system.
   C. There will be long periods when the best systems fail.
   D. All of the above

5. If a buy signal is given but there is no countervailing sell system, what is the problem?
   A. You are using too much margin.
   B. The system was not properly back-tested.
   C. The system has not been designed precisely.
   D. The results were not extrapolated before entering the marketplace.
   E. B and D

6. If you trade a proven and well-designed system and you lose all of your capital executing it, what is the problem likely to be?
   A. You do not have the aptitude to trade.
   B. You did not follow every signal without question.
   C. You did not make sure that you had enough capital to survive the worst losing streak during the test period.
   D. B and C
   E. You should have diversified by using several systems simultaneously.
   F. C and E
   G. B, C, and E

7. Fill in the blank: The worst string of losses from a specific open equity peak is known as the greatest d_____.

8. Looking at the equity curves from three different systems in the following chart, which one is likely to offer the best results?
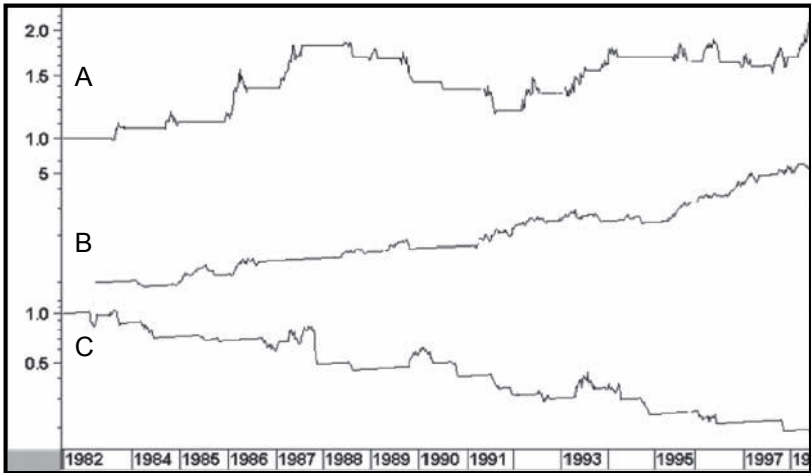
9. Which statement is true?
   A. If you don't invent enough rules, the sample data will not be profitable and neither will the real-time application.
   B. The size of the drawdown is unimportant if the system is really profitable.
   C. If your system starts out a big winner in real time, you know you've got it made.
   D. None of the above

10. Using leverage with mechanical systems will:
    A. Always result in bigger gains for systems that test profitably
    B. Exaggerate the results both on the upside and downside
    C. Depend on the chronological sequence in which the gains and losses occur, but will definitely exaggerate the results both on the upside and downside
    D. Bust the account

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AUTOMATED TRADING SYSTEMS

Answers

1. **B.**

2. **B.**

3. **E.**

4. **D.**

5. **C.**

6. **G.**

7. **drawdown**

8. **B.** This line has a consistent ring trend. A is too volatile and C loses money.

9. **D.**
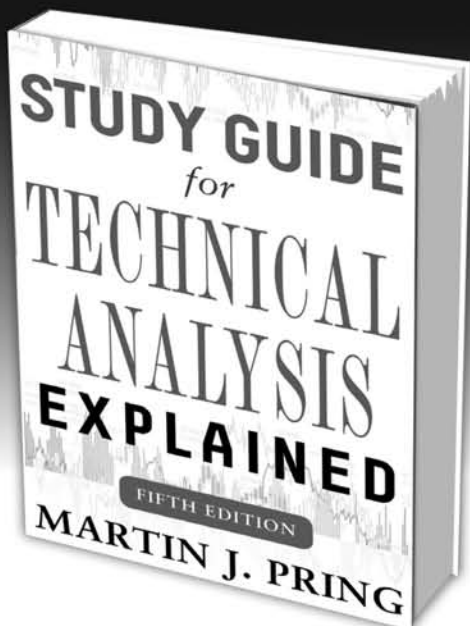
10. **C.** But D cannot be ruled out either!

INDEX

ABOUT THE AUTHOR

Martin J. Pring is the chairman of Pring Turner Capital group as well as the strategist for the Pring Turner Business Cycle ETF (symbol DBIZ). He is the founder of Pring.com, which provides research for financial institutions and individual investors around the world. The site also features a 15+ hour interactive online video training course on technical analysis. Since 1984, he has published the *InterMarket Review*, a monthly newsletter offering a long-term synopsis of the world's major financial markets, and in 2013, he joined Golden Gate University as an adjunct professor teaching a virtual graduate level course on technical analysis.