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Kase ON TECHNICAL ANALYSIS WORKBOOK

TRADING AND FORECASTING

CYNTHIA A. KASE, CMT, MFTA

KASE ON TECHNICAL ANALYSIS WORKBOOK

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Trading and Forecasting

Cynthia A. Kase, CMT, MFTA

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To my dear husband, friend, and consigliere, Paul R. Pedota,
who has had my back from the day we met.

Contents

Foreword

I met Cynthia more than 20 years ago when we were touring for Dow Jones-Telerate. We talked about the markets. She was full of contagious energy, very excited about trading and technical analysis, and had just developed her DevStop and started her new business. She still is just as enthusiastic. Since then she has developed a significant following in the energy markets, an ever-changing, volatile, and seemingly unpredictable commodity. Yet she has flourished where many have failed. I can only attribute that to her discipline and understanding of risk, two characteristics that I rank exceptionally high for those expecting to profit from trading.

There seems to be a tendency among the senior industry professionals to "give back" at some point. That is, there is great personal satisfaction to share what you've learned with the next generation of traders. There may be some personal gain, but the overwhelming balance is the satisfaction. It is also a two-way process. When you teach, you learn from your students. It could simply be the questions they ask, which lead you to more clarity, but also the ideas embedded in the questions that lead you further on the path to discovery. It's the process of talking *with* people, rather than *to* people, and valuing what everyone says.

Cynthia is one of those professionals who have learned and now shares. Her course is targeted to take the novice through the most practical elements of technical analysis, but also holds exceptional value for the advanced analyst. She covers the most popular and useful chart patterns, trends, and momentum indicators at the outset, but then develops considerable sophistication later on. She gives detailed explanations of her own indicators, risk controls, trading filters, multiple time frames, and puts them together into a trading program that can be personalized.

For someone interested in developing their own special trading program, new concepts are vital. They stimulate your thought process and distinguish your trading from others'. Cynthia's course is filled with her own unique approach to many aspects of trading and her own interpretation of well-known methods. At the simplest level she advocates a double true range, that is, a range formed by two days of price movement rather than the standard 1-day range because it is more stable. I agree. It is a simple but important variation on volatility measurement.

As she gets into the description of various oscillators, her KSDI (a divergence indicator) is shown to be much clearer and more reliable than the standard RSI, stochastic, or MACD versions. We both like divergence because it's proved to be one of those reliable trading signals, but Cynthia's version is much better and less ambiguous.

Throughout the course, Cynthia adds extra value with small variations and explanations that she probably doesn't even recognize. When someone has a depth of understanding, they always manage to show it with added points and examples, and give more than you expect. Cynthia's examples are more practical than usual. We often see the "perfect" setup that justifies a particular pattern, but in reality they are not always so clear and do not always succeed. It is better to understand the reality than to be sold a shiny coin that is only plate.

I encourage you to take a trip through technical analysis with Cynthia Kase. It is a more personal experience than reading a book. Seek discipline and a systematic way to trade. Learn to apply the necessary statistics, understand the chances of winning and losing, find ways to control risk, discover new tools, and come out the other end as a more thoughtful and skillful trader. I wish you a pleasant and productive journey.

Perry Kaufman
Author of *Trading Systems and Methods, 5th Edition*

Acknowledgments

For many years, I've had the vision of producing a comprehensive educational video and workbook on my work in technical trading and forecasting. That vision of what now has become a legacy project has come to fruition.

Certainly everyone I've ever met, served with, or worked with has contributed to getting me to this point. While I can't name them all, I'd like to personally thank the following people for their contributions to my inspiration and knowledge, and other help in bringing to fruition what now has become a legacy project.

P. Dean Rogers, no longer my apprentice, but now my right-hand man, and his team at DRC Solutions, Inc. (dba Kase Call Center) particularly Dan Kase, who handled all the screenshots and indexing, and Carlos Sandoval, a great programmer, for their ongoing support, invaluable suggestions, editing, proofreading, and more.

Harvey Budkofsky, whom I've known since I was a rookie trader at Chevron, my go-to broker on the corporate and institutional side for exchange-traded instruments, for his unflagging devotion and constant encouragement over what now has been a long career for both of us.

A great lover of the markets, and former colleague at Kase, Mr. Clifford Wilson, Jr. for his loyal friendship, humor, weather reports, and math wizardry.

The folks at Bloomberg—Tom Secunda, George Geyer, Eugene Sorenson, and Ernie Popke for having the faith in my work to carry Kase Bars and KaseSwing, and other Kase studies on the Bloomberg terminals; Steve Isaacson and Paul Ciana for encouraging me to publish under the Bloomberg Press imprint; to the Tech Brief and Oil Brief staffers; to Steve Vargas and Tom Schneider on the technical analysis team; and all my friends at the APP store, including Claudio Storelli, Rich Berk, and Jay Lee.

Bill Cruz and Darla Tuttle, former executives of the "old" Omega Research platform on which I taught myself to program. Stan Dash of TradeStation, Omega's successor firm, and John Gromala along with all his staff at NinjaTrader for encouragement throughout the years and screenshot permissions.

All those at John Wiley & Sons, Inc. who made the realization of *Kase on Technical Analysis Workbook* possible—Meg Freeborn, Evan Burton, Mary Daniello, and Paul Chen; at Trailhead Video, Lisa and John Ward, and Bruce Fraser; and to Maria Pappas of Create MMO who conscientiously kept my nose powdered (among other things) throughout the video shoot.

My fellow market technicians, especially the late Mike Epstein who was my MTA sponsor, Perry Kaufman with whom I presented at a series of TAG conferences and from whom I learned much, and the late George Lane who, when I was a fledgling technician, always took my phone calls and patiently explained his seminar notes. Special thanks also to Wells Wilder, Richard Donchian, Bob Prechter, Steve Nison, Thomas Bulkowski, Joe DiNapoli, and Martin Pring for their thought-provoking and helpful work.

About the Author

Cynthia A. Kase, CMT, MFTA, is president of Kase and Company, Inc. CTA. She holds a BS from Lowell Tech (1973) and an ME from Northeastern (1977), both in chemical engineering, a field in which she worked for the first 10 years of her career, commencing in 1973. In 1980, she joined Standard Oil Company of California's corporate engineering department and three years later, as the new crude oil (CL) contract was being introduced and PCs just began to show up at the workplace, was transferred into the company's international oil trading arm, CIOC, where she traded both crude oil and refined products.

In January 1990, Ms. Kase joined Chemical Bank as their first VP of Commodity Risk Management, trading over-the-counter derivatives and futures, and designing pricing models. In September 1991, she accepted a one-year consulting assignment with the Saudi Oil Ministry's Petronal, as Director Energy Risk Management and Trading.

In September 1992, Ms. Kase founded Kase and Company, Inc., which provides energy trading and forecasting, hedging advisory services, and software solutions to corporate and institutional clients, as well as, for all markets, statistically-based, precision technical analysis studies and indicators and forecasting systems. Uniquely qualified as a cash market, derivatives, and futures trader, market technician, risk manager, and technical analysis software developer, since 1989 Kase has taught thousands of traders, aspiring traders, and technical analysts technical trading and forecasting.

Kase's awards and honors include Winner "Best Commodity, Energy, and Power, Research and Strategy" Technical Analyst Awards 2014; Winner Best of the Best Award, "Relative Strength/Momentum," Market Technicians' Association 1997; Finalist "Consultancy of the Year–West Coast, Southwest, Midcontinent, and Gulf Coast Regions," Oil and Gas Awards 2013; Finalist "Best Specialist Research," The Technical Analyst 2013; Finalist "Consultancy of the Year–Gulf Coast and North East Regions," Oil and Gas Awards 2012; Finalist "Best Trading Software," "Best Newsletter," TraderPlanet STAR Awards 2012; Finalist "Best Commodity, Energy & Power Research & Strategy," "Best Specialist Product," The Technical Analyst 2012; Finalist "Best Commodity, Energy & Power Research & Strategy," "Best Specialist Product," The Technical Analyst 2011; Finalist "Technical Analyst of the Year" and "Best Specialist Research," The Technical Analyst 2009; Top 50 Women Worldwide, "Vision," Commodities Now Magazine 2002; and Key Women in Energy Americas, "Innovation/Creativity," Bozell & Jacobs LLC 2004.

Kase has earned the professional accreditation of Chartered Market Technician (CMT) from the Market Technicians Association (MTA; 1993) and was the first American and third woman worldwide to be awarded the Master of Financial Technical Analysis (MFTA) diploma (2007) from the International Federation of Technical Analysts (IFTA), both of which she has been a member since 1991. Kase is also a member of the American Association of Professional Technical Analysts.

Kase has spoken often on technical analysis and/or energy trading, including Traders Expo, Gas and Power Mart, Energy Expo, Futures Industry Expo, FIA Conference, Independent Producers Association of America, Canadian GasMart, Omega World, TAG (Technical Analysis Group) Conferences, Futures Magazine Conferences, Energy Risk Management Magazine Conference, and INO Conferences.

She has been featured in many videos produced by the Chicago Mercantile Exchange, eSignal, NinjaTrader, CQG, Bloomberg, and more, has appeared on CNBC's *Tech Talk* program, and is widely published in both the energy and trading press. Her book, *Trading with the Odds*, published in 1996, was hailed as the first new approach to trading in 40 years.

Ms. Kase is often invited to speak about her areas of expertise at MBA programs, and acts as an expert witness in the areas of energy trading and hedging, derivatives, and financial analysis issues, including financial damage issues.

Kase is also an active member of the Military Officers Association of America, and lifetime associate member of the United States Submarine Veterans, having served as an engineering duty officer in the United States Naval Reserves from 1976 to 1991, reaching the rank of lieutenant commander.

About the Video Course

This book is accompanied by a video course and online materials. To access the content, go to www.wiley.com/go/kaseonTA.

Video Course

To access the video course, refer to the card at the back of the book and use your unique pin code. If you purchased an e-book, you can find instructions for verifying your purchase and obtaining an access code at the end of the e-book.

Online Materials

PDFs of PowerPoints and figures from the book are also available. To access this content, go to www.wiley.com/go/kaseonTA, enter your email address, and use password "wiley15."

CHAPTER 1

Introduction

The *Kase on Technical Analysis* project consists of a 13-part video series, available both online and in DVD format—and this *Kase on Technical Analysis Workbook*.

Regardless of whether you currently interact with the market, are aspiring to do so, or are just curious about the markets, *Kase on Technical Analysis* is for you.

Kase on Technical Analysis Workbook is for any trader wanting better results, analysts seeking better estimates, forecasters looking to hit targets more closely, any institution wanting those involved with markets to do whatever they do better, and, not least, for those aspiring to be market players.

Kase on Technical Analysis Workbook is also for anyone looking for something interesting to learn, which is easier than a new language, and a lot more fun than chess, and also has the potential of big benefits, if you're good at it.

Kase on Technical Analysis Workbook is not an academic-style overview of the field, nor is it presenting a narrow topic or a trading system. *Kase on Technical Analysis Workbook* presents the material that I personally used to launch a boutique technical trading and hedging advisory service and software development firm in 1992—and to run successfully over many years. The project tests the material with *Workbook* exercises. For those who already are familiar with technical analysis, test your knowledge by picking up the *Workbook*.

I have significant experience trading and managing risk in the energy sector, from trading physical oil, over-the-counter energy derivatives, and futures, to advising hundreds of corporate and institutional clients on energy price risk management issues. I've had a parallel practice developing unique algorithmic approaches to the ways in which we humans might more successfully interact with the market. So one side of my experience is practical, and the other is abstract.

You should know that, as a commodity person with a focus on trading one thing at a time, my orientation is for high-precision trading, with no portfolio to diversify risk, and a conservative low-risk approach.

In the 13 sessions, I concisely cover what I think is needed for success. One benefit with a video is that you can watch it repeatedly until you get it. Then you can test your knowledge by answering the exercises in the *Workbook* and checking your answers. So the *Workbook* complements the video as a way to ensure that you understand the

materials, and can apply your new-found knowledge to real-world situations. I liken the experience to learning to dance from a video, and then having to go out on the dance floor and demonstrate the steps.

Here are the topics covered in the videos, upon which the exercises in the *Workbook* are based.

Charts and Prices Viewed Visually: This includes the types of charts used in technical analysis; how they are used; new ways of looking at price charts, gaps, geometric, bar, and candlestick patterns; and some unique ways of using these patterns.

Indicators and Studies: These are mathematical algorithms of varying complexity that are used for entries, exits, and risk management. Moving averages and the directional movement index and average directional index (DMI/ADX) are shown as entries or "stop-and-reverse" systems. Some special rules and patterns relating to DMI/ADX are addressed. Traditional momentum indicators such as Oscillators, MACD, Stochastic, RSI, and Ultimate Oscillator are taught, along with how periodicity impacts indicator performance, momentum divergence, overbought and oversold signals, and how to use momentum to enter trades. The math behind Kase's proprietary indicators, the Kase PeakOscillator and KaseCD, are discussed, and some performance studies are exhibited.

Stops and Risk Management: Various sorts of stops are discussed, including fixed-value from entry, trailing fixed-value, trailing range-based, and Kase's DevStops and KaseX two-sided dashes, based on probability theory. Many chart examples show how stops fit into a trading system, leveraging from examples that had their origin earlier in the course. How to estimate the risk associated with a given trade is taught, along with how to set trade size, or how to calculate bar size, working backwards from risk tolerance. Additionally "gaming" math is taught, which gives insight into not only managing risk in a given trade, but also seeing how performance and risk interact.

Trading Techniques: Most trading techniques involve combining indicators, stops, and patterns in sensible ways, so that the indicators confirm, correct, and augment one another. Additionally, the use of multiple time frame indicators simultaneously is discussed. Kase's Permission Stochastic and Screen, which provide moving window higher time frame filters, are discussed. Scaling up using multiple bar length charts is explained, as is scaling out of trades.

Swings, Waves, and Forecasting: The definitions of a swing, a wave, and a wave cycle and how to draw and label them are discussed. Using waves and wave targets calculated using Fibonacci numbers and retracements, as well as the number Phi, are explained, along with a step-by-step explanation of how to succinctly develop a market view with particular target, expanded with real-life examples.

Lots of Trading Examples: These are shown throughout, with the ending sessions focused on more advanced examples, putting some of the multiple indicator,

multiple bar length techniques into practice. Kase's two study packages, Kase StatWare and KaseX, are also explained, and examples employing Kase studies along with bar length selection and scaling up and down are shown.

The *Workbook* contains questions and answers for Sections 2–13 of the video course (Section 1 is introductory). It also provides information on all the equity, index, futures, and FOREX symbols used in the course material (Appendix C), suggestions for further reading from my publications as well as a range of other writers (Appendix B), and an FAQ section with answers (Appendix A). Kase's contact information is also included (Appendix E).

PART I

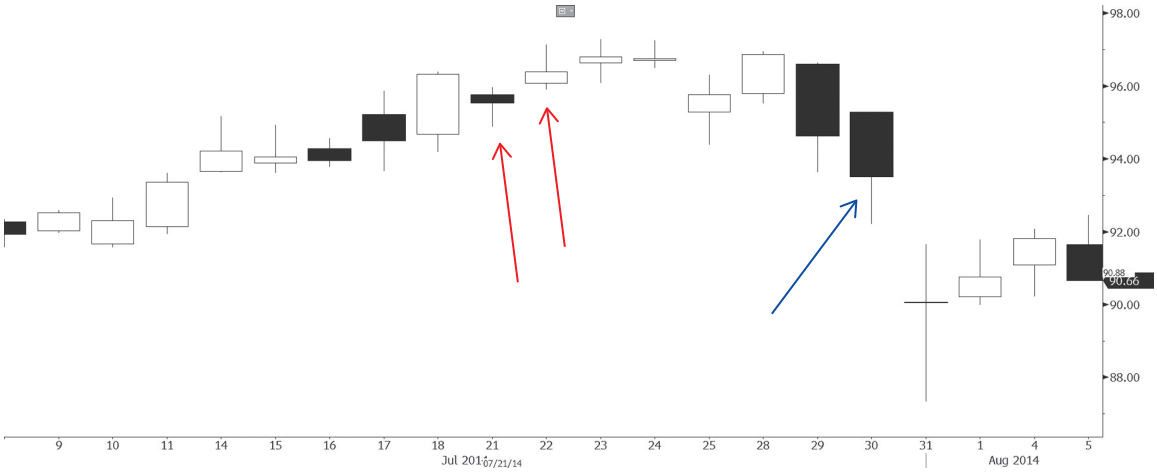
Questions

CHAPTER 2

Start with Charts

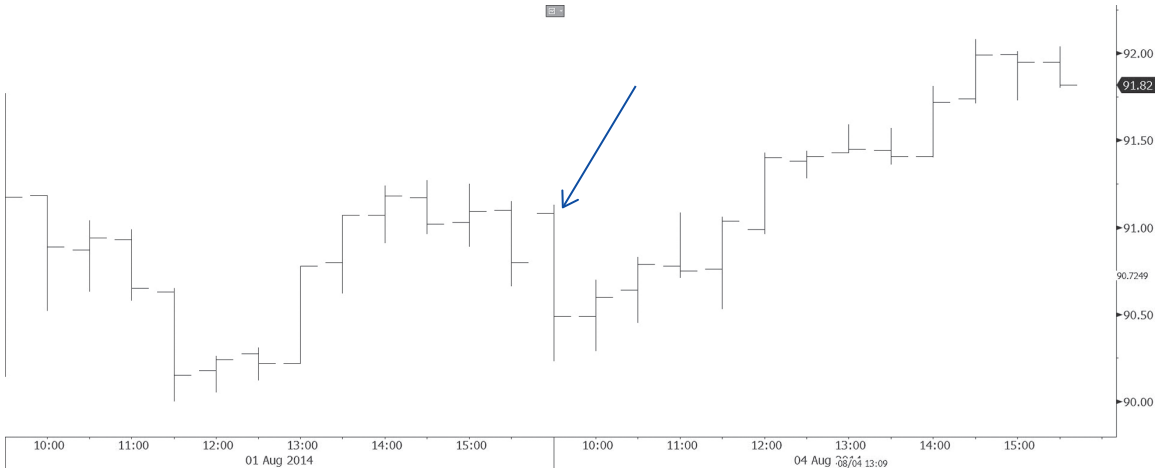
In Section 2, "Start with Charts," different types of charts are discussed. This includes different ways of viewing X-axis increments, such as natural and intraday time charts and range charts. Various display types are presented, such as bar, candlestick, line on close, and point and figure charts. Also included in this section are how to draw support, resistance, and trendlines, and how do deal with some unique features of futures charts.

QUESTION 2.1 CI Chart



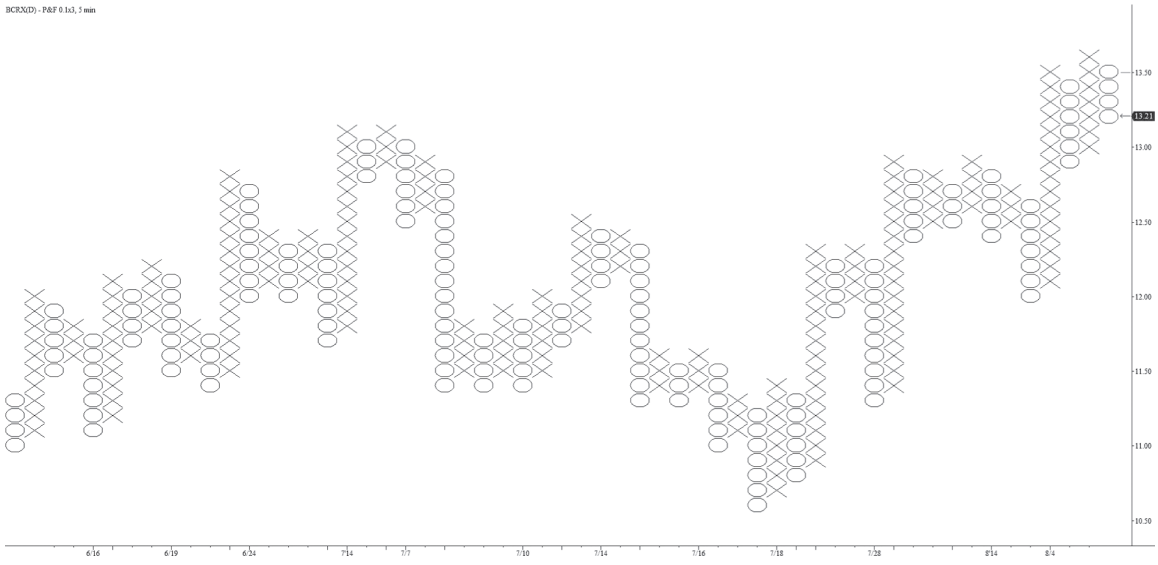
1. What type of chart (plot type) is this?
2. What increments or intervals describe the X and Y axes?
3. For the plot to which the blue arrow is pointing, label the open, high, low, and close.
4. Also, list the parts of the plot, and which part isn't showing.
5. How would you designate the plots to which the red arrows are pointing?
6. For those plots, is it significant that one is filled in and the other empty?

QUESTION 2.2 CI US 30M Chart



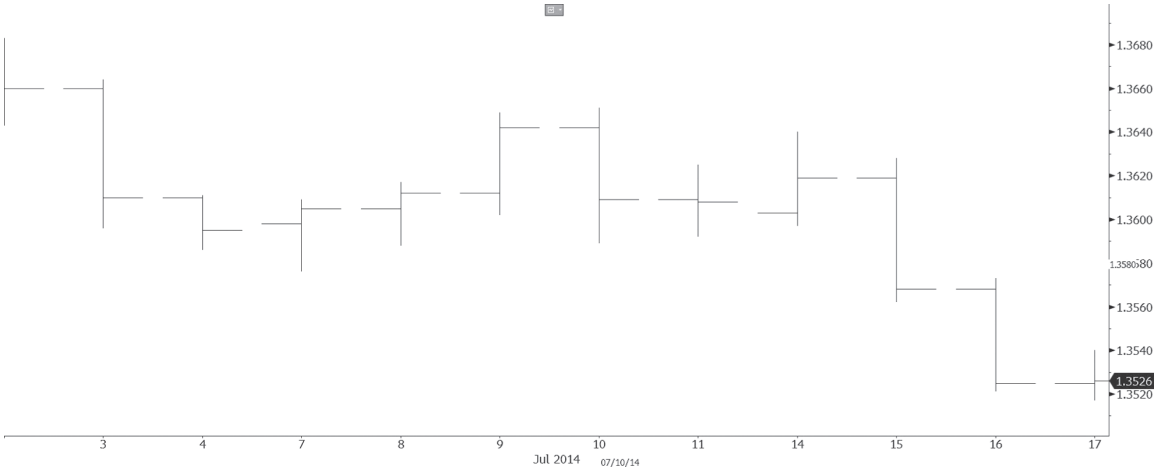
1. What type of chart (plot type) is this?
2. Is this a natural time increment chart or another X-axis type?
3. For the plot to which the blue arrow is pointing, label the open, high, low, and close.
4. Draw an up-sloping trendline.

QUESTION 2.3 BCRX 0.10*3



1. What do the Xs and Os represent?
2. What price change does each box represent (see chart title)?
3. How many boxes are needed for a reversal in direction?
4. Circle two up and two down columns that have the minimum number of boxes.
5. Draw at least three support and/or resistance lines.
6. Choose one of those lines, and draw arrows to the support and resistance points.

QUESTION 2.4 EURUSD OHLC Bar Chart



Draw in a line on close chart.

QUESTION 2.5 Nomenclature

1. What is GCX16?
2. How about CLF20?

QUESTION 2.6 Equities versus Futures

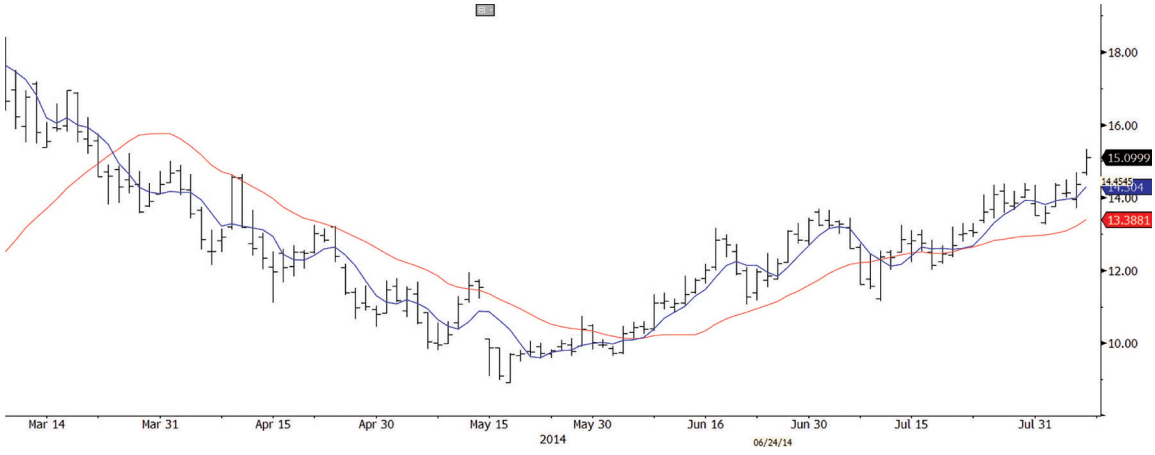
1. What's the major difference between equities and futures?
2. What's the difference between a rollover and a natural or intramonth gap?
3. Do rollover gaps apply to equities?

CHAPTER 3

Trending Indicators: Entries and Stop and Reverse

In order to trade at all, it's necessary to get into the market to buy or sell. Thus indicators used for entries are fundamental. In Section 3, the most well-known of indicators, moving averages, are discussed, as well as the popular DMI and ADX (Directional Movement Index and Average Directional Movement Index). Various trading systems using these indicators are presented, as well as methods of combining them such that one corrects or filters the other.

QUESTION 3.1 DANG with SMAs (5, 21)



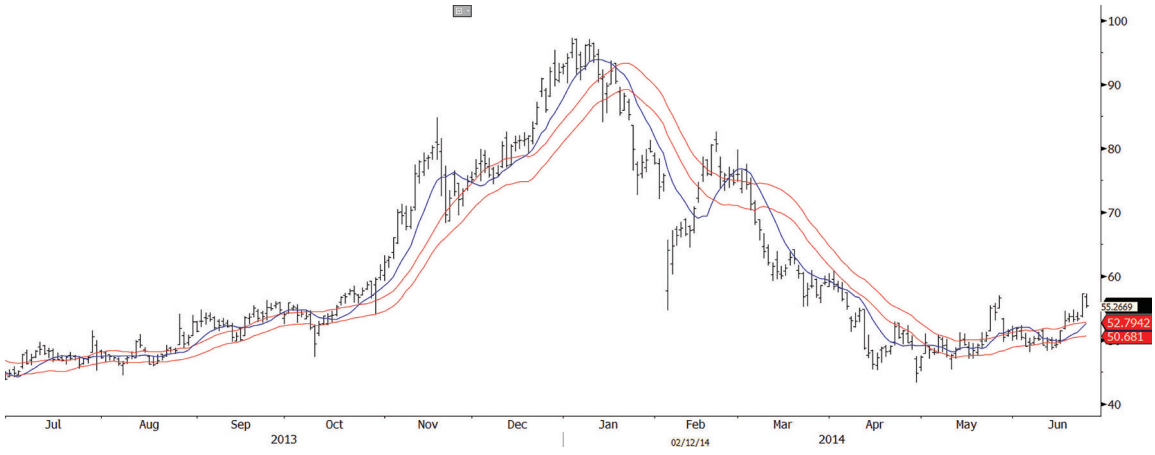
1. Draw in blue up and red down arrows for a moving average stop and reverse system.
2. Circle any whipsaws.

QUESTION 3.2 AVAV SMAs (10, 21, 50)

Long Entry = FastMA > (MediumMA and SlowMA), Long Exit = FastMA < MediumMA
Short Entry = FastMA < (MediumMA and SlowMA), Short Exit = FastMA > MediumMA

1. Draw in blue up and red down arrows for long and short entries.
2. Draw in purple down and up arrows for long and short exit only.

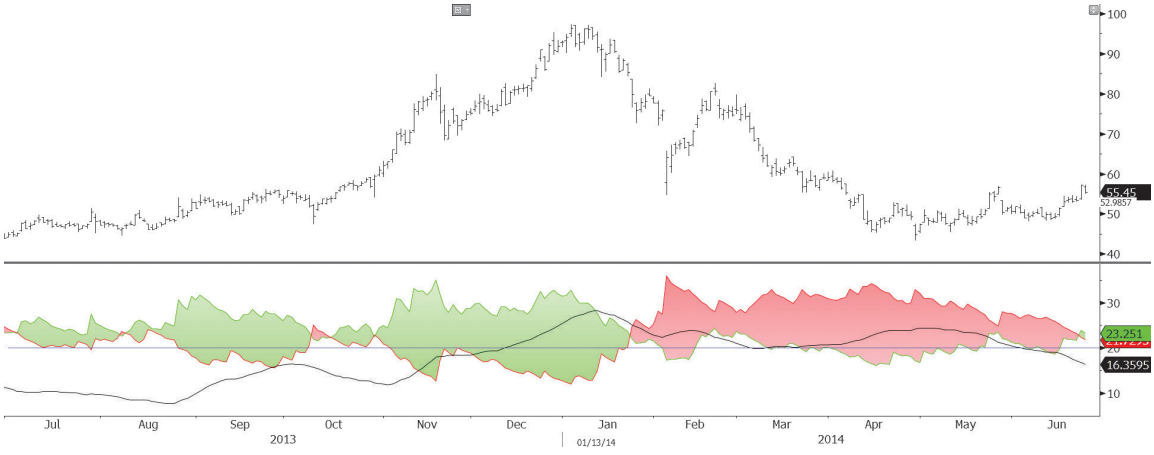
QUESTION 3.3 DDD with SMA (10), High Low Channel (21)



Long Entry = FastMA > Upper Channel, Long Exit = FastMA < Upper Channel
Short Entry = FastMA < Lower Channel, Short Exit = FastMA > Lower Channel

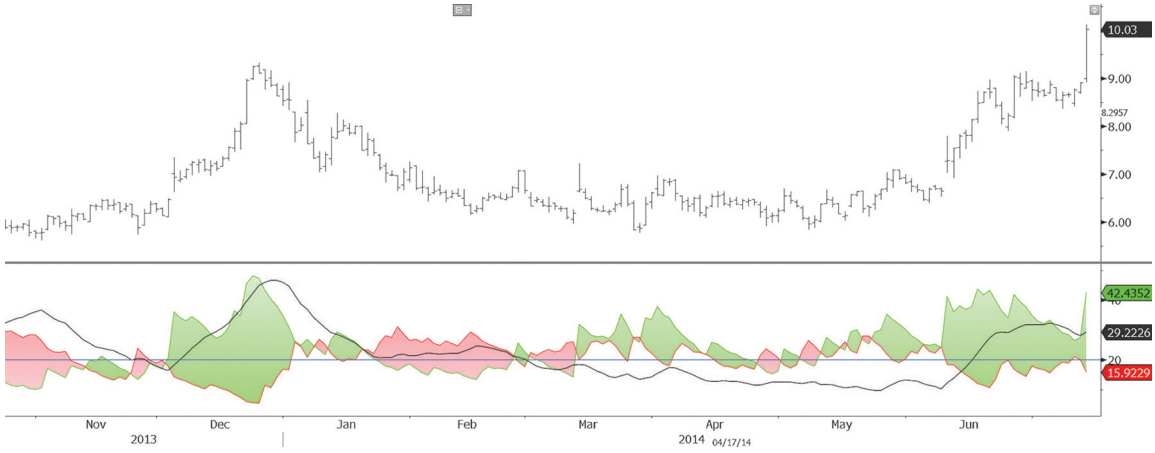
1. Draw in blue up and red down arrows for long and short entries.
2. Draw in purple down and up arrows for long and short exit only.

QUESTION 3.4 DDD with DMI and ADX (34)



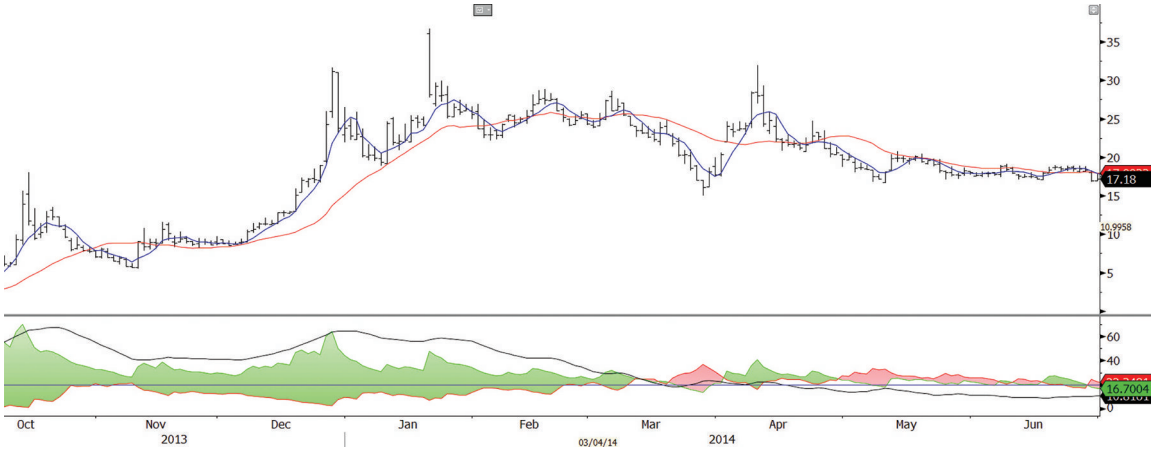
1. Using blue up arrows and red down arrows show the trades for a DMI SAR system.
2. Circle any whipsaws.

QUESTION 3.5 CBK with DMI and ADX (14)



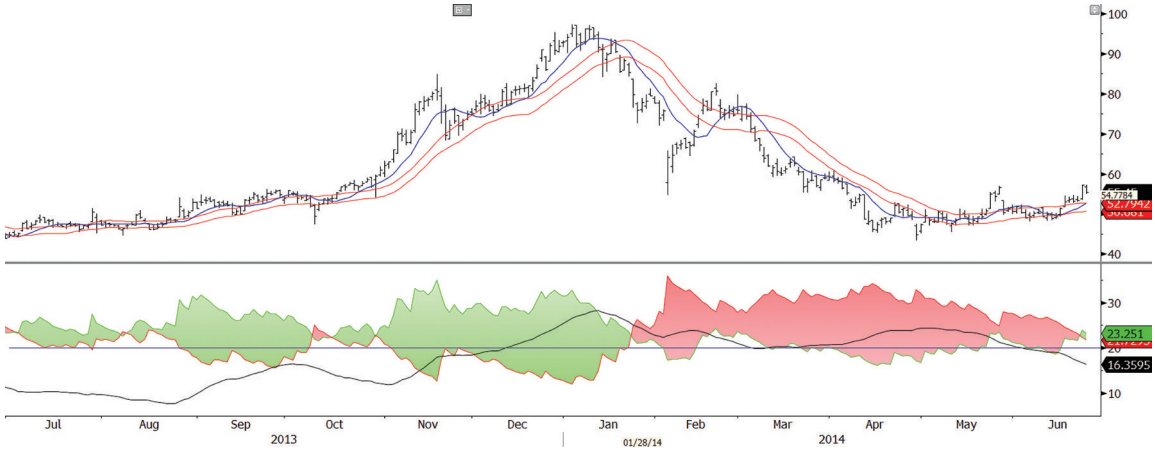
1. Draw blue up or red down arrows on what appear to be successful entries.
2. Circle a major area where there's a "necklace effect."
3. What is the condition of the ADX during December 2013?
4. What does this condition mean?
5. What's the condition of the ADX from about mid-February through late May?
6. What does this condition mean?

QUESTION 3.6 VISN SMAs (5, 21) and DMI (14)



1. Using a simple moving average crossover system, with the DMI as a filter, circle whipsaws that would have been avoided.

QUESTION 3.7 DDD with SMA (10), High Low Channel (21), and DMI and ADX (14)



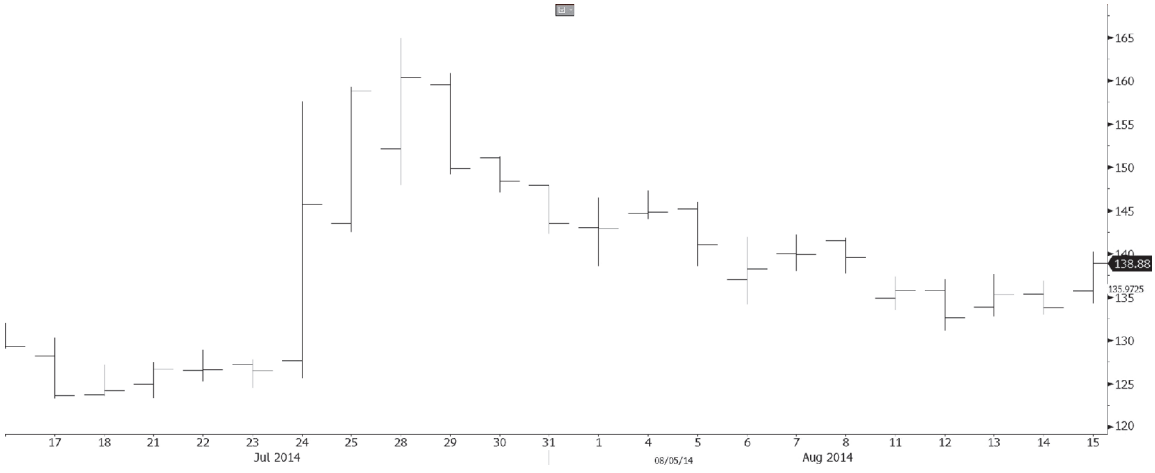
1. Assume you were using the DMI as a filter for the moving average with channel system. Circle whipsaws that would have been avoided.
2. Put a W on the whipsaws not avoided.

CHAPTER 4

Swings and Swing Systems

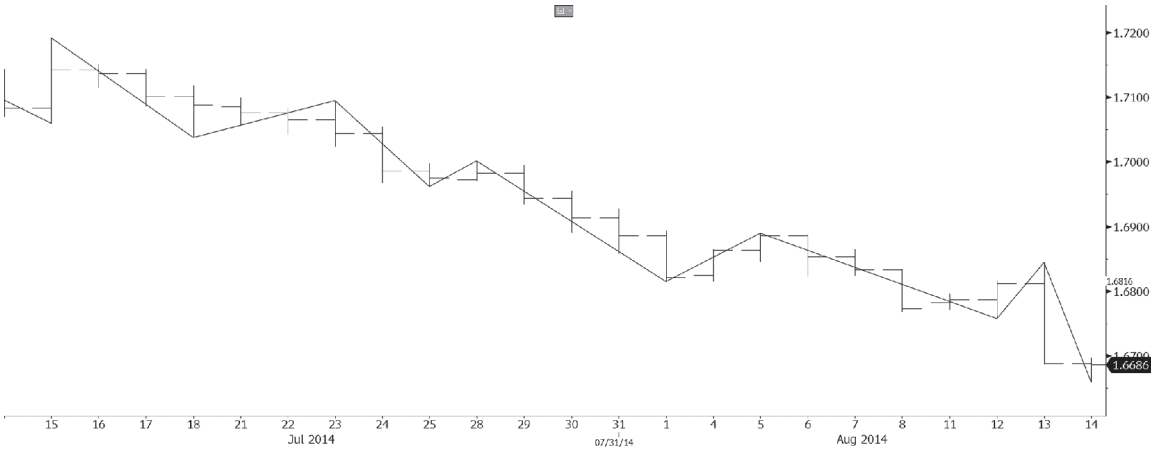
Swings help clarify market behavior, filtering out all but important intermediate, or swing, highs and lows. In this session, Kase's technique for drawing swings is explained, and its uses as an entry filter and as an exit technique are elucidated.

QUESTION 4.1 Z with OHLC Bars



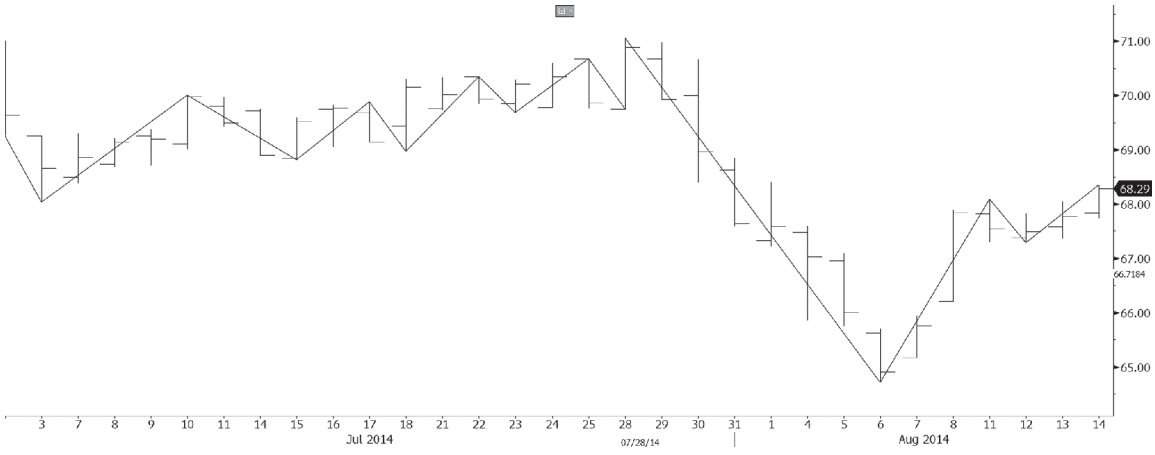
1. Draw in Swing One (Insides Off)

QUESTION 4.2 GBPUSD Swing One (Insides Off)



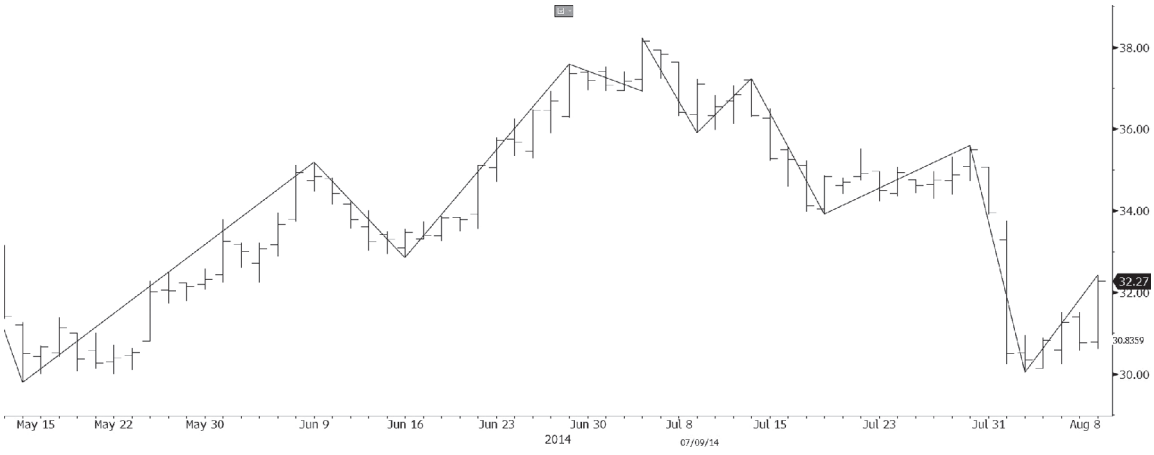
1. This chart shows Swing One (Insides Off). Draw in Swing One (Insides On).

QUESTION 4.3 D with Swing One (Insides Off)



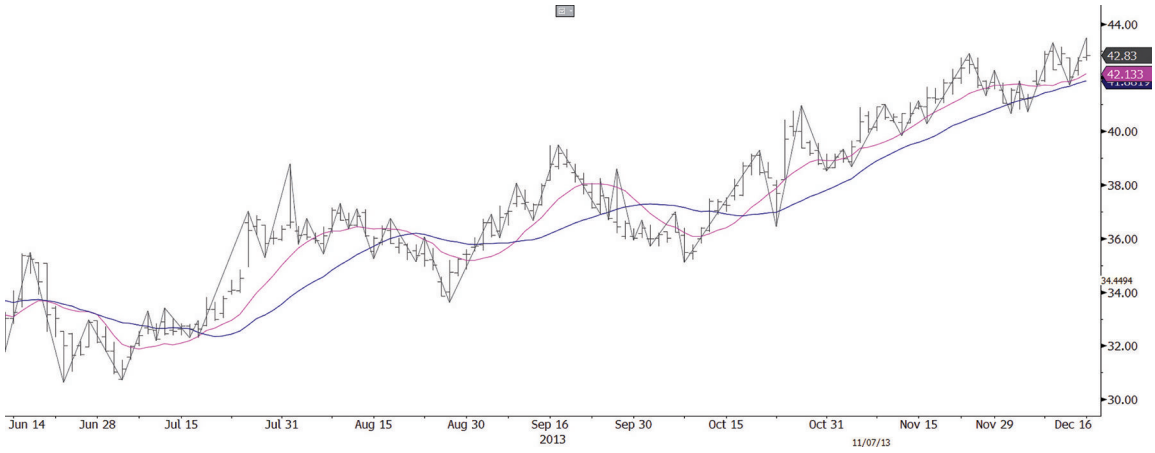
1. This chart shows Swing One (Insides Off). Draw in Swing Two (Insides Off).

QUESTION 4.4 GFF with Swing Two (Insides Off)



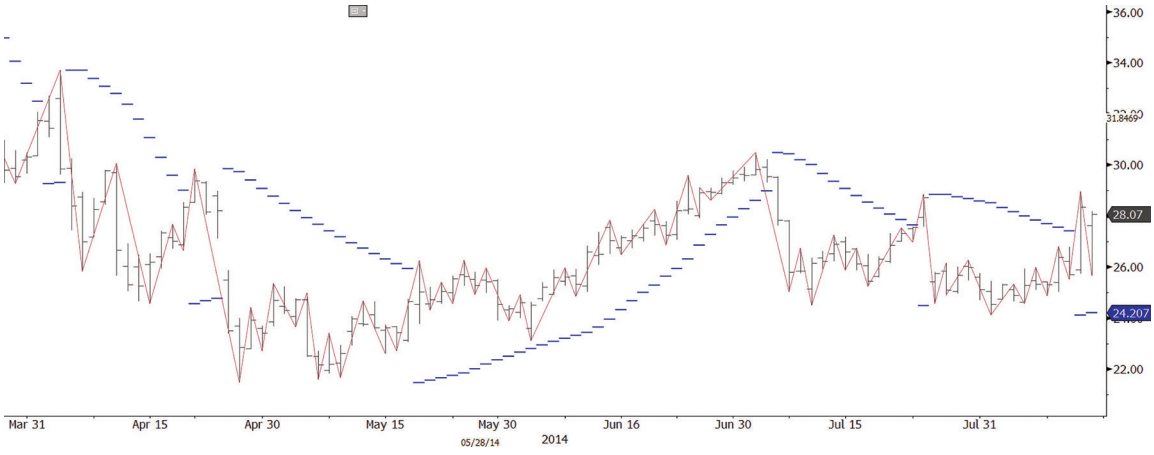
1. This chart shows Swing Two (Insides Off). Draw in Swing Three (Insides Off).

QUESTION 4.5 LAZ SMAs (10, 21) with Kase Swing Two (Insides Off)



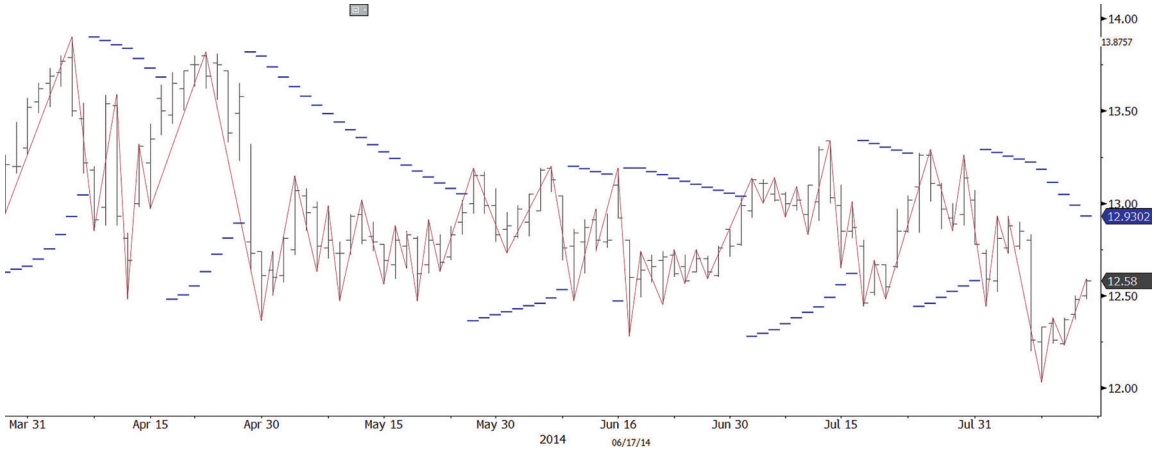
1. Using SMA crossover entries, show trades where you would have had to wait for a second or consecutive swing.
2. From around June 28, August 30, and October 15 (long trades), show how you would have moved swing stops up, with stops not hit in black and stops hit in blue.

QUESTION 4.6 P with Parabolic (Default) and Kase Swing (1, Insides On)



1. If taking only second or consecutive signals based on Kase Swing, point out which trades based on the Parabolic SAR would not have been taken.
2. Assume you took all other Parabolic entries, show where swing stops would have been better exits, and draw a vertical line showing the difference between the Parabolic exit and the swing exit.
3. Show where swings would have exited early, even if small swings are ignored. Assume reentry upon a second or consecutive upswing.

QUESTION 4.7 BSX with Parabolic Default with Kase Swing One (Insides On)



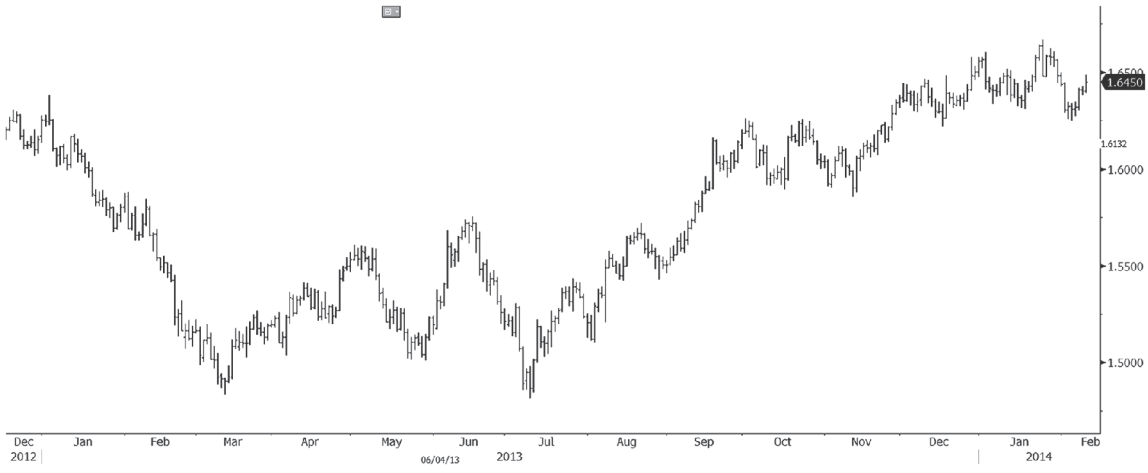
1. If taking only second or consecutive signals based on Kase Swing, point out which trades based on the Parabolic SAR would not have been taken. Ignoring swings caused by one outside bar is allowable. Make any comments you deem appropriate.
2. Assume you took all other Parabolic entries, show where swing stops would have been better exits, and draw a vertical line showing the difference between the Parabolic exit and the swing exit.

CHAPTER 5

Chart Patterns

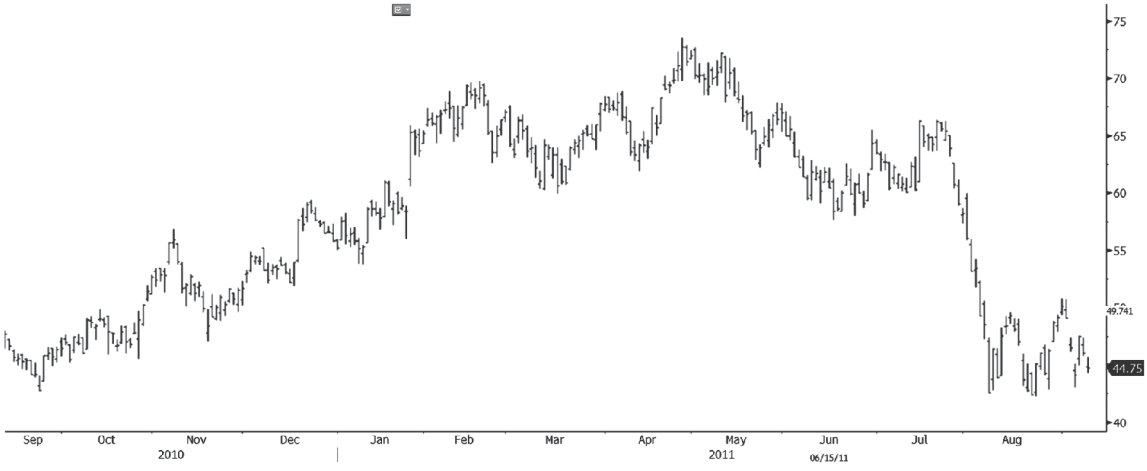
Really looking at charts without any indicators or other markings is a key step in getting a feel for market direction, and for whether a market is trending or choppy. Geometric patterns, covered in Section 5, are larger-scale patterns in that they may comprise a large number of bars. In Section 5, patterns are classified as reversal, continuation, or breakout.

QUESTION 5.1 GBPUSD Daily (1)



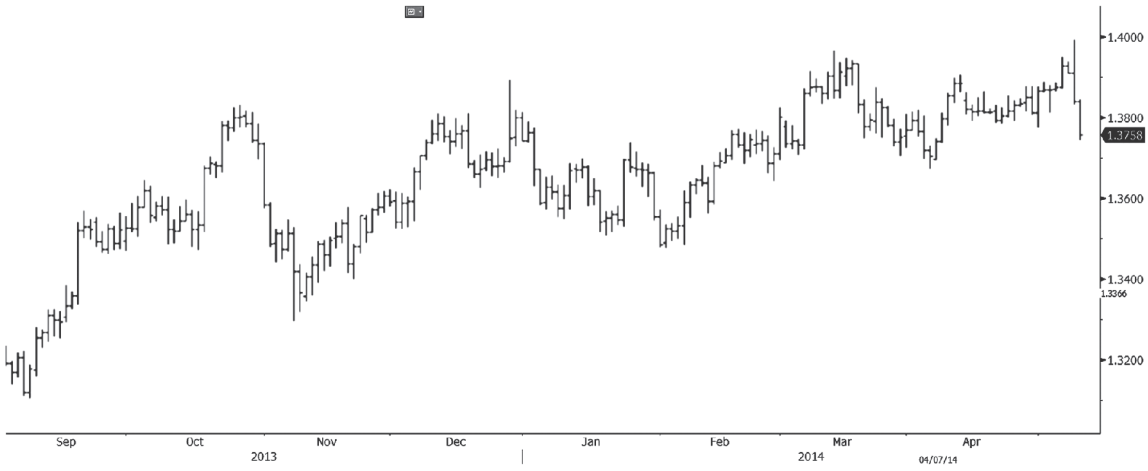
1. What is the major pattern?
2. Is it a reversal, continuation, or breakout pattern?
3. Draw in the pattern.
4. Is it a textbook example?
5. Does the pattern have a target? If so, draw it in and specify if target was met.
6. Is there another pattern worth noting on the chart?
7. Is it a reversal or continuation pattern?
8. Draw in the pattern.

QUESTION 5.2 ATI Daily



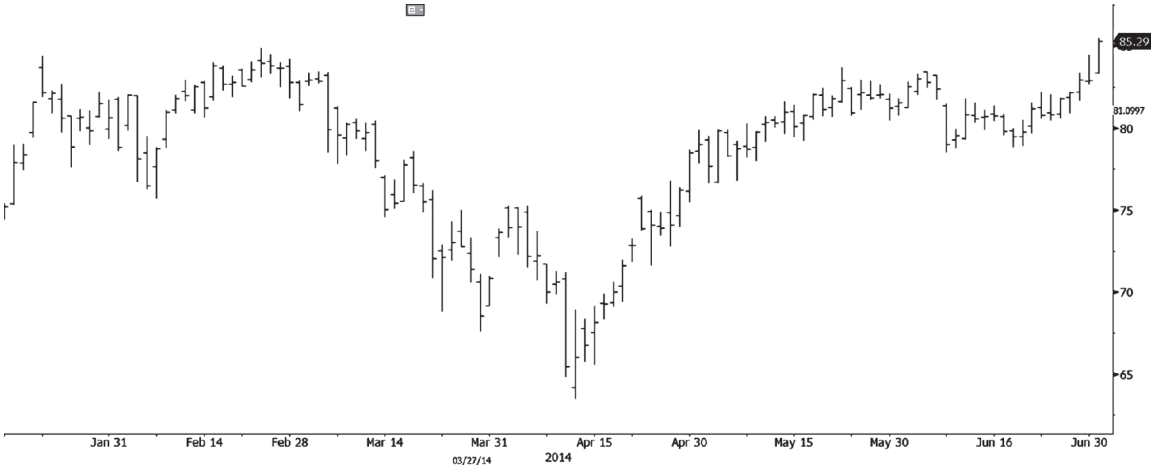
1. What is the major pattern?
2. Is it a reversal, continuation, or breakout pattern?
3. Draw in the pattern, and name one of the lines you draw.
4. Does the pattern have a target? If so, draw it in, and specify if target was met.

QUESTION 5.3 EUR Daily



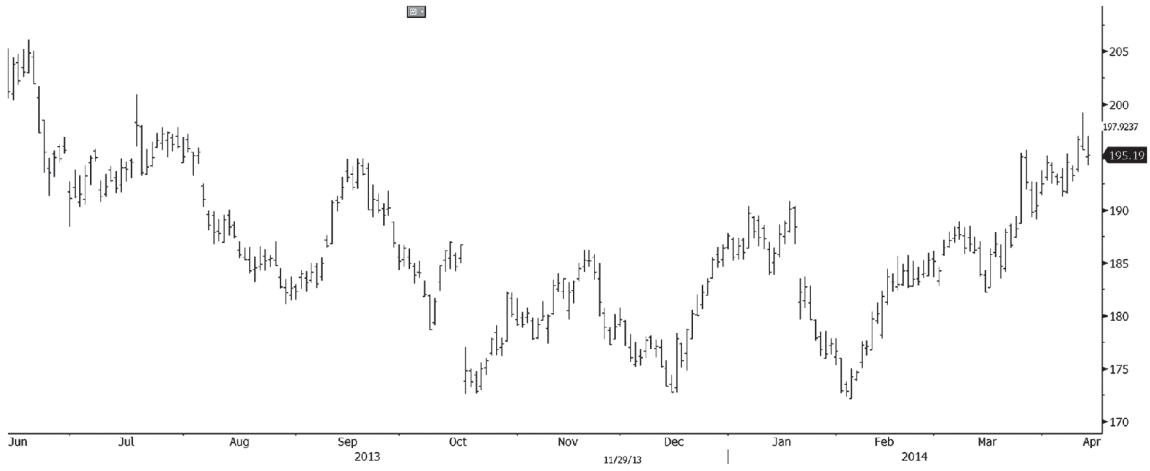
1. Find a large pattern on this chart. Did it start off as one sort of pattern and change into another? If so, discuss.
2. Find a medium-sized pattern on this chart. Name it.
3. Are they reversal, continuation, or breakout patterns?
4. Draw them in.
5. Are there any similar smaller patterns on the chart? If so, name them and draw in.

QUESTION 5.4 GILD Daily



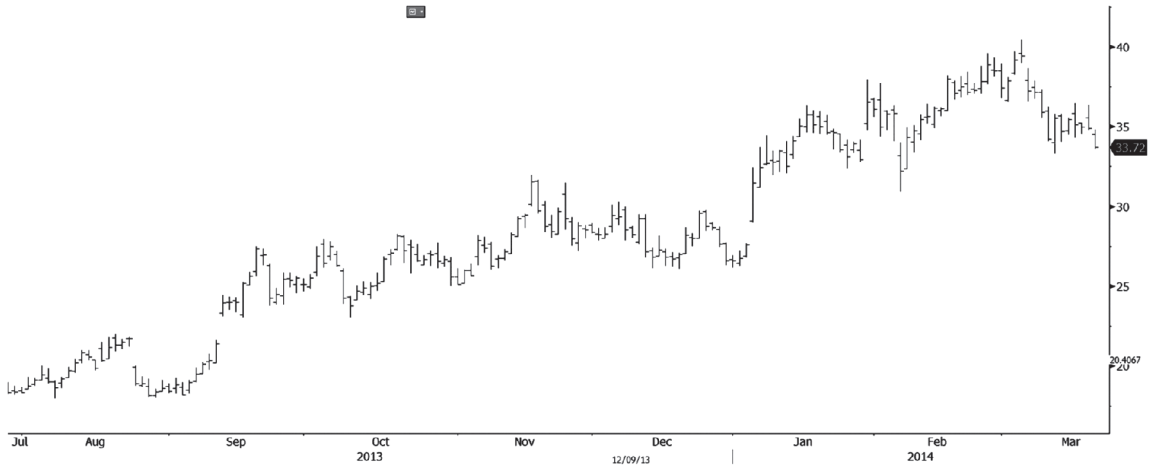
1. What is the major pattern?
2. Is it a reversal, continuation, or breakout pattern?
3. Draw in the pattern.

QUESTION 5.5 IBM Daily



1. What is the major pattern?
2. Is it a reversal, continuation, or breakout pattern?
3. Draw in the pattern.
4. Is it a textbook example or not? Why?
5. Why isn't this pattern an inverse head and shoulders?

QUESTION 5.6 GBPUSD Daily (2)



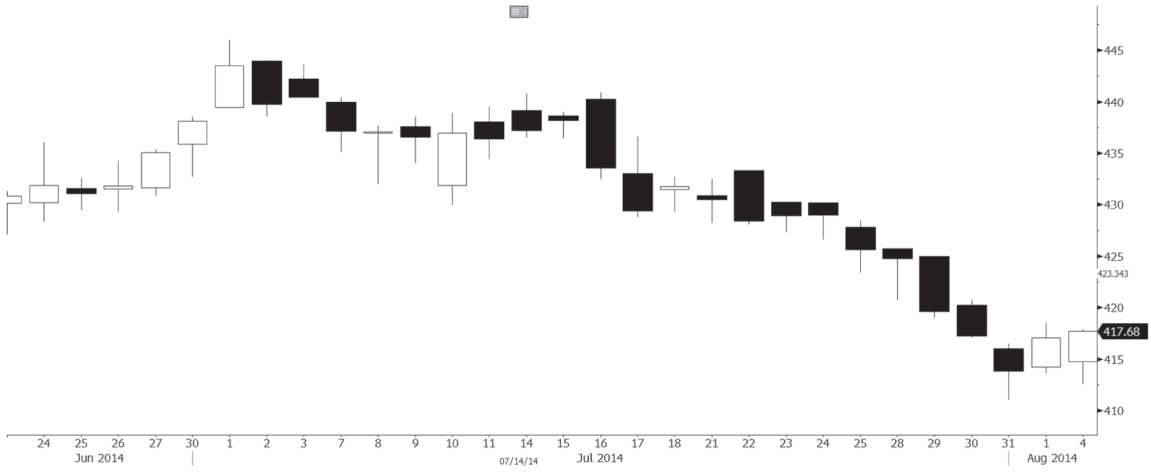
1. What is the major pattern?
2. Is it a reversal, continuation, or breakout pattern?
3. Draw in the pattern.

CHAPTER 6

Candlesticks and Gaps

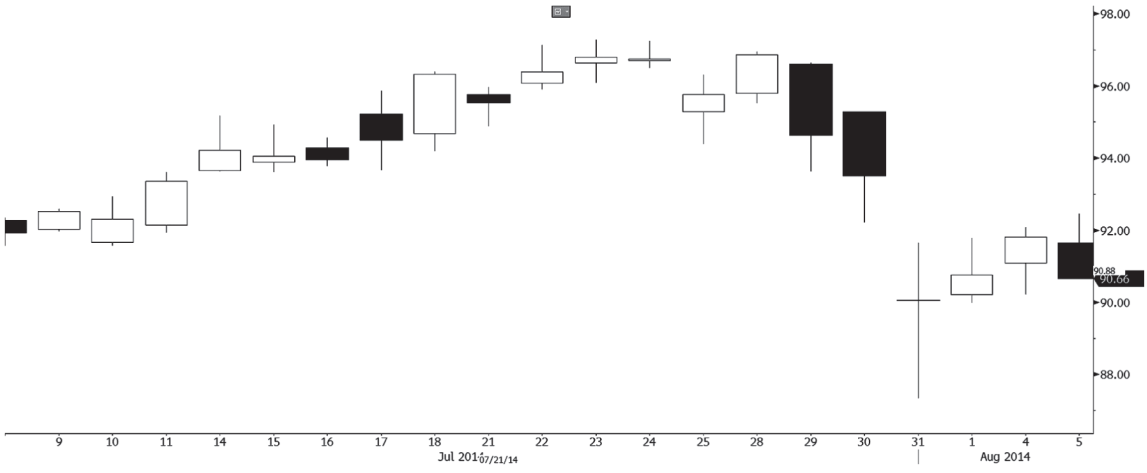
This section deals with candlestick patterns and gaps. Candlesticks display the same information as OHLC bars, but form a box between the open and the close, making it easier to see if there's been an up or down close, and to see patterns formed by one to three bars. Gaps, as the name implies, are price ranges over which no trading took place between one bar and the next. The placement of gaps before or after key patterns, or during trends, can give clues as to the market's future action.

QUESTION 6.1 Y Candlestick Chart with Gaps



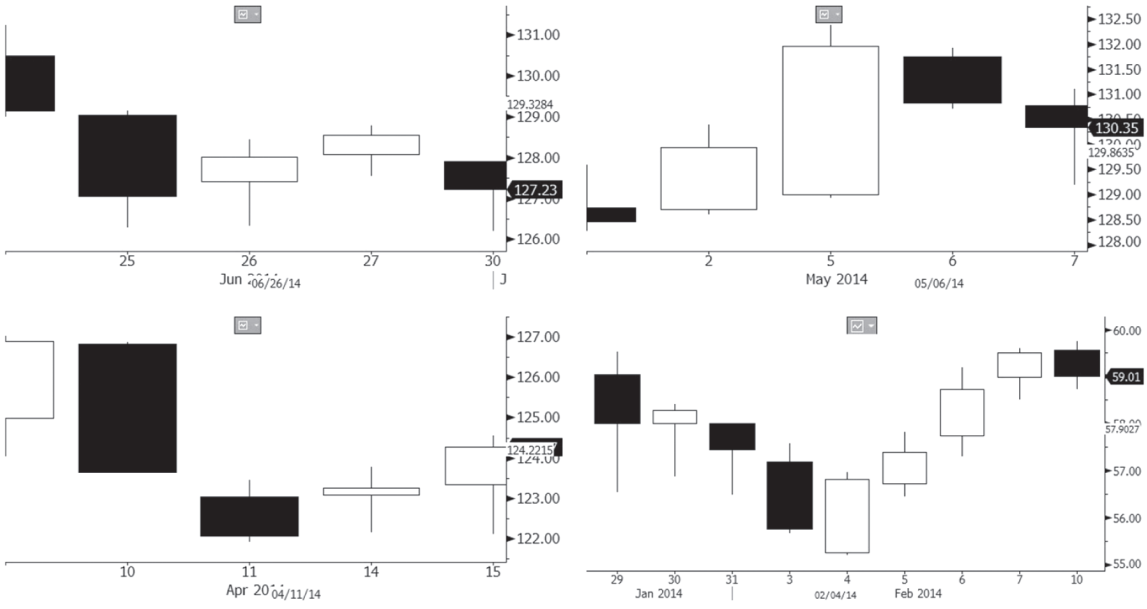
1. What is the candlestick pattern at the top of the market?
2. Find and identify two gaps, and describe their meaning.
3. Can you find a bearish engulfing line within the down trend? Circle it.
4. Can you find a failed (unconfirmed) Harami line and star? Circle it.

QUESTION 6.2 CI Candlestick Chart with Gaps



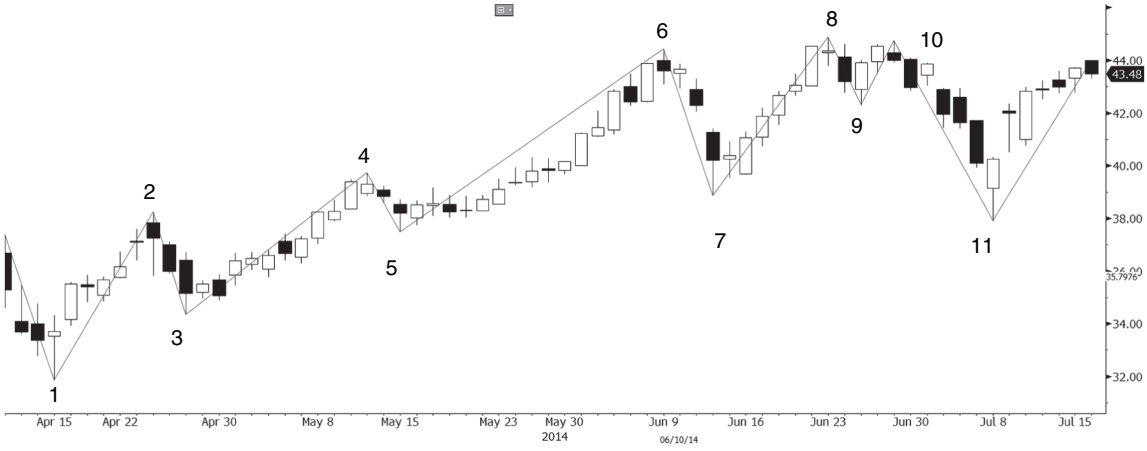
1. Identify at least one failed bearish candlestick pattern.
2. Identify and label at least two gaps.
3. What's the pattern at the bottom of the market to the right?

QUESTION 6.3 BA with Candlestick Patterns



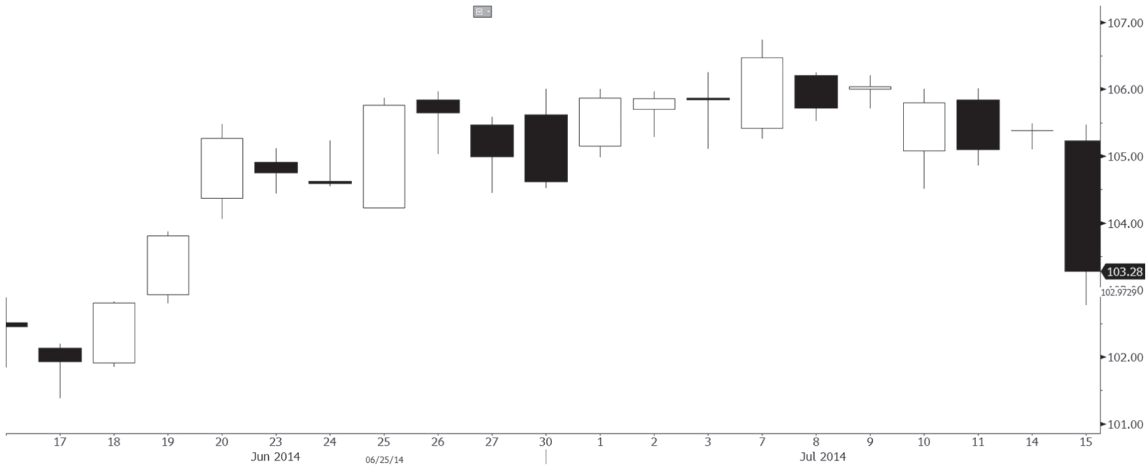
1. Draw in the completion and confirmation points for the charts above.
2. Name the candlesticks or candlestick setups.
3. If any pattern is nonstandard, note.
4. Note if a pattern is completed or confirmed.

QUESTION 6.4 AAL with Candlestick Patterns



1. At each swing, identify the candlestick pattern, and note whether bullish or bearish, if any.
2. Note if any of the patterns are irregular or not "textbook."
3. Note if any of the pattern remains unconfirmed before a new swing high or low takes place.
4. Are there any gaps before or after a pattern? Note and name the gap type.

QUESTION 6.5 JNJ with Midpoint Gap



1. Find the midpoint gap, and draw in the lines needed to project to its target.
2. Identify a failed bearish pattern.
3. Identify a bearish pattern that completed but did not confirm.
4. What is the bearish pattern at the top of the market? Draw its confirmation point.

CHAPTER 7

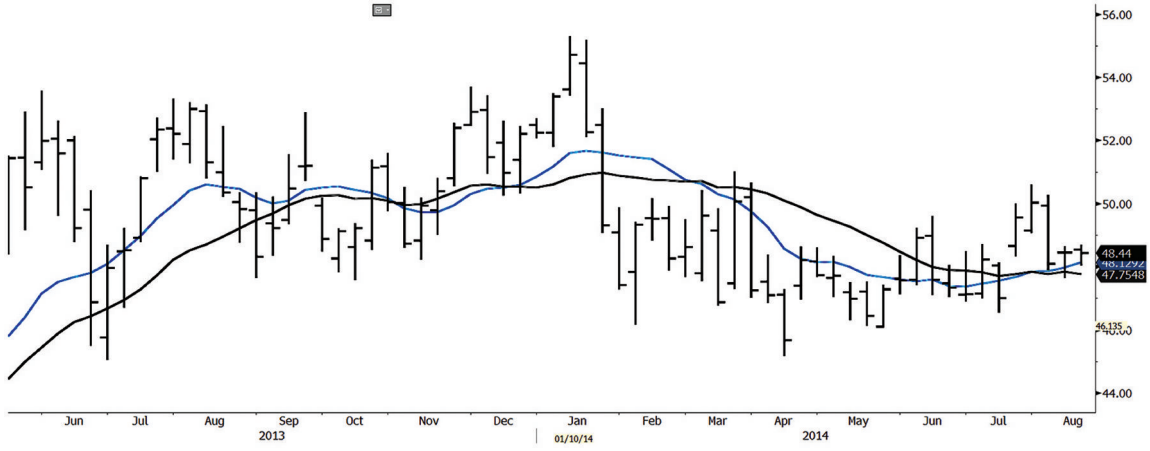
Using Stops to Exit Trades: Taking Profit, Cutting Losses

Section 7 discusses stop methodologies. A stop is a price at which a trade might be exited, either in whole or part, or at which increased caution might be exercised. Many investment-focused techniques only emphasize entries, but when trading, taking profit and cutting losses are imperative. Stops help determine points where getting out of a trade might be called for, and they help traders exercise the discipline necessary to follow proper exit strategies.

QUESTION 7.1

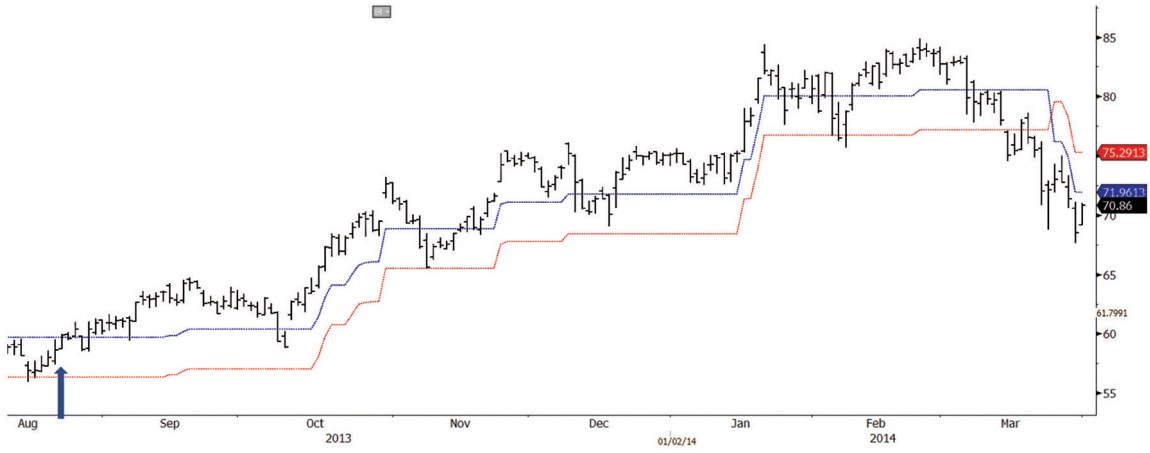
1. Assume you have taken a long trade at $90.00, and the market has just made a high of $95.00. If you have placed a breakeven stop, where would it be?
2. If you placed a $10.00 fixed value from entry stop, where would your stop be?
3. If you are using a $10.00 fixed value trailing stop, where would your stop be?
4. Assume volatility has picked up so you have increased your fixed value trailing stop to $20.00, and the market has just made a high of $115.00, where would your stop be?

QUESTION 7.2 C Weekly with SMAs 3, 21



1. If you were using a moving average stop and reverse system (SAR), what additional method could you use to exit prior to a crossover, with only the information on the chart?
2. Show an example of when you might have used this stop to exit a long trade. Explain.
3. Show an example of when you might have used this stop to exit a short trade. Explain.

QUESTION 7.3 GILD with Stops $4.33 (Red) and $7.66 (Blue)

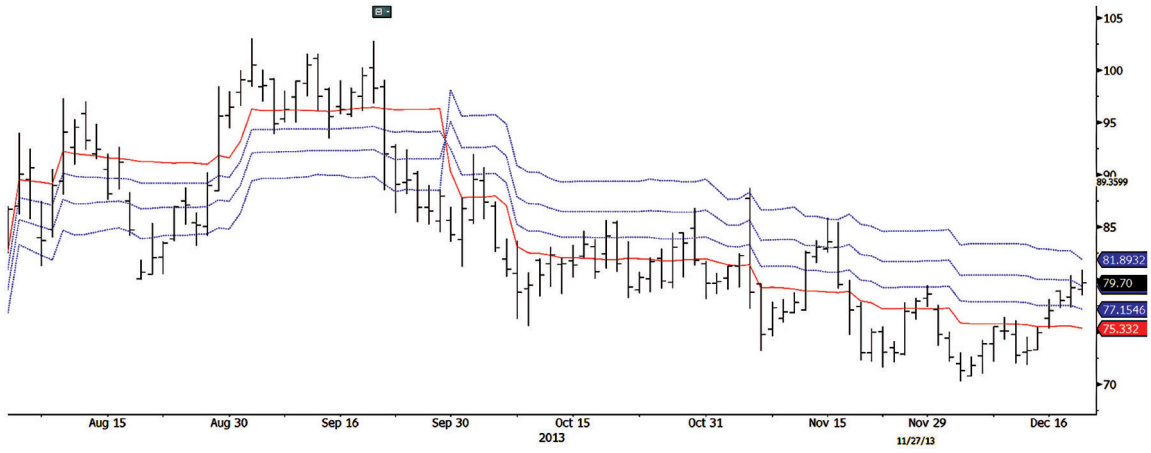


1. What is the type of stop shown above called?
2. Which stop would have worked better if you wanted to let the trend run?
3. Starting with the blue up arrow, circle the times where there was a close below the $4.33 stop but not the $7.66.
4. Show where you would have gotten out on a $7.66 stop hit.
5. Instead of exiting in late January when the $7.66 stop was hit, how might you have exited before the decline? What's that type of stop called?

QUESTION 7.4 X with Parabolic (Default Settings = 0.02, 0.2, 0.02)

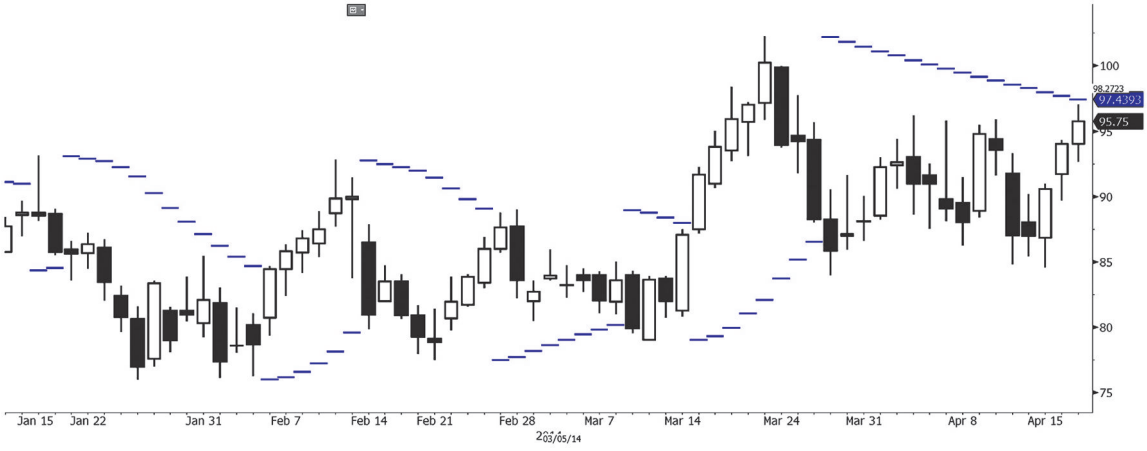
1. Mark the parabolic stop and reverse (SAR) points
2. What do you think about the performance of this indicator in this choppy market?
3. Circle a few examples of performance areas you didn't like.
4. With the benefit of hindsight, how would you have increased or decreased the variables?
5. What compromise did you have to make to improve the functioning of the Parabolic?

QUESTION 7.5 Z Daily with DevStops (34 MA otherwise Defaults)



1. Mark the designations of the displays.
2. What are default numbers of DTR standard deviations over the mean for the blue stops?
3. Circle an instance where there was a close below Dev3 and the stops did not flip.
4. Circle an instance where there was a close below Dev3 and the stops flipped thereafter.
5. Draw an arrow pointing out when the stops flipped.
6. Circle an instance where there was a Dev2 hit, but not a close beyond.

QUESTION 7.6 Z Candlesticks Daily with Parabolic Default



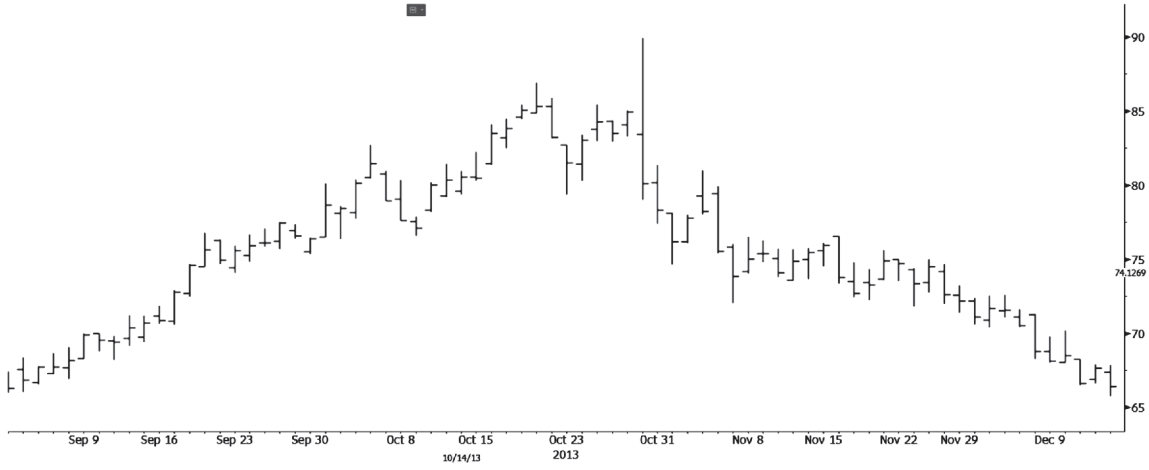
1. Mark the Parabolic SAR points with up and down arrows.
2. Identify five bullish candlestick patterns. For simplicity, using confirmation only, show how your stops could have been accelerated for each example.
3. Circle the hanging man on the chart. Given that the candlestick before it is too small to be a Harami line, how might you handle the situation if you wanted to accelerate your stops?

CHAPTER 8

Bar Patterns: Estimating Risk and Setting Bar Size

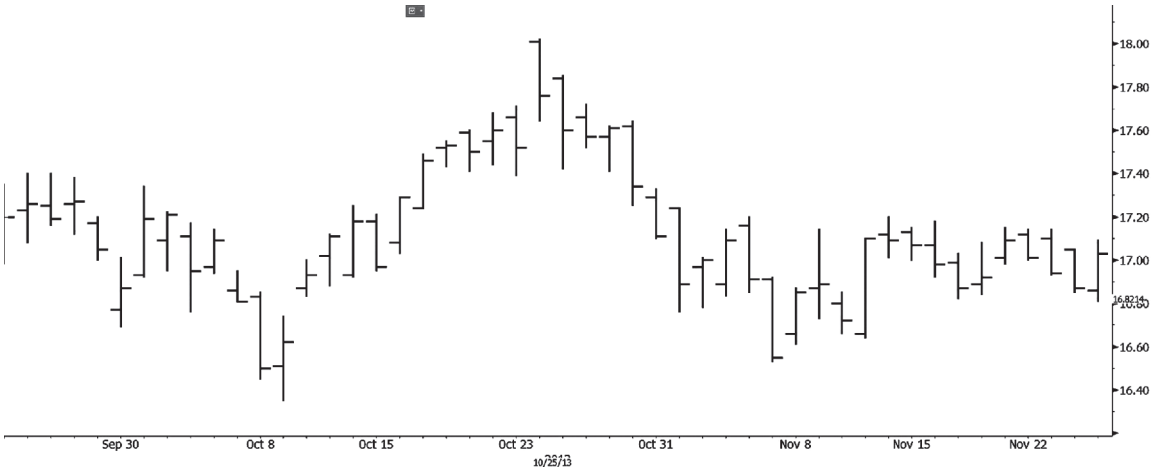
Section 8 starts off by identifying three bar patterns, key, closing point, and island, that can be used to identify potential reversals. This section then goes on to discuss the very important topic of risk and various ways that risk can be measured. The Risk of Ruin formula is also discussed in detail. Position sizing, determining bar length, and setting up multiple bar lengths for trading are all skills taught in Section 8.

QUESTION 8.1 EGN with Bar Pattern



1. What is the bearish bar reversal pattern?
2. How would you describe this pattern?
3. What candlestick pattern is it similar to?
4. What's the difference between the similar candlestick pattern and the bar reversal pattern in this example?

QUESTION 8.2 F with Bar Pattern



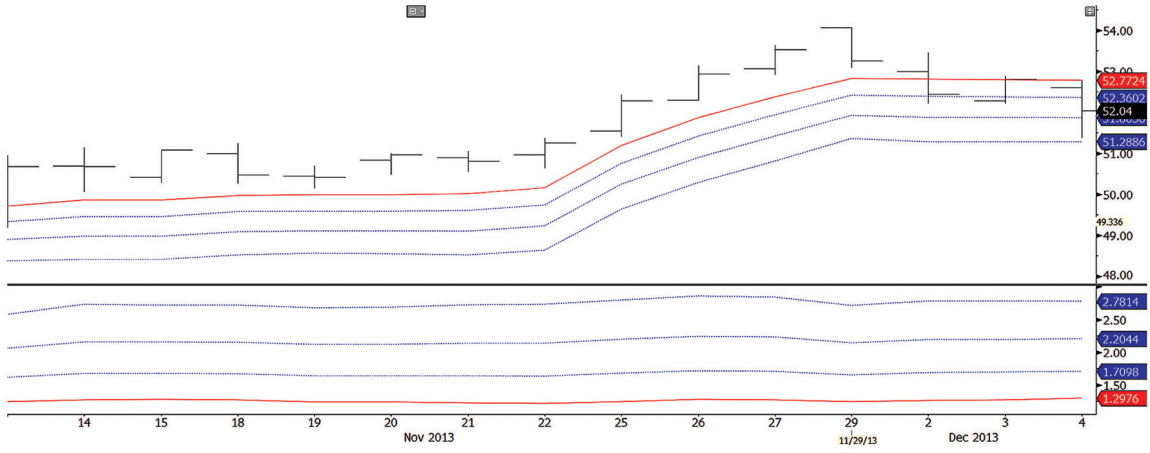
1. What is the bearish bar reversal pattern?
2. How would you describe this pattern?
3. What candlestick pattern is it similar to?
4. What's the difference between the similar candlestick pattern and the bar reversal pattern in this example?
5. Draw an arrow to, and name the type of, gap on this chart.
6. Why doesn't the bullish bar prior to the gap qualify as the same bar pattern as "1"?

QUESTION 8.3 GILD Risk (NASDAQ)

A trader is going to trade a daily chart of Macy's (M) and will use a $7.66 trailing stop.

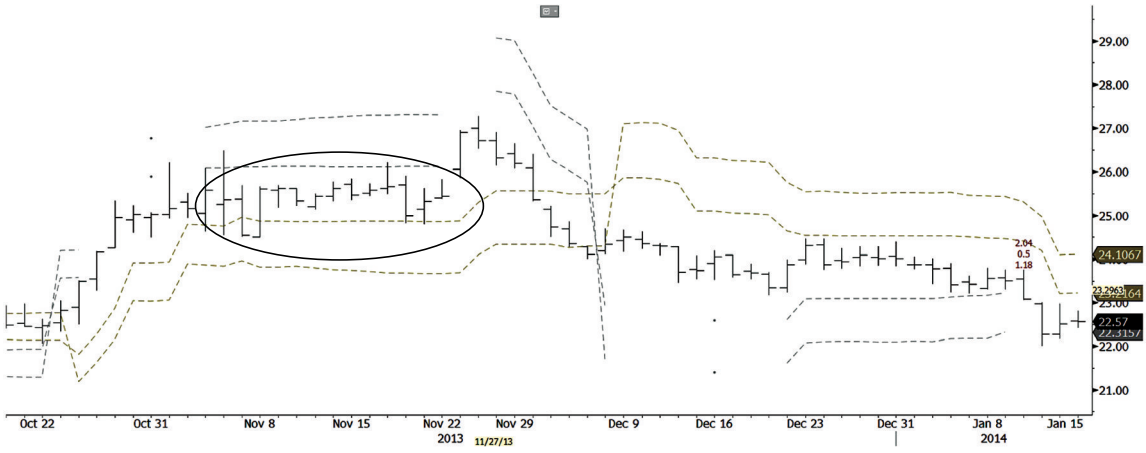
1. Assume that a trader can risk $8,000 per trade, how many shares can he trade?
2. Assume that only $3.13 risk per trade may be taken. The NASDAQ trades for 6.5 hours per day. The trader is willing to trade intraday. What bar length would be set up as a starting point?
3. Assuming the trader is willing to lose up to $70,000 cumulatively over time and has a 55 percent win rate and a 1.5 win-to-loss ratio, what's his risk of ruin (percent chance of losing everything)? [Hint: you might want to calculate this in a spreadsheet.]
4. Now let's assume this trader has become very risk averse and wants to reduce his risk of ruin to 0.001 percent. How much can he now risk per trade in dollars and in shares?

QUESTION 8.4 M with Kase DevStops and Kase Reversal Amounts



1. What are the most recent stop amounts (reversal values) shown on the chart? Use two decimals.
2. If a trader was using Kase DevStop3, at what price would he exit?
3. Trading 1,000 shares using DevStop1, how much risk per trade would be taken?
4. Using DevStop3, with a $20,000 per trade risk limit, how many shares may be traded?
5. Based on the information shown on the chart, using the TrueRange as opposed to Double True Range, calculate the relative risk.

QUESTION 8.5 BLMN Daily with Double Stops and Relative Risk



1. What is the relative risk for this chart?
2. Does that mean it's more or less risky than Macy's (M) from the previous question? Why?
3. What's the relationship visually between the default and opposing stops in the circled area?
4. What kind of exit using an alternative stop method might have been used here?

QUESTION 8.6 Risk of Ruin

A trader is risking a total of $75,000 in his portfolio cumulatively. His track record is 55 percent wins with a 1.5 to 1 risk-to-loss ratio. His risk per trade is $20,000.

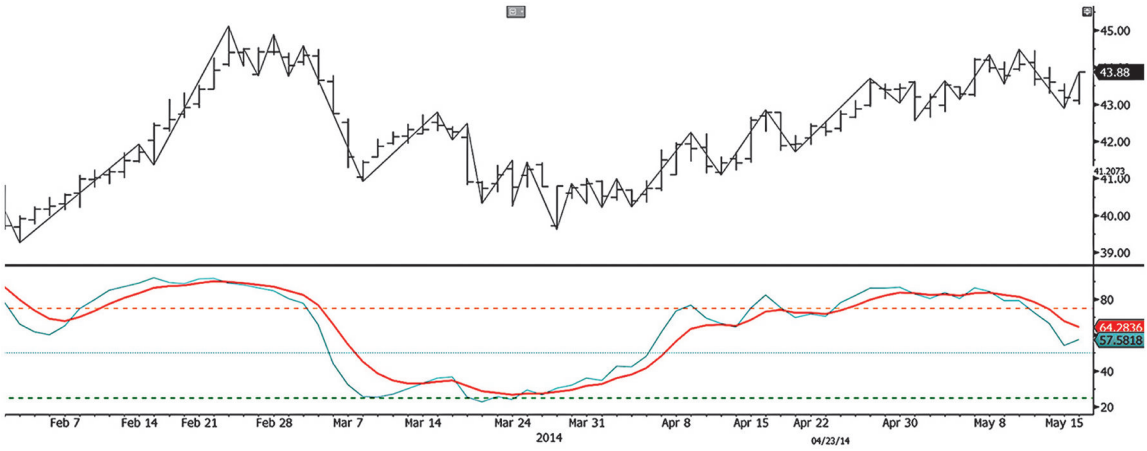
1. What's his risk of ruin to the nearest integer?
2. How much would he have to cut his risk per trade to cut his risk of ruin by half?
3. How much would he have to improve his win-to-loss ratio to do the same?
4. How much would he have to improve his percent wins to cut risk by half?

CHAPTER 9

Intro to Momentum, Including Momentum in Trading

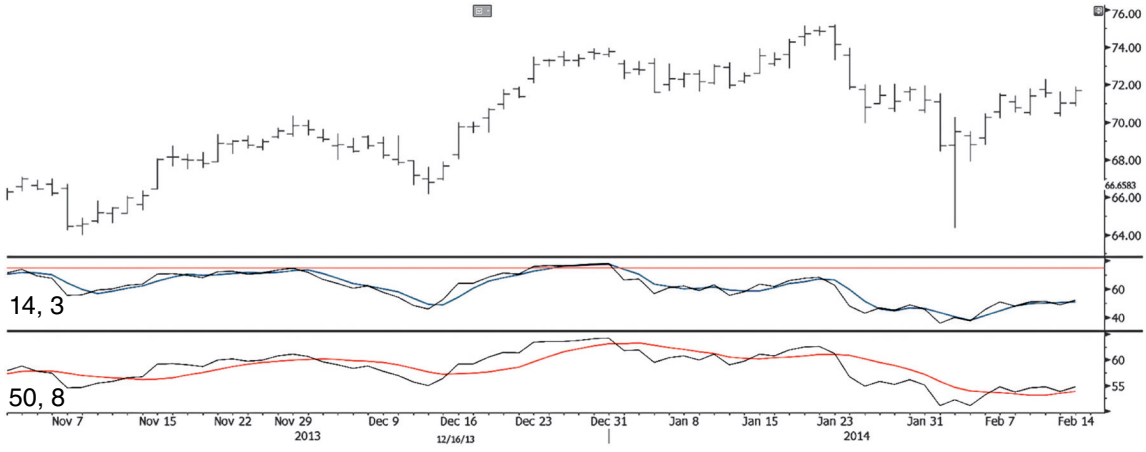
Section 9 addresses momentum indicators, including the popular Stochastic and RSI. Momentum indicators can be used for entries, employing crossovers, exits using overbought/oversold signals and momentum divergence, and for filtering other indicators' signals for significance. These techniques are addressed in Section 9. (See Section 12 for oscillators, including the MACD, the Ultimate Oscillator, and Kase's momentum indicators: the Kase PeakOscillator and KaseCD.)

QUESTION 9.1 O US Daily with Momentum Indicator



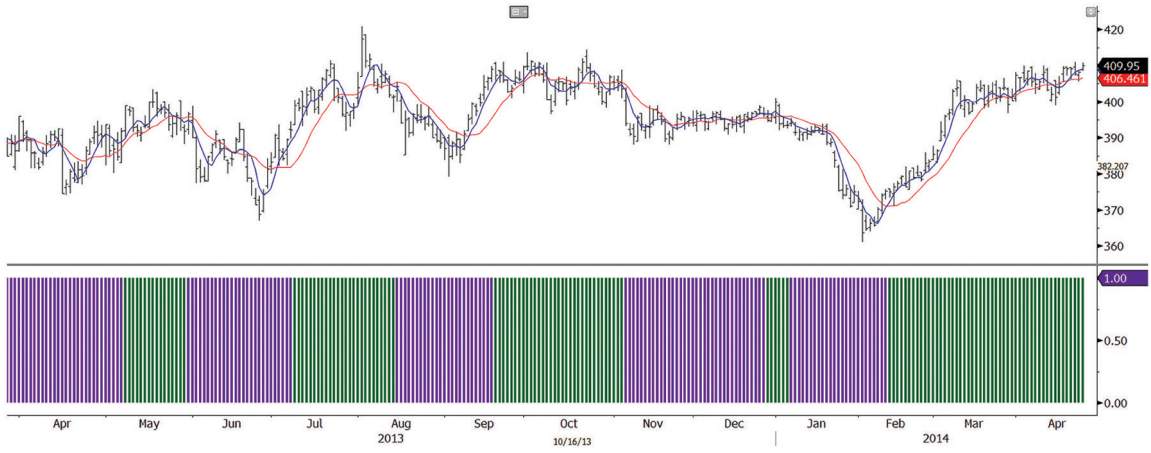
1. Can you identify this indicator?
2. Identify each line.
3. Draw in at least one instance of bullish divergence or bullish mini-divergence.
4. Identify an instance of a drop or rise out of OBOS.

QUESTION 9.2 R US Daily with RSI exponential with simple MA (14, 3) and (50, 8)



1. Identify at least one instance where RSI (14, 3) performed better than RSI (50, 8).
2. Identify at least one instance where RSI (50, 8) performed better than RSI (14, 3).
3. Draw in bearish divergences on both indicators.
4. Draw in bullish divergences on both indicators.
5. Which RSI has a flat divergence?

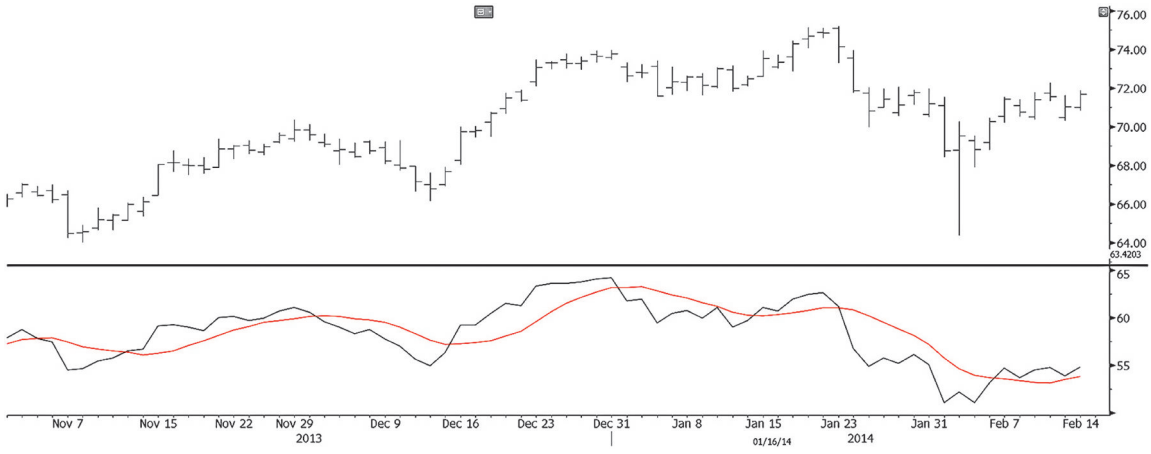
QUESTION 9.3 Y US Daily with SMAs (5, 13) and Kase Permission Screen



A longer bar length filter, Kase Permission Screen, displays green giving permission to go long and purple giving permission to go short.

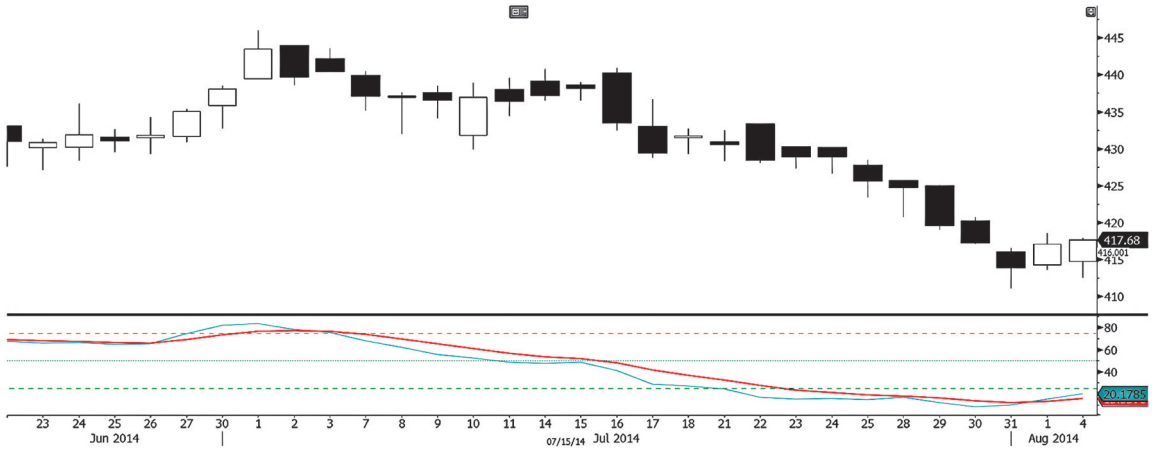
1. Circle areas where long whipsaws would have been avoided due to the Permission Screen allowing short trades only.
2. Circle areas where short whipsaws would have been avoided due to the Permission Screen allowing long trades only.
3. Circle any whipsaws that were not avoided.

QUESTION 9.4 R US Daily with RSI exponential with Simple RSI Average (50, 8)



1. Using a Stop and Reverse system, Short exit and long entry = RSI crosses above RSI MA, Long exit and short entry = RSI crosses below RSI MA, draw in up arrows for short exit, long entry, and down arrows for long exit, short entry.
2. Add an exit signal based on momentum divergence. Mark with X.
3. Identify a point at which a crossover took place before the momentum divergence.
4. Identify where momentum divergence exited the trade earlier than a crossover.

QUESTION 9.5 Y Daily with Slow Stochastic



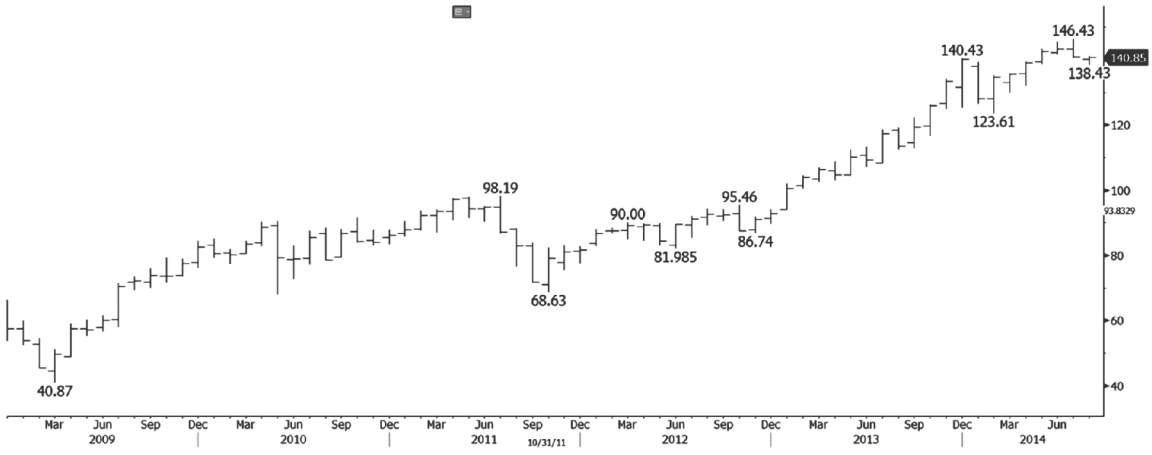
1. Mark the date range over which candlesticks are filtered by the Stochastic as bullish, and explain your rationale.
2. Mark the date range over which the candlesticks are filtered by the Stochastic as bearish, and explain your rationale.

CHAPTER 10

Forecasting Techniques: Waves and Projections

Section 10 teaches various forecasting techniques using wave projections and retracements. The section also teaches about the relationship between Phi and Fibonacci, and how that relationship can be used in forecasting future market prices. Traders learn how to calculate five basic impulse projections, three corrective projections, and the trend terminus. They are also taught how to calculate and use retracements and identify confluence between the retracements and wave projections.

QUESTION 10.1 MMM Monthly with Swing 2 Labels



1. List the waves up from 40.87, and explain how you made your choices.
2. Which impulse target was fulfilled at 146.43 within 2 percent?
3. Which corrective projection was fulfilled at 146.43 within 2 percent?
4. Fill in the following table:

	X	Y	Z	Target	Price
1	40.87	98.19	68.63	L	
2	68.63	95.46	86.74	X	
3	81.99	140.43	123.61	S	
4	123.61	146.43	138.43	E	
5	123.61	146.43	138.43	P2	

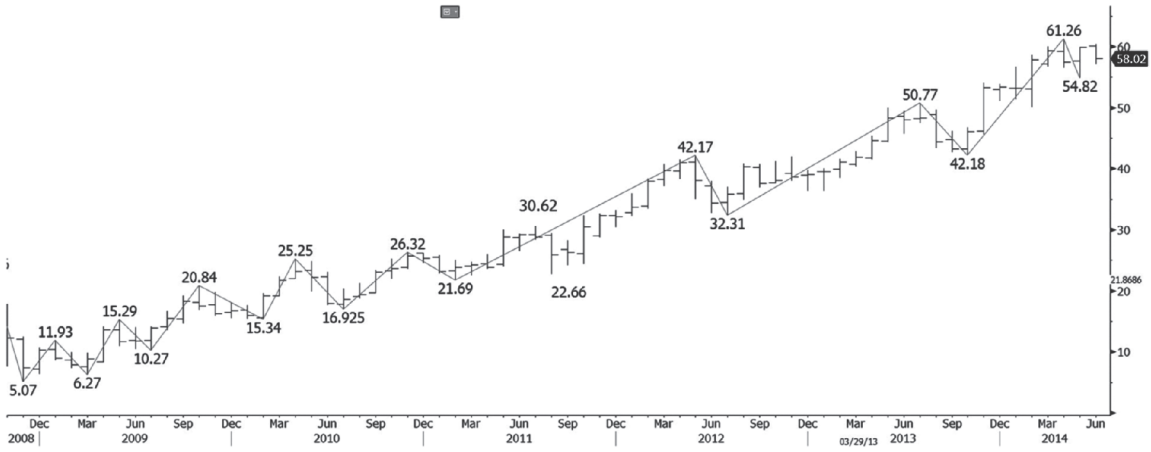
5. Based on the table, what might be the next confluence point above 146.43?
6. List the waves that contain the same YZ leg, where Y is 146.43.

7. Put the X values for the waves you've listed for the list in "6," and fill out the retracements from the X value to 146.43. Shade any retracements already met.

From					
21%					
38%					
50%					
62%					
89%					

8. Circle the confluent retracement prices you think will form the next important support. Explain why these prices are important.
9. Calculate the equal to (E) impulse target and the corrective projection, Phi squared or P2, for the one wave down, 146.43 – 138.43 – 140.89. Does the result cause you to view the retracement table differently?

QUESTION 10.2 M Monthly with Swing 2 Labels



1. List the wave cycles up from 5.07.
2. What corrective projections from the first wave cycle up were met by its YZ leg? Show your calculations.
3. For the wave 5.07 – 25.25 – 16.925, what's the P1 projection? What point met this projection? With what point from "2." is it confluent?
4. For the wave 5.07 – 15.29 – 10.27, which swing high (within a 2 percent range) fulfilled its larger than target?
5. For the wave 5.07 – 26.32 – 21.69, which two consecutive impulse projections were met within a 2 percent range?
6. Fill out the following table. For greater accuracy, use three decimals for the multipliers, if any.

X	Y	Z	Target	Price
5.07	11.93		T	
5.07	30.62		L	
5.07	50.77		P2	
5.07	61.26		P1	

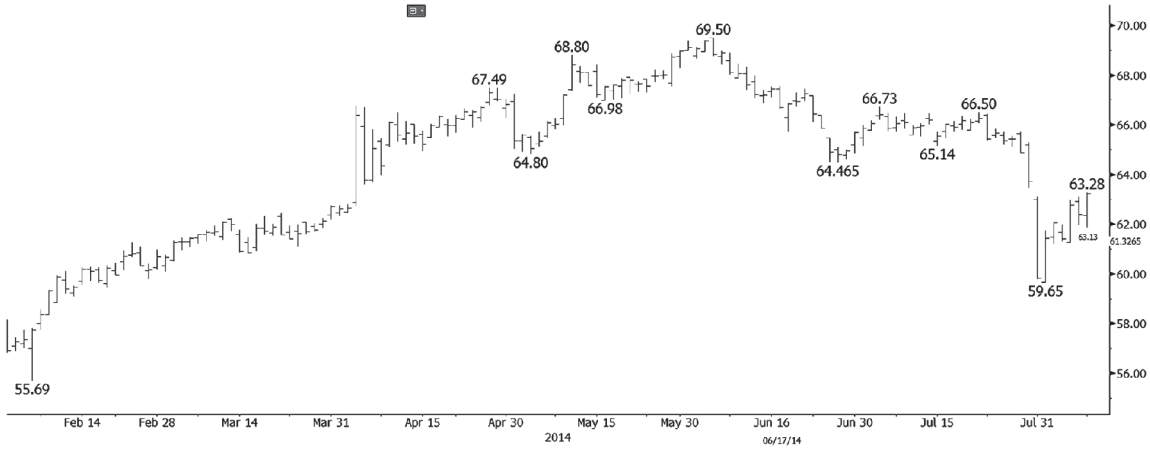
7. Given the prices calculated in the table above, what would you say the next target above 61.26 might be?
8. List the waves that include 61.26 – 54.82 as the corrective YZ portion.

9. Put the X values for the waves you've listed in the first row of this table, and fill out the retracements from the X value to 61.26. Shade any retracements already met.

From										
21%										
38%										
50%										
62%										
89%										

10. What price would you estimate as the next major retracement to be tested? Circle the values.

QUESTION 10.3 K with Waves and Swing 3 Labels



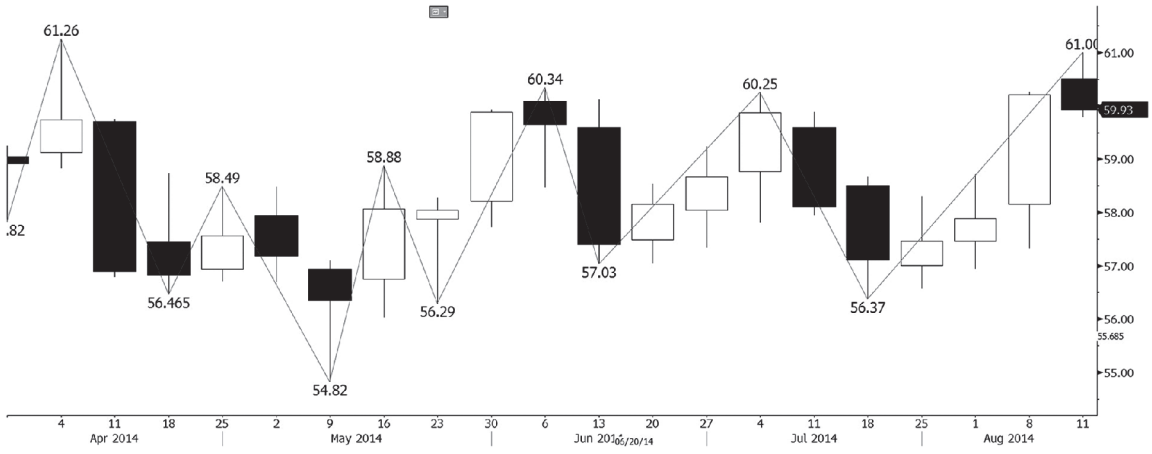
1. Mark valid up waves (XY) in blue.
2. List the XYZ points for the related wave cycles.
3. Mark valid down waves (XY) in red.
4. List the XYZ points for the related wave cycles.
5. For the largest wave cycle up from 55.69, what is the 62 percent retracement? Has it been met? Show the calculation.
6. For the largest wave cycle down from 69.50 what is the 38 percent retracement? Has it been met? Show the calculation.
7. Was the wave cycle 55.69 – 67.49 – 64.80 ever valid? Why isn't it valid now?
8. Was the wave cycle 68.80 – 66.98 – 69.50 ever valid? Why isn't it valid now?
9. What's the I (Intermediate) target for the first wave cycle down from 69.50? Show the calculation. Was this target met within 0.50 percent?

CHAPTER 11

Developing a General Market View

In Section 10 waves, wave cycles, projections, and retracements were discussed as the basis for forecasting. Section 11 brings together additional elements to support a forecast, such as moving averages, stops, and retracement tables. In addition, projections are viewed on a more comprehensive basis by looking at confluent targets within tables.

QUESTION 11.1 M Weekly as of August 11, 2014 (Refer to ANSWER 10.1)



The monthly chart above shows that following the 54.82 swing low a 61.00 swing high was made.

1. Given one down wave, 61.26 – 54.82 – 61.00, what is the smaller than target?
2. Here's the retracement table from the swing lows shown on the chart to 61.00. Is the smaller than target confluent on this table? Shade in any cells you deem important. Add any further comments you deem appropriate.

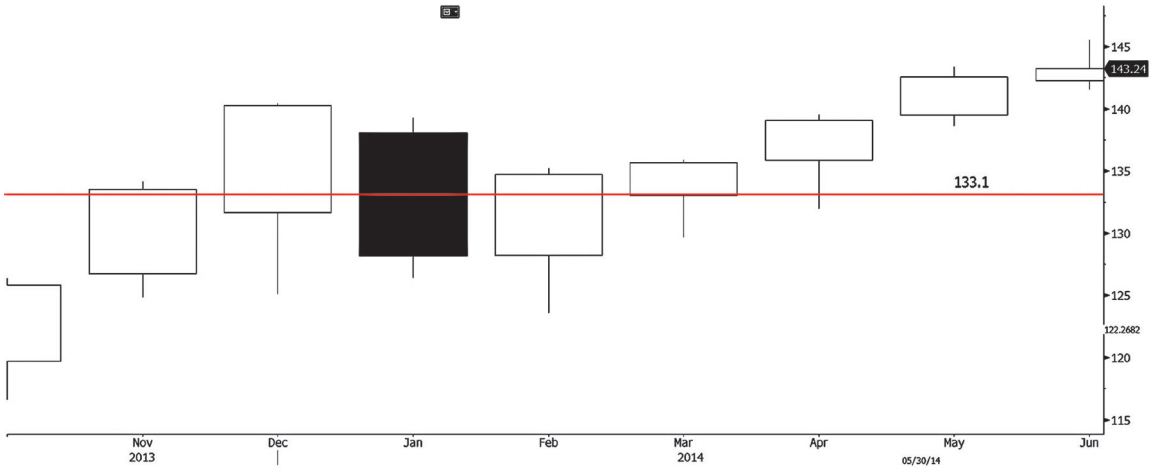
From	54.82	56.37
21%	59.7	~~60.0~~
38%	58.7	59.2
50%	57.9	58.7
62%	57.2	58.1
89%	55.5	56.9

3. Here's the support DevStop table. Do you find corroboration for the smaller than target? If so, shade in any cells you want to point out. Add any further comments you deem appropriate.

Support	**Dev1**	**Dev2**	**Dev3**	**Dev6**
Daily	59.2	58.7	58.1	57.0
Weekly	57.0	55.8	54.3	51.8

4. Just looking at the candlestick chart, where would you draw a support line? Does this change how you would view support?

QUESTION 11.2 MMM Monthly (Refer back to ANSWER 10. 2)



Retracement Table from ANSWER 10.1

From	40.87	68.63	81.985	86.74	123.61
21%	124.3	130.1	132.9	133.9	141.6
38%	106.3	116.9	121.9	123.7	137.8
50%	93.7	107.5	114.2	116.6	135.0
62%	81.0	98.2	106.5	109.4	132.3
89%	52.5	77.2	89.1	93.3	126.1

For QUESTION 10.1 we looked at a price of around 133.4 as being interim support. Using that information, please address the following questions.

1. Here's the support DevStop table. How does this table add to any knowledge about the importance of 133.4? Shade any cells you wish to point out.

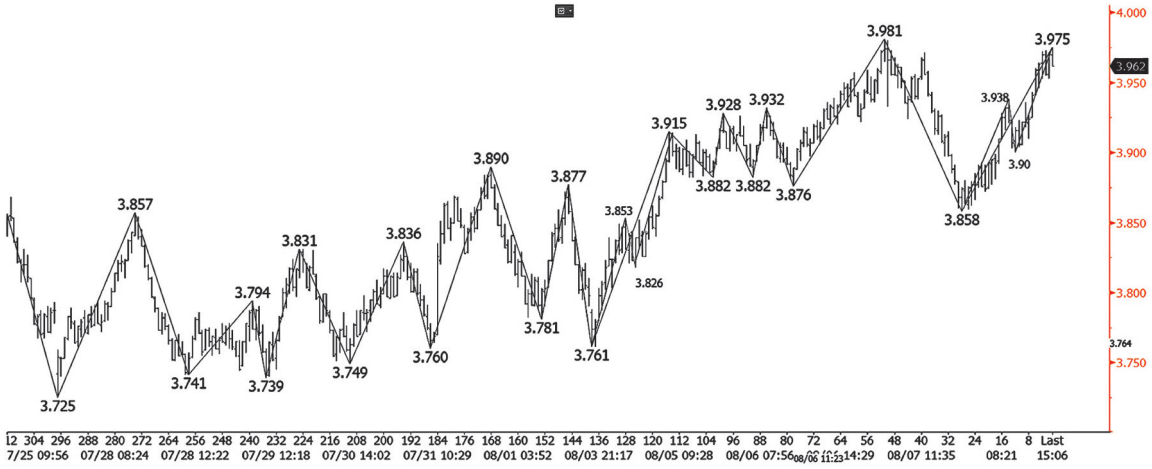
Support	Warn	Dev1	Dev2	Dev3	Dev6
Daily	138.8	138.0	137.1	136.0	134.1
Weekly	141.1	138.9	136.1	133.0	127.6

2. Now, here's the moving average table. How does this table add to any knowledge about the importance of 133.4? Shade any cells you wish to point out.

Weeks	8	26	52
SMA	143.7	139.1	132.7

3. Now looking at the monthly candlestick chart, with a horizontal line at 133.1, how does this add to your understanding of interim support?

QUESTION 11.3 NGU14 60M Equivalent Kase Bars with Swing 4



"Landscape" Table for Up Waves NGU14 as of August 9, 2014

X	Y	Z	S	E	I	L	T	X	P1	P2	P3
3.725	3.857	3.739	3.82	3.87	3.92	3.95	4.14	4.10	3.93	4.05	4.24
3.725	3.890	3.760	3.86	3.93	3.99	4.03	4.24	4.22	3.97	4.10	4.31
3.725	3.981	3.858	4.02	4.11	4.21	4.27	4.55	4.57	4.06	4.18	4.38
3.739	3.831	3.749	3.81	3.84	3.88	3.90	4.02	4.00	3.88	3.96	4.10
3.749	3.836	3.760	3.81	3.85	3.88	3.90	4.02	4.00	3.88	3.96	4.08
3.749	3.890	3.760	3.85	3.90	3.95	3.99	4.19	4.15	3.97	4.10	4.31
3.749	3.981	3.858	4.00	4.09	4.18	4.23	4.49	4.50	4.06	4.18	4.38
3.760	3.877	3.761	3.83	3.88	3.92	3.95	4.12	4.08	3.95	4.06	4.25
3.761	3.853	3.826	3.88	3.92	3.95	3.97	4.04	4.08	3.87	3.90	3.94
3.761	3.932	3.876	3.98	4.05	4.11	4.15	4.30	4.35	3.97	4.02	4.11
3.826	3.981	3.858	3.95	4.01	4.07	4.11	4.31	4.29	4.06	4.18	4.38
3.858	3.938	3.900	3.95	3.98	4.01	4.03	4.10	4.12	3.96	4.00	4.06
3.858	3.975	3.962	4.03	4.08	4.12	4.15	4.22	4.29	3.98	4.00	4.02
3.881	3.975	3.962	4.02	4.06	4.09	4.11	4.17	4.22	3.98	4.00	4.02

1. Given the waves and targets above, label the waves.
2. Mark the major waves you used in your analysis along with any associated targets.

3. Explain how you chose which swing high to use among 3.915, 3.928, and 3.932, and explain why. Was there an alternative choice?
4. Explain how you chose to label the 3.981 swing high.
5. Starting with a target at least 10 cents above the 3.981 high, with a range of +/– 2 cents, color code the next two major targets that appear most confluent. Make sure the second target is at least 10 cents above the first target.
6. Shade in any duplicate corrective projections.
7. Why are there duplicate targets at all?
8. Did any of the projected targets help you decide how to label the chart?
9. If the market were to exceed 4.10 but stall before meeting 4.22, what would you choose for the stall price? Take the following retracement table into consideration, and explain how it helped you choose the stall price.
10. Was the 21 percent retracement of the entire move down from 4.874 met?
11. For the move down from 4.399 to 3.725, which retracement does the 3.981 fulfill?

Retracements from Prices Shown to 3.725

From	**4.874**	**4.582**	**4.399**
21	~~3.97~~	~~3.91~~	~~3.87~~
38	4.16	4.05	~~3.98~~
50	4.30	4.15	4.06
62	4.44	4.26	4.14

QUESTION 11.4 Forecasting Exercise for NGU14

"Landscape" Table for Down Waves NGU14 as of August 9, 2014

X	Y	Z	S	E	I	L	X	T	P1	P3
8.474	5.223	5.771	3.76	2.52	1.28	0.51	1.98	–3.21	4.88	3.45
5.771	4.878	4.997	4.45	4.10	3.76	3.55	3.49	2.53	4.80	4.49
5.687	4.878	4.997	4.50	4.19	3.88	3.69	3.59	2.76	4.80	4.49
5.687	3.582	4.874	3.57	2.77	1.96	1.47	1.42	–0.94	2.78	–0.60
4.997	3.582	4.874	4.00	3.46	2.92	2.58	1.84	0.96	2.78	–0.60
4.874	3.725	3.981	3.27	2.83	2.39	2.12	2.18	0.81	3.57	2.90
4.582	4.089	4.159	3.85	3.67	3.48	3.36	3.26	2.80	4.05	3.86
4.582	3.725	3.981	3.45	3.12	2.80	2.59	2.46	1.61	3.57	2.90
4.470	4.102	4.159	3.93	3.79	3.65	3.56	3.45	3.14	4.07	3.92
4.470	3.940	3.981	3.65	3.45	3.25	3.12	3.06	2.52	3.91	3.81
4.470	3.725	3.981	3.52	3.24	2.95	2.78	2.59	1.92	3.57	2.90
4.399	4.078	4.142	3.94	3.82	3.70	3.62	3.50	3.25	4.04	3.87
4.159	3.725	3.981	3.71	3.55	3.38	3.28	2.99	2.78	3.57	2.90

Given the table above for down waves from the contract high, answer the following:

1. Cross out the prices that have been met based on the applicable low.
2. Highlight the next major support below 3.582, and state the value.
3. Why is this price particularly significant?
4. What's the next major support above 3.00? Color-code it.
5. How about below 3.00? Color-code it.
6. How might the DevStop table inform or confirm the values you've chosen? Color-code the confluence points.

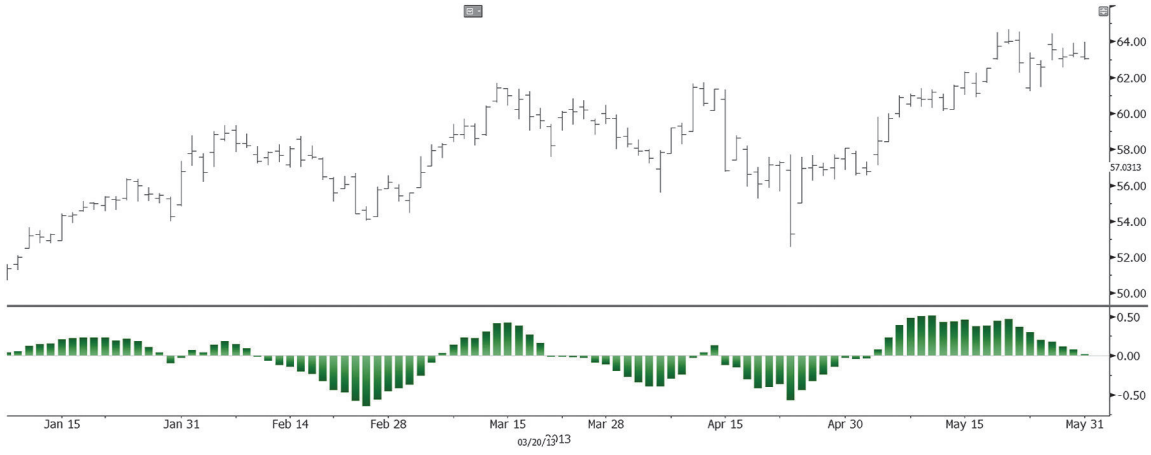
Support	Dev1	Dev2	Dev3	Dev4.5
Daily	3.80	3.75	3.69	3.65
Weekly	3.55	3.45	3.33	3.25

CHAPTER 12

Oscillators: Trading Oscillators Systems

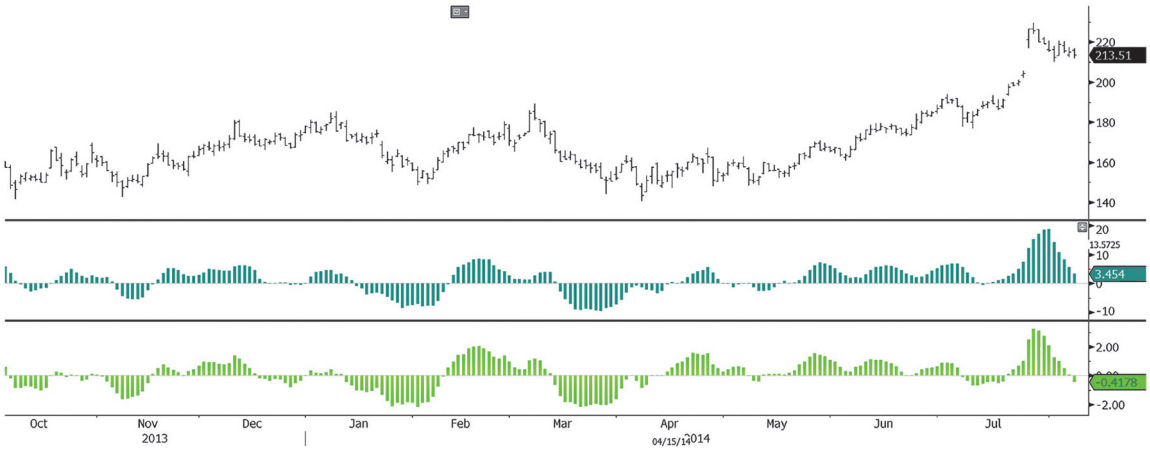
Section 12 continues the discussion about momentum indicators by taking a look at oscillators. These are "rate of change" indicators that evaluate how quickly trend measures, most popularly, moving averages, are moving toward or away from each other. Indicators in this class include moving average oscillators (MAOsc) of which the well-known MACD is a subset. Kase's momentum indicators, based on oscillators relating to statistical measures of trend, are also discussed. Kase also discusses new upgrades and enhancement to her divergence algorithm.

QUESTION 12.1 R US Daily MACD (12, 26, 9)



1. Identify at least two turns the MACD caught with momentum divergence.
2. Identify at least two turns the MACD missed.
3. Circle an instance of a plateau on the MACD.
4. Can you circle an instance of overbought or oversold?

QUESTION 12.2 BIDU Daily with MA Oscillator, Blue (5, 15, 1), and MACD, Green (default)

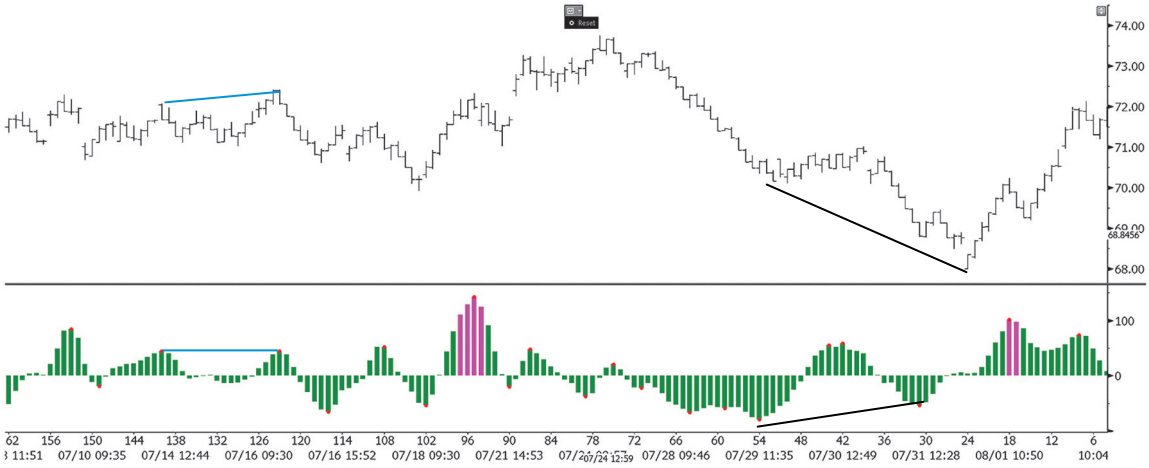


1. Is there an easy way to tell the MAOsc from the MACD?
2. Why?
3. On the MAOsc, identify a valid divergence with a tolerance of two bars.
4. On the MACD, identify a valid divergence with a tolerance of two bars.
5. Find an instance where there are two valid divergences with the same starting peak.
6. Find a divergence the MAOsc missed altogether.
7. Find a divergence where the MAOsc was "off tolerance," using a tolerance of two bars.
8. Find a flat divergence. Which indicator is it on? Is it bullish or bearish?

QUESTION 12.3 Oscillators

1. How was the Ultimate Oscillator a breakthrough or precursor indicator?
2. What techniques do Kase's momentum indicators use to improve upon this idea?

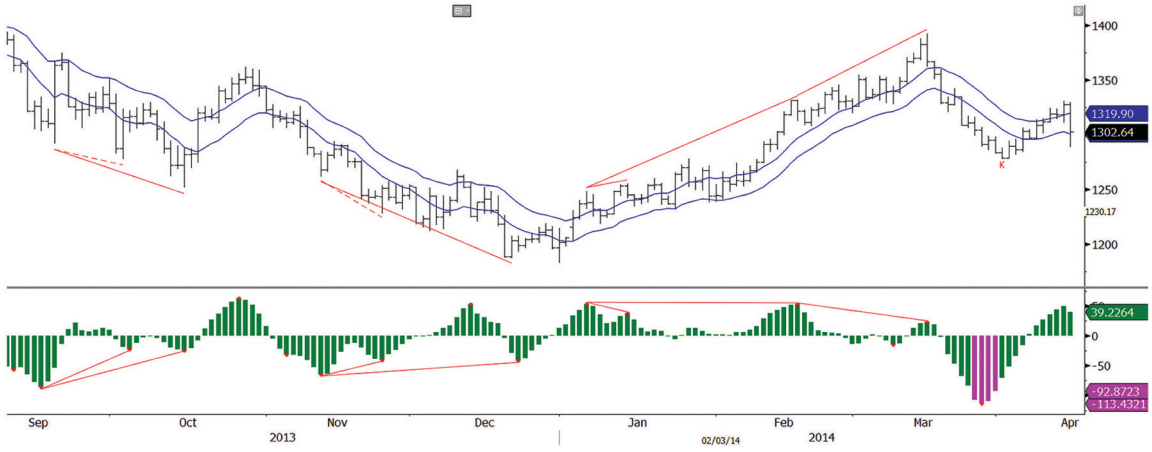
QUESTION 12.4 WAG 60M Kase Bars with KaseCD (Slope Filter Off, Otherwise Default Settings)



A tolerance of "2" means that a price peak may take place two bars before or after a momentum peak. The questions are all based on a tolerance of two bars.

1. Identify two overbought and/or oversold signals.
2. Why isn't the "divergence" shown in blue valid?
3. Why isn't the "divergence" shown in black valid?
4. Draw in at least four valid divergences. Make sure at least one is bullish and one bearish.

QUESTION 12.5 XAU Daily with KaseCD (Tolerance 3, Otherwise Default Settings)



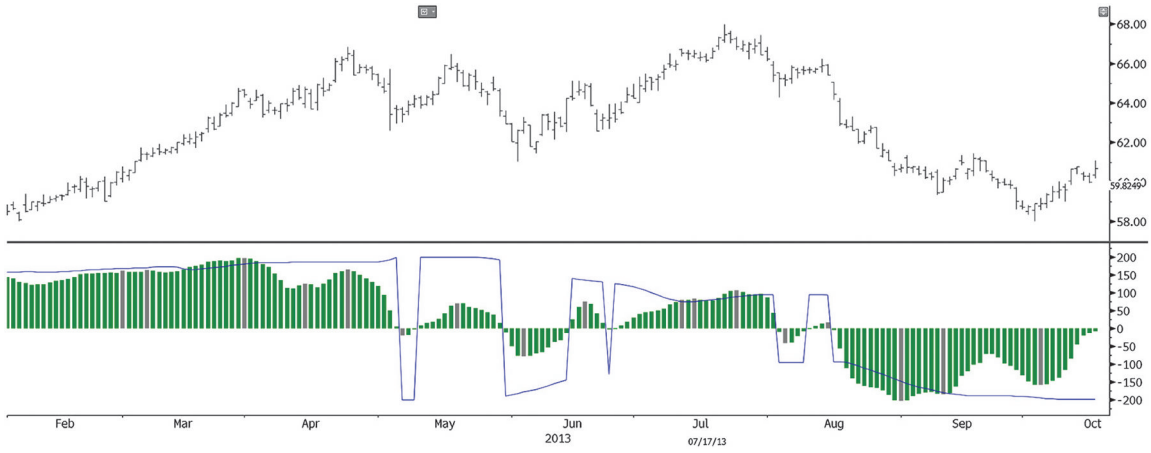
Note that a dotted divergence line, a new improvement to Kase's momentum indicators, means the confirming price bar closed in the opposite direction, for example down for a bullish signal.

1. Assume a stop and reverse (SAR) system where (short exit) long entry = two closes over the upper channel, and (long exit) short entry = two closes below lower channel. Draw black up arrows for the first signal, and black down arrows for the latter.

Now add the following exits: On a dotted KCD divergence, exit if prices touch the opposing channel, upper channel to exit short and lower channel to exit long. Exit on a standard KCD divergence or OBOS signal.

2. Mark any exits or trades that made a profitable difference with blue arrows, and describe the reasons for the difference.
3. Mark any exits or trades that caused a negative difference with red arrows, and describe the reasons for the difference.
4. Circle any instances where the added exit rules made no difference, and explain why.

QUESTION 12.6 K Daily with Kase Peak Oscillator, No Annotations



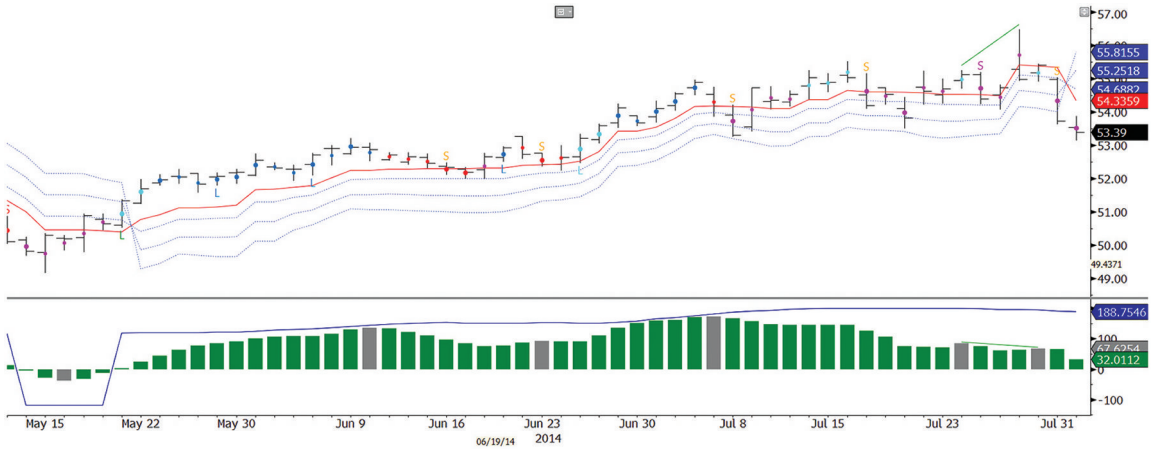
1. Note any overbought or oversold signals, called PeakOuts, by marking a "P" above a bearish peak and below a bullish peak. Explain how you decided on these points.
2. Draw in any valid divergences, using a tolerance of three bars.
3. Show two incorrect comparisons. These would be two price and two momentum peaks that should not have been evaluated. Explain why.
4. Find a correct comparison that was nondivergent. Mark with black lines and explain why the comparison was valid.
5. Mark any PeakOuts or divergences that would have been very helpful in identifying turns with blue arrows. Explain.
6. If they were only modestly helpful, mark with black arrows. Explain.
7. If they were overly sensitive, mark with red arrows. Explain.
8. Find a turn that was not identified by the Kase PeakOscillator.

CHAPTER 13

Multiple Chart Trading: Using Kase StatWare, and KaseX

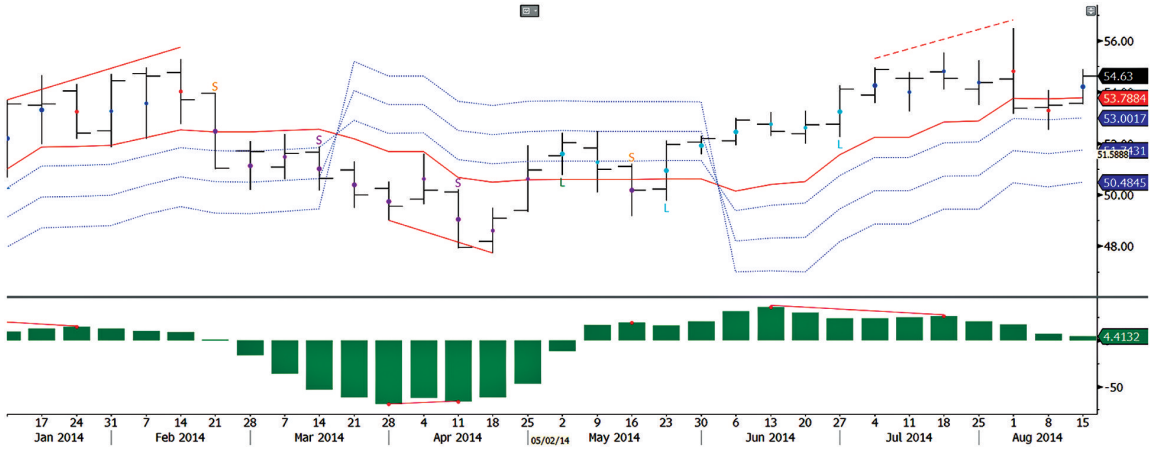
Section 13 discusses Kase's trading methods using Kase StatWare and KaseX, the latter of which is also published as Kase Private Label. These approaches employ Kase's proprietary algorithms, but are simple to follow and execute. The questions below include trade examples using these methods, as well as an example of scaling up to a higher bar length.

QUESTION 13.1 CMCSA Daily with Kase StatWare and KPO, Wide Stops



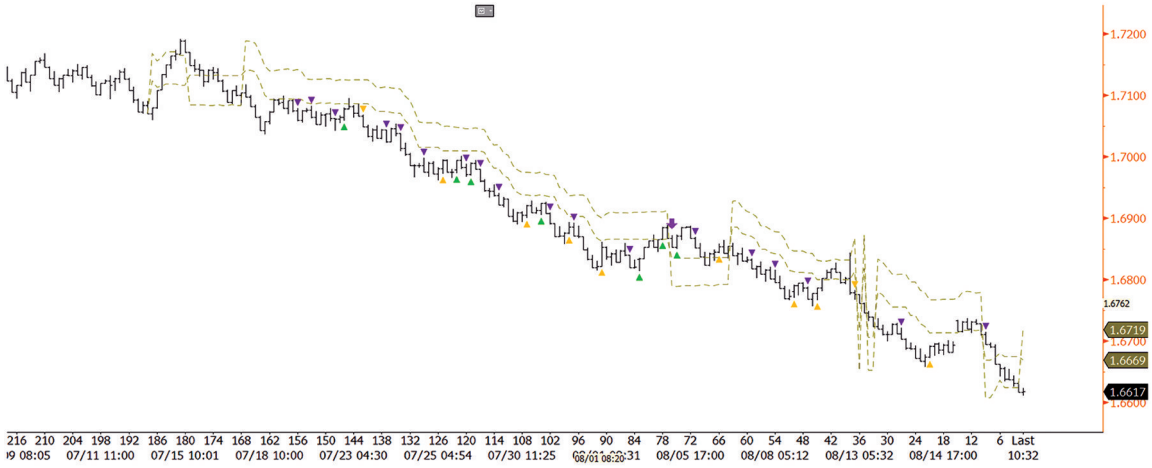
1. If you wanted to enter long aggressively, where would you get in on a first signal?
2. If you wanted to use normal rules and take a second signal long, where would you enter?
3. Why aren't any of the orange "S" signals valid for entering short?
4. Where would you have exited using momentum divergence plus Dev1 and/or Dev3?
5. Alternatively, if you were exiting on a valid short signal, where would you exit long?
6. Which was the better exit in this case, and why?
7. Around what date was there a previous high from which you could have drawn divergence?

QUESTION 13.2 CMCSA Weekly with Kase StatWare and KCD, Wide Stops, Tolerance 3



1. Assuming you were long coming into the chart, where would you exit using normal rules?
2. Following the exit, where would you have entered short?
3. At what points would you have exited short? What percentage at each point?
4. Where would you have entered long?
5. If you had actually entered the trade on the daily chart in Question 13.1, could you have scaled up to the weekly right away, or would you have had to wait?
6. Would you still be long at the end of the chart? Why?

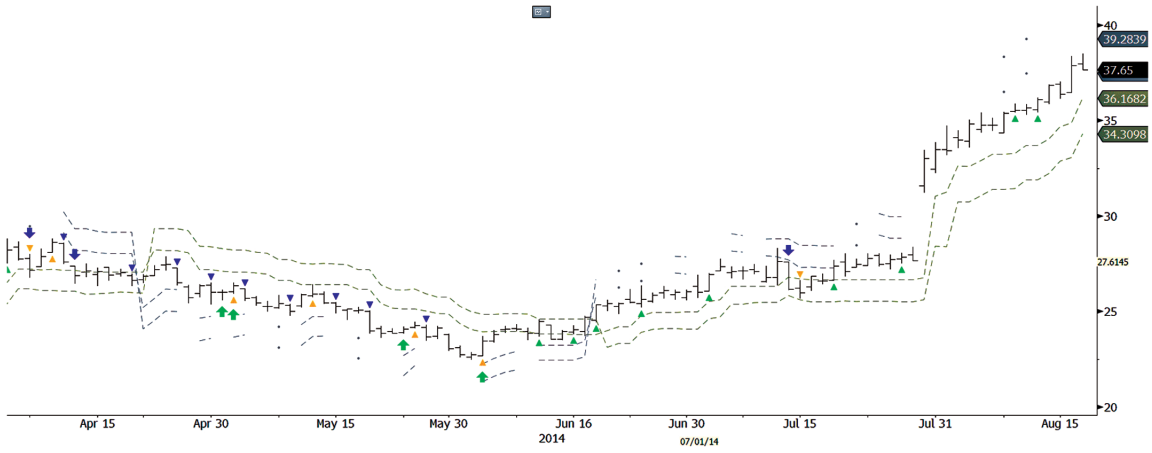
QUESTION 13.3 GBPUSD 33 Percent of Daily Range Kase Bar, KaseX



The chart above is a 33 percent of daily range Kase Bar chart. This means that each bar's range is approximately 33 percent of the daily bar ATR. Assume you took a short position on the purple down arrow. Exit as follows: Dash2 hit, or green triangle followed by close over Dash1, or yellow and green triangle followed by Dash1 hit, or momentum divergence. Reenter on a consecutive purple down triangle.

1. Mark your exits and reentries. Explain.
2. Now assume you would enter long on two consecutive up triangles with the second triangle green, provided there wasn't a purple down triangle or down arrow in between, where would your long entries be?
3. All but one of the long entries would have reversed to short on a consecutive purple down triangle. On what signal would that one trade have been exited?
4. What would your current position be? Where would it have been entered?

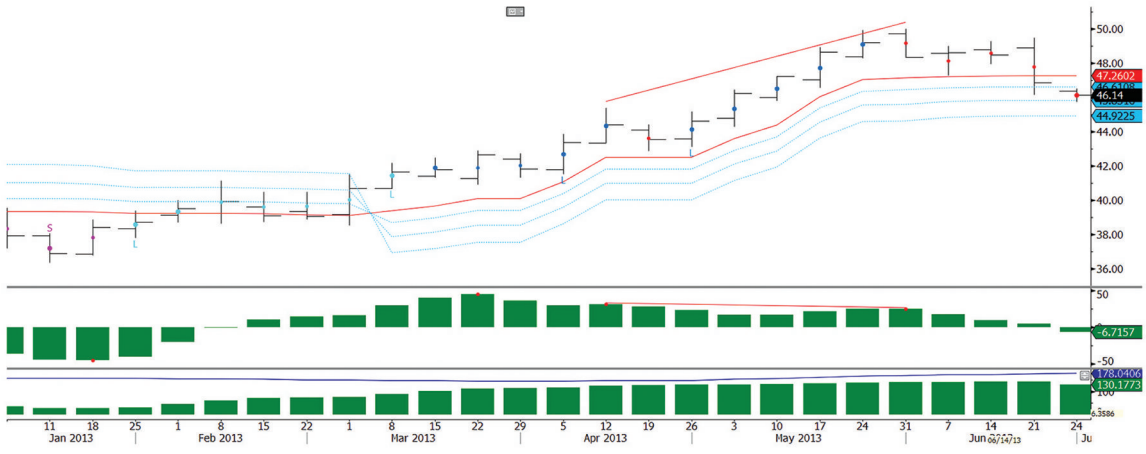
QUESTION 13.4 X Daily with KaseX



1. Overall, would it have been better to enter short aggressively (on a yellow triangle plus down purple arrow) or on a normal signal?
2. Overall would it have been better to enter long aggressively (yellow triangle plus up green arrow) or on a normal signal?
3. If you were exiting on a divergence signal followed by a stop hit, or on a normal reversal signal, where would you have shorted?
4. Where would you have exited long?
5. What would your current position be? Why?

QUESTION 13.5 M Daily with Kase StatWare

M Weekly with Kase StatWare



1. Mark the initial entry point for a second buy signal after a pullback in the daily chart.
2. Mark the point at which you could have scaled the long trade to the weekly chart.
3. Circle the whipsaws that would be avoided on the daily chart by scaling to the weekly chart.
4. Mark the exit on the weekly chart.

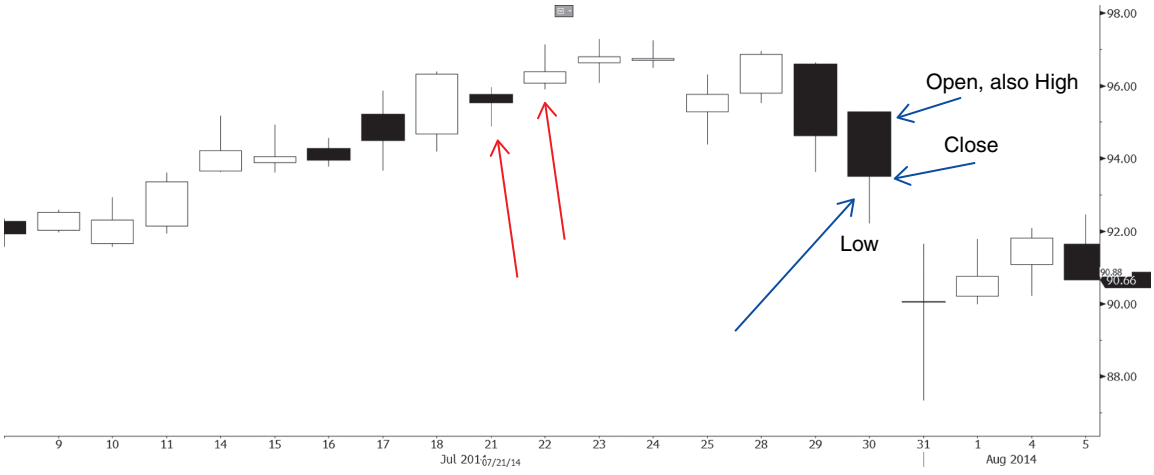
PART II

Answers

CHAPTER 2

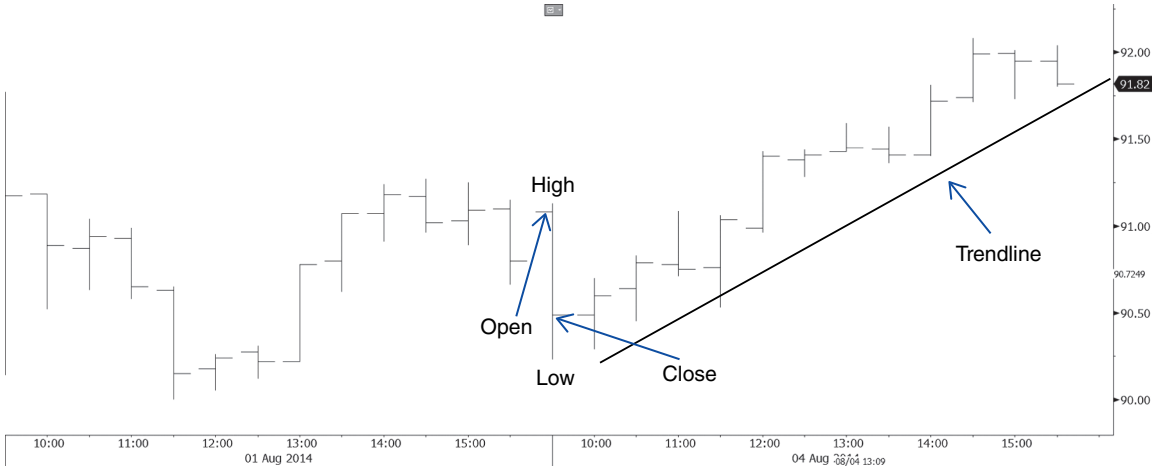
Start with Charts

ANSWER 2.1 CI Daily Candlestick Chart



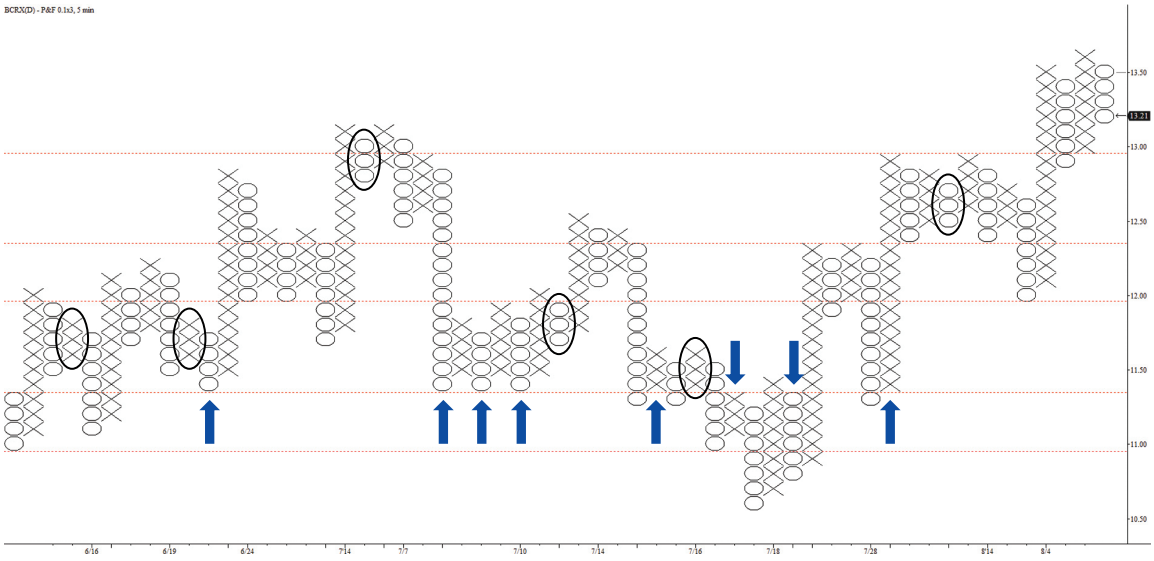
1. This is a candlestick chart
2. Daily time increments describe the X axis, and price increments the Y axis.
3. The open, high, low, and close are labeled.
4. Body, or real body, which is the box section of the candlestick, lower shadow from the bottom of the box to the low, and upper shadow from the top of the box to the high. The latter is missing here, because the top of the box, the open, equals the high.
5. Stars, as the open and close of each candlestick are close together.
6. For stars, the point is that the open and close are near each other, so it doesn't matter if they are filled in or empty.

ANSWER 2.2 CI US 30M OHLC Bar Chart



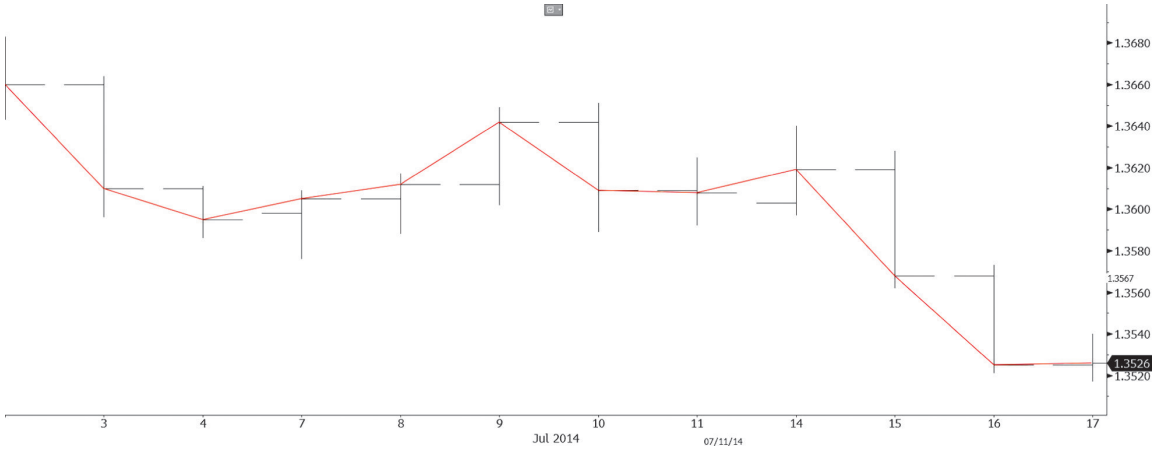
1. This is an open high low close, OHLC, bar chart
2. It is not a natural time increment chart, which includes monthly, weekly and daily charts. It is an intraday chart.
3. Open, high, low, and close as labeled.
4. Trendline is drawn in, as labeled. Note that trendlines don't have to be perfect. This trendline touches price lows in three places. It doesn't matter that it was penetrated once.

ANSWER 2.3 BCRX 0.10*3



1. The Xs represent up moves, and the Os down moves.
2. Since the chart is 0.10*3, each box represents a move of at least 0.10.
3. The "*3" means three boxes are needed.
4. See columns circled. Each of these columns has only three boxes. Those circled with Os represent minimum down columns, and those with Xs minimum up columns.
5. Support and/or resistance lines are shown by the red dotted lines.
6. Arrows show support and resistance points for the selected line.

ANSWER 2.4 EURUSD OHLC Bar Chart with Line on Close Superimposed



Line on close is drawn in red above. Note how the lines connect to the point at which the closing tick intersects the bar.

ANSWER 2.5 Nomenclature

1. GC denotes CME gold futures. X is November, and 16 is 2016. So these are November 2016 gold futures.
2. CLF20 stands for January 2020 WTI, CME crude oil.

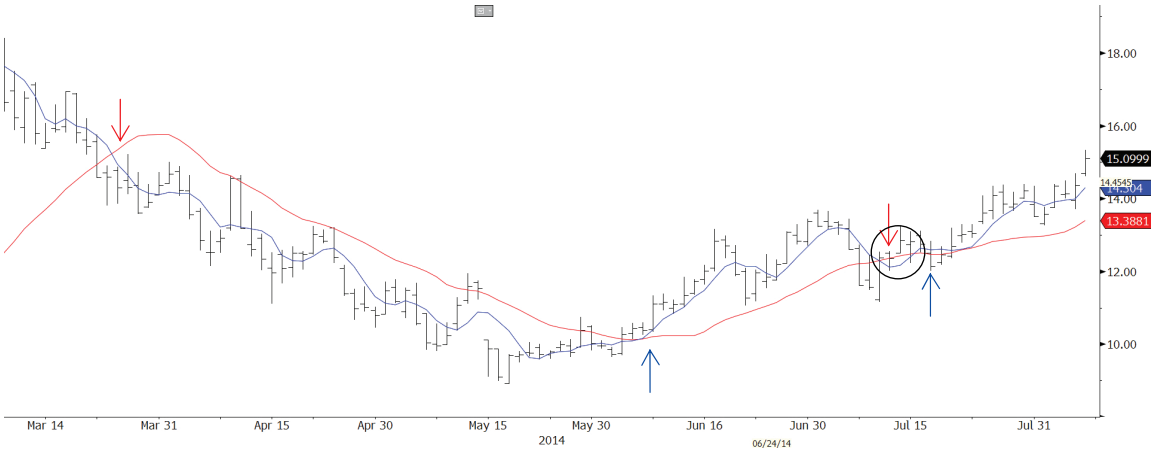
ANSWER 2.6 Equities versus Futures

1. Futures expire.
2. A rollover gap takes place if there is a jump or drop in price when the prompt contract expires and the next contract becomes prompt.
3. No, equities don't expire.

CHAPTER 3

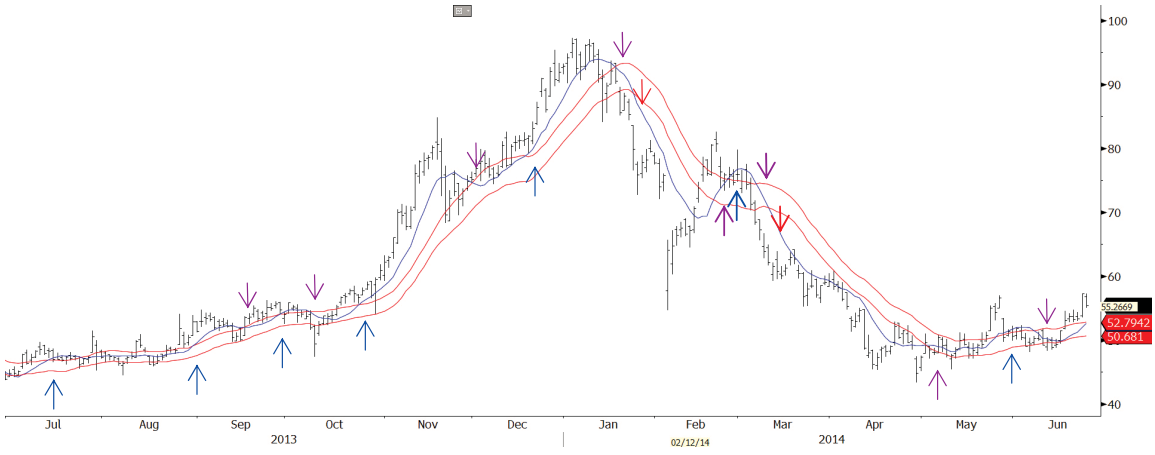
Trending Indicators: Entries and Stop and Reverse

ANSWER 3.1 DANG with SMAs (5, 21)

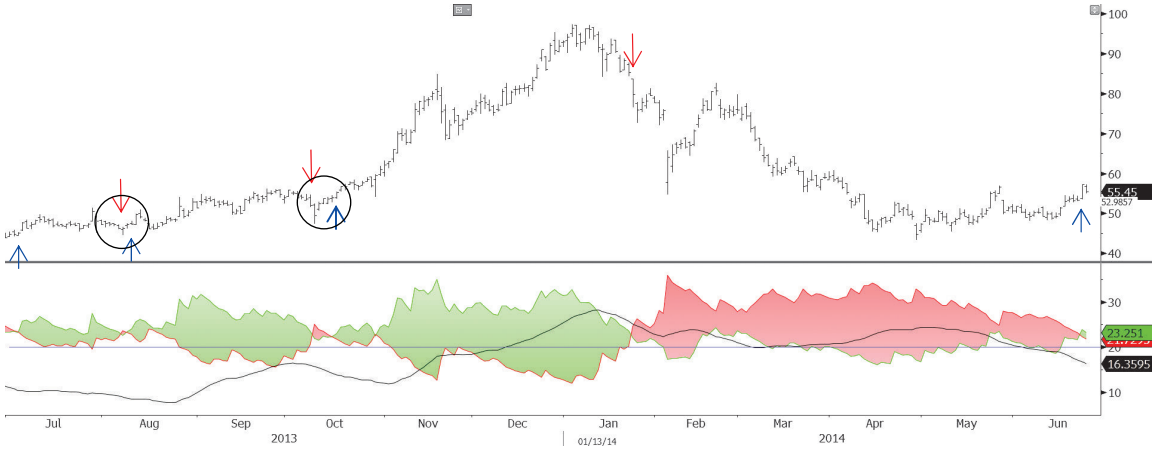


ANSWER 3.2 AVAV SMAs (10, 21, 50)

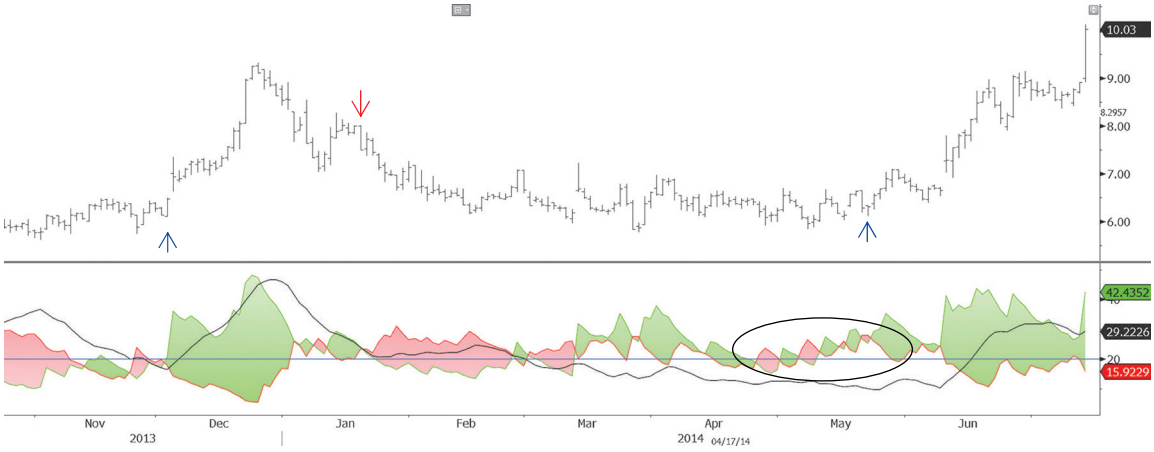
ANSWER 3.3 DDD with SMA (10), High Low Channel (21)



ANSWER 3.4 DDD with DMI and ADX (34)



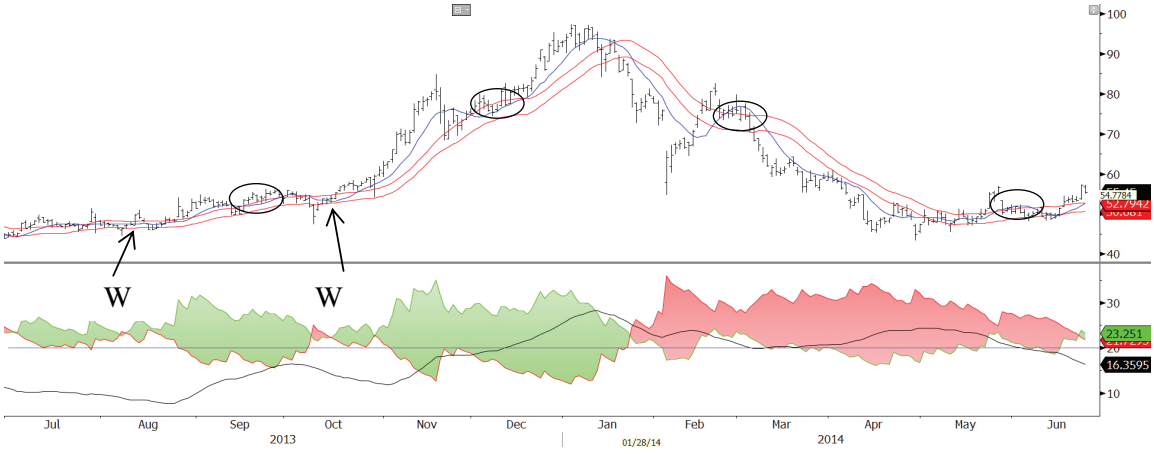
ANSWER 3.5 CBK with DMI and ADX (14)



1. See chart.
2. Circled.
3. It is rising.
4. This means the market is trending or trend is increasing.
5. The ADX is considered "low" as it's below 20.
6. This means that the market is becoming flat, or not trending in either direction.

ANSWER 3.6 VISN SMAs (5, 21) and DMI (14)

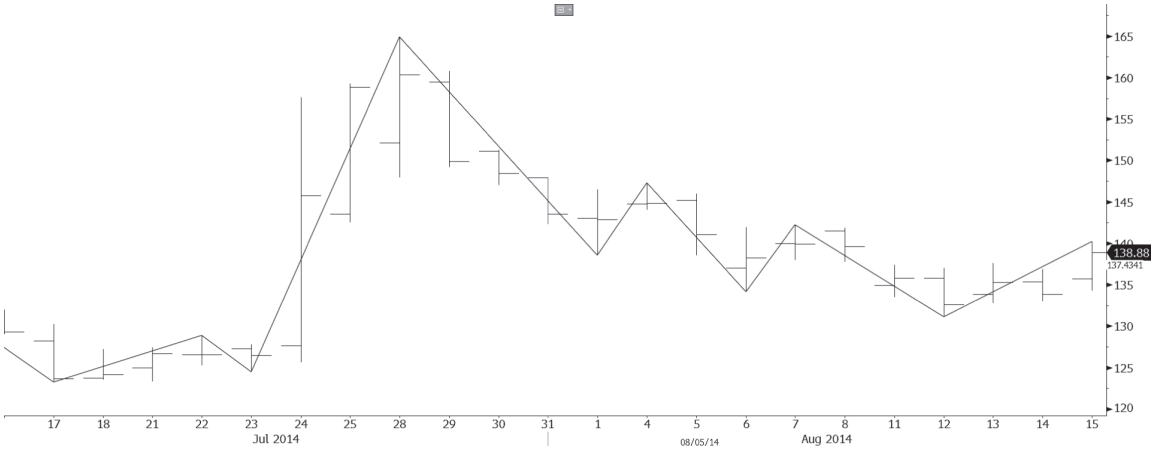
ANSWER 3.7 DDD with SMA (10), High Low Channel (21), and DMI and ADX (14)



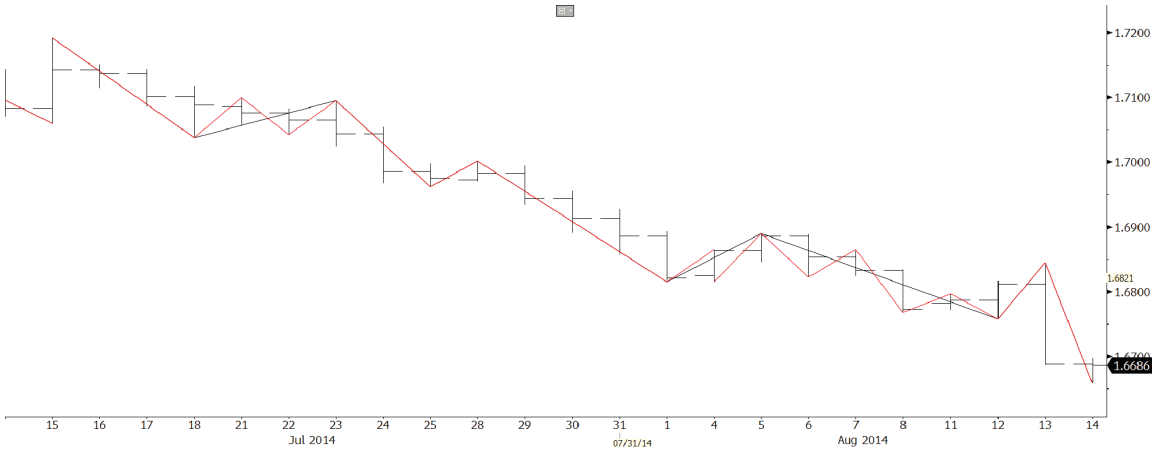
CHAPTER 4

Swings and Swing Systems

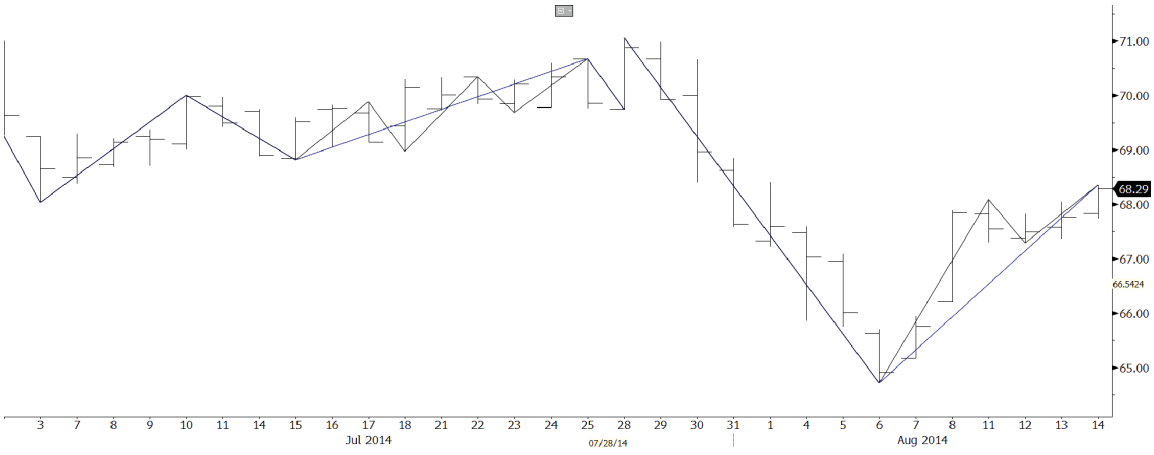
ANSWER 4.1 Z with OHLC Bars with Swing One (Insides Off)



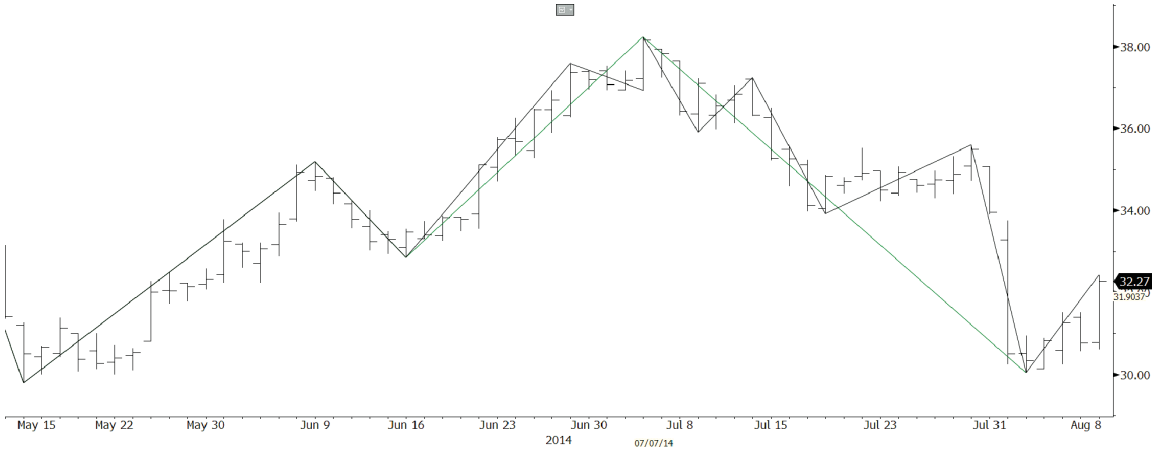
ANSWER 4.2 GBPUSD Swing One (Insides Off) and Swing One (Insides On)



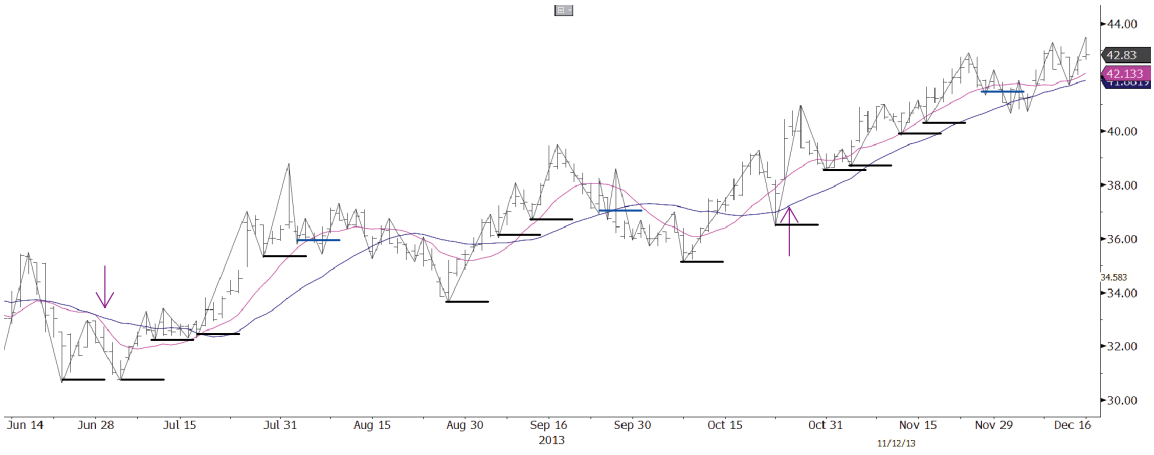
ANSWER 4.3 D with Swing One (Insides Off) and Swing Two (Insides Off)



ANSWER 4.4 GFF with Swing Two (Insides Off) and Swing Three (Insides Off)

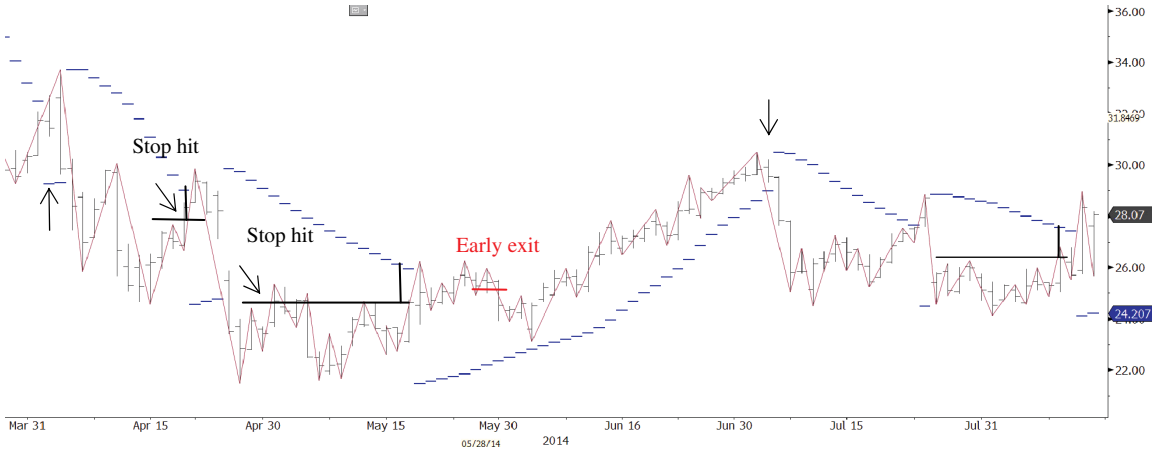


ANSWER 4.5 LAZ SMAs (10, 21) with Kase Swing Two (Insides Off)



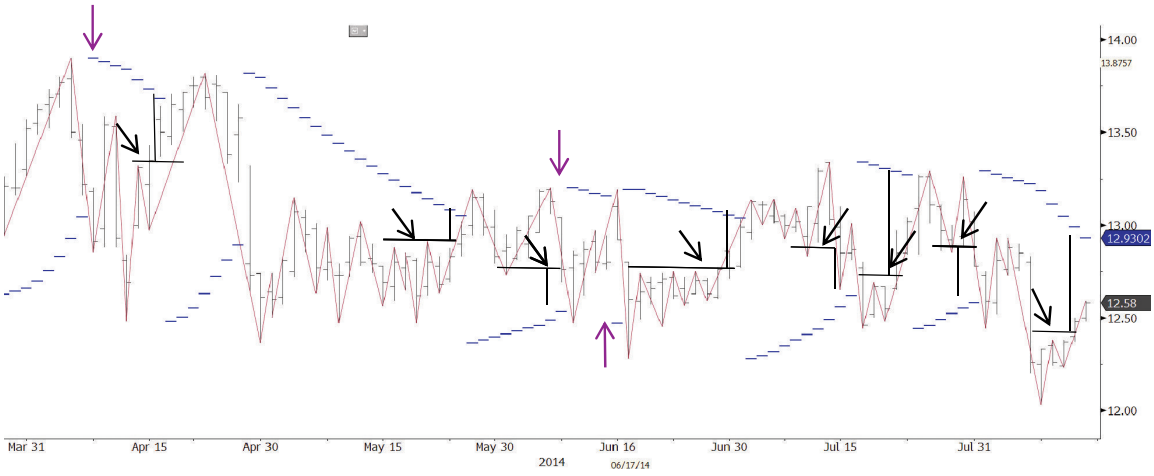
1. Purple arrows indicate where a second swing took place, following an entry that took place only after the first swing.
2. Stops not hit are in black, and stops hit are in blue.

ANSWER 4.6 P with Parabolic (Default) and Kase Swing One (Insides On)



Answer is in annotated chart.

ANSWER 4.7 BSX with Parabolic Default with Kase Swing One (Insides On)



1. As marked by vertical arrows. The first down arrow points to an entry following a first swing, as does the second down arrow, which follows a slightly higher swing than the one before, thus making it also a first swing. The up arrow shows that if the small swing caused by one outside bar had been ignored, the whipsaw buy would have been avoided.
2. As marked by lines and angled arrows.

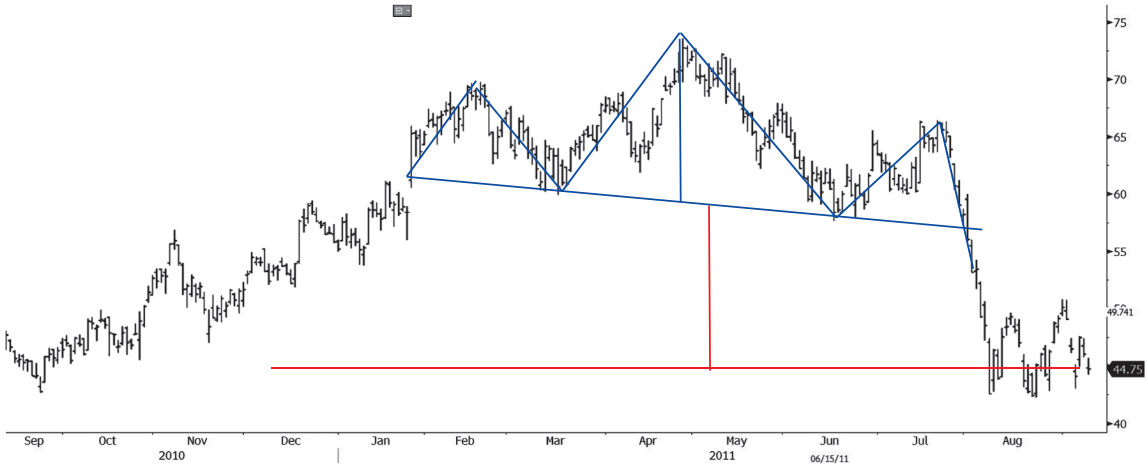
CHAPTER 5

Chart Patterns

ANSWER 5.1 GBPUSD Daily (1)

1. Double Bottom.
2. Reversal.
3. Pattern in blue.
4. It's not a textbook example because the second low was slightly lower.
5. Target extension in red, and target was met.
6. Bullish pennant.
7. Continuation.
8. Pattern drawn in black.

ANSWER 5.2 ATI Daily

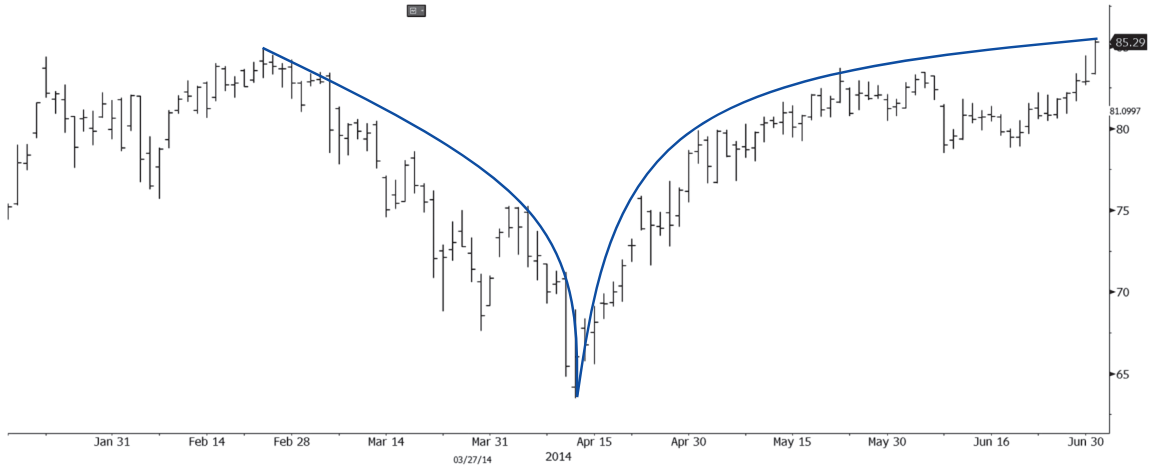


1. Head and Shoulders.
2. Reversal.
3. Drawn in blue. Down-sloping line is the "neckline."
4. Target extension in red, and target met.

ANSWER 5.3 EUR Daily

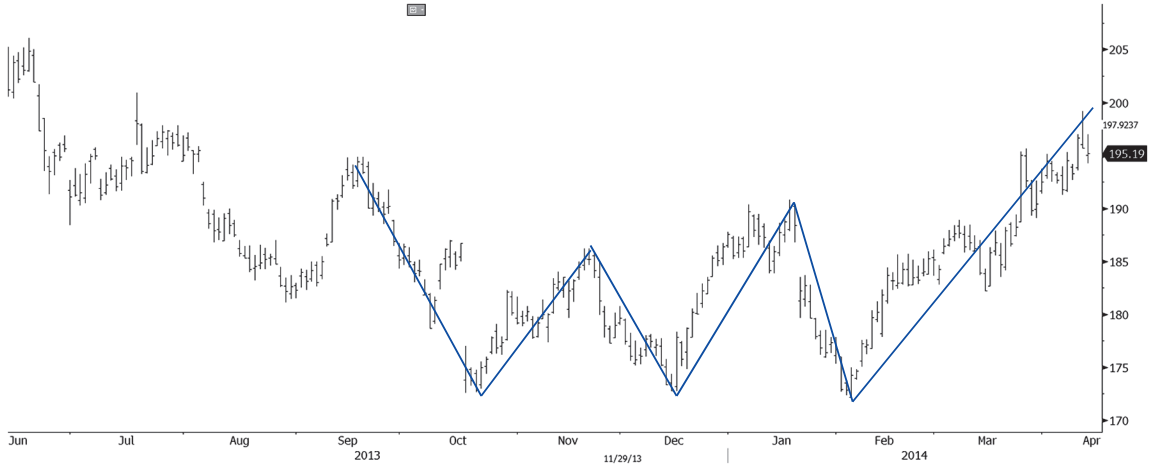
1. The larger pattern started off as a pennant, or descending wedge, and then changed into a shallower pennant, almost a flag.
2. The medium-sized pattern is a shallow pennant.
3. Both are continuation patterns.
4. Drawn in blue.
5. Yes. Flag followed by pennant, drawn in black.

ANSWER 5.4 GILD Daily



1. V or spike bottom.
2. Reversal.
3. Pattern in blue.

ANSWER 5.5 IBM Daily



1. Triple bottom.
2. Reversal.
3. Drawn in blue.
4. No because the second upswing is higher than the first.
5. The head is higher than the two shoulders.

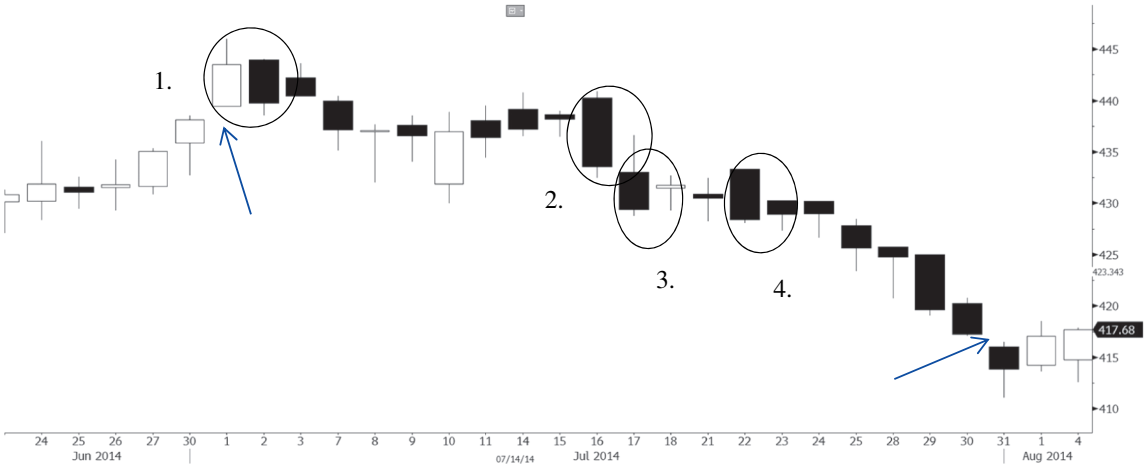
ANSWER 5.6 GBPUSD Daily (2)

1. Flag.
2. Continuation.
3. Drawn in blue.

CHAPTER 6

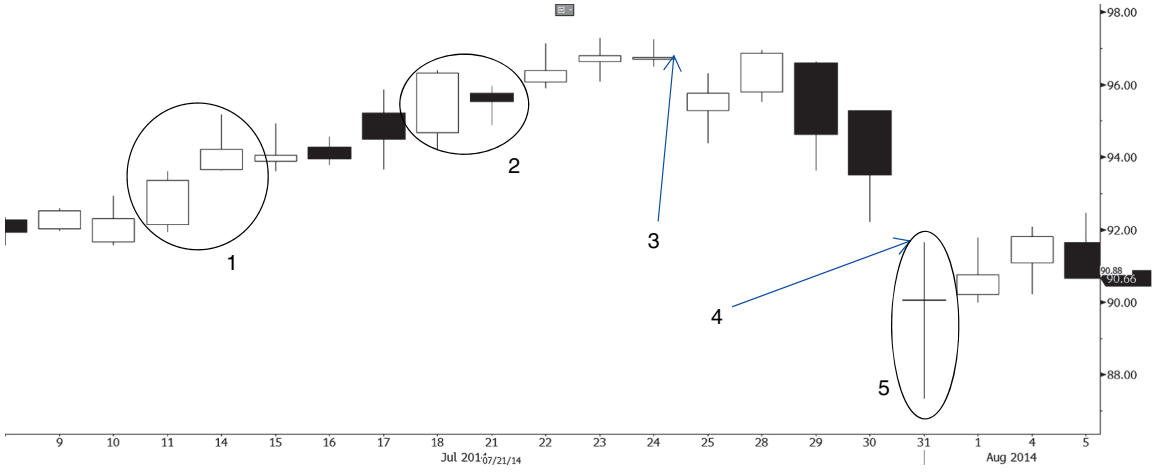
Candlesticks and Gaps

ANSWER 6.1 Y Dark Cloud Cover with Exhaustion Gaps



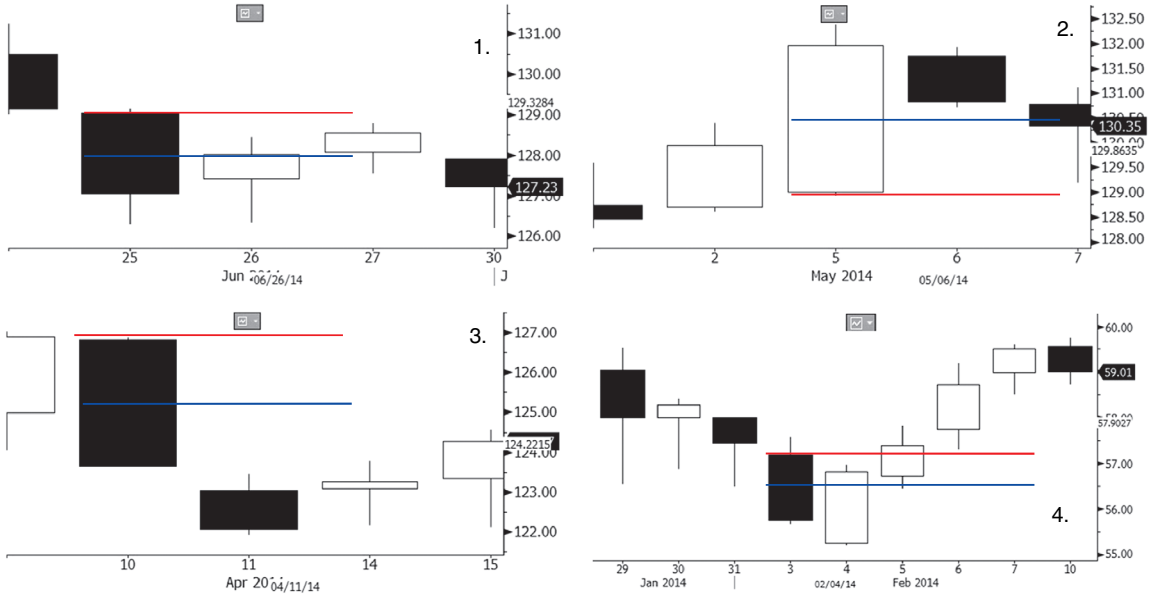
1. Circle 1, classic dark cloud cover, which closed below the prior midpoint.
2. Gaps identified by arrows. Both are exhaustion gaps, before a high, then a low.
3. Bearish engulfing line, circle 2.
4. Harami Line and Stars, circles 3 and 4, are neither completed nor confirmed. There would have needed to be a close above each pattern's down bars to confirm.

ANSWER 6.2 CI Candlestick Chart with Gaps



1. Circle 1 is a failed Evening Star setup. Circle 2 is a failed Harami Star.
2. Gap labeled 3 is a breakaway gap, confirming that a new trend is likely in the current direction, and 4 is an exhaustion gap, meaning that the current trend is likely ending.
3. The pattern at the bottom of the market to the right, circle 5, is a bullish hammer.

ANSWER 6.3 BA with Candlestick Patterns

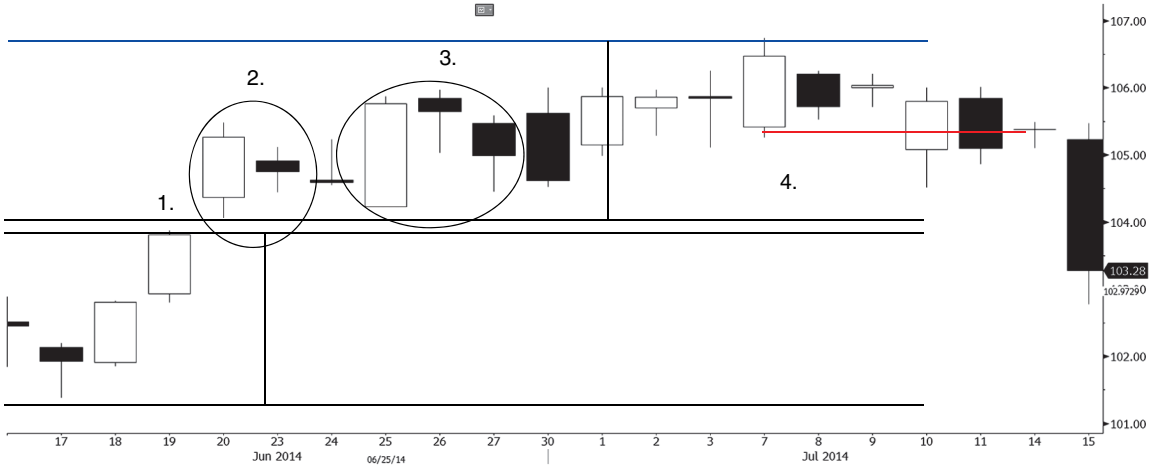


1. Bullish Harami Line and Star, completed, not confirmed.
2. Bearish Harami Line and Star, completed, not confirmed.
3. Bullish Morning Star Setup, nonstandard as it's a setup only. Neither completed nor confirmed.
4. Bullish Piercing Pattern, completed and confirmed, but nonstandard as completion did not take place with the piercing pattern.

ANSWER 6.4 AAL with Candlestick Patterns

1. Bullish Harami Line and Star.
2. Bearish Hanging Man.
3. Bullish Harami Line and Star.
4. Bearish Harami Line and Star.
5. Bullish Hammer.
6. Bearish Evening Star setup. Although confirmed, the bearish large down bar that would be expected as the third bar in the pattern, does not take place.
7. Bullish Harami Line and Star, preceded by an exhaustion gap. Note a bullish engulfing line follows that acts as a piercing pattern relative to the first bearish down bar of the Harami Line and Star.
8. Bearish Harami Line and Star. Completed but not confirmed.
9. Bullish Piercing Pattern
10. Bearish Harami Line and Star. Not ideal pattern because Harami Line is a bit small. A couple of bars later, there's a delayed breakaway gap. One might have labeled this as a mid-point gap, but it's been exceeded.
11. Technically, one could say this does not conform to any standard pattern. Or it could be named a nonstandard piercing pattern, as it only penetrates to a small degree into the prior bar. It's important though because it made a much lower low and closed within the previous candlestick's body. (See key reversal bars, Section 8.) Breakaway gap follows.

ANSWER 6.5 JNJ with Midpoint Gap



1. The midpoint gap is labeled 1, and projects upward to the blue horizontal line.
2. Bearish Harami Line and Star neither completed nor confirmed.
3. Bearish Evening Star completed but did not confirm.
4. Bearish Harami Line and Star. Confirmation point is the open of up bar, red horizontal line.

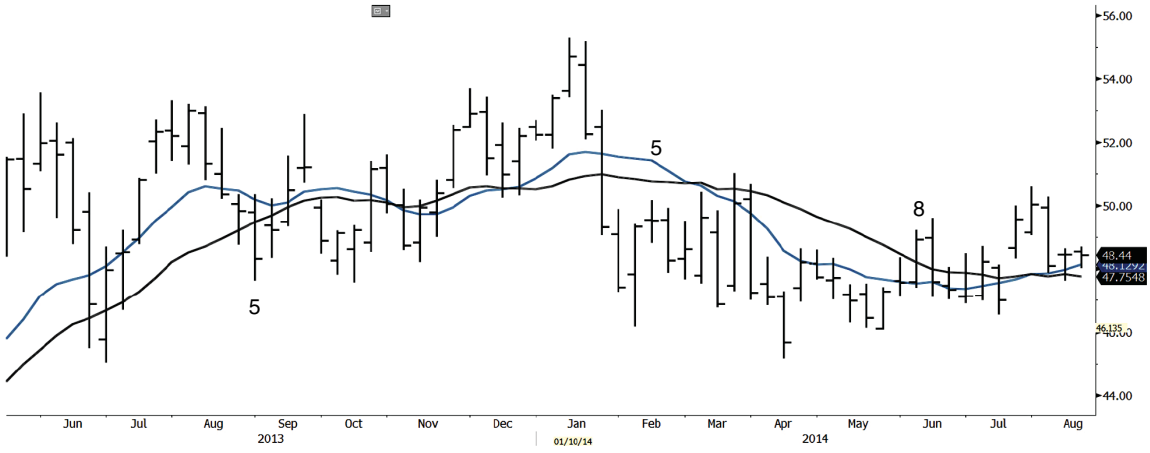
CHAPTER 7

Using Stops to Exit Trades: Taking Profit, Cutting Losses

ANSWER 7.1

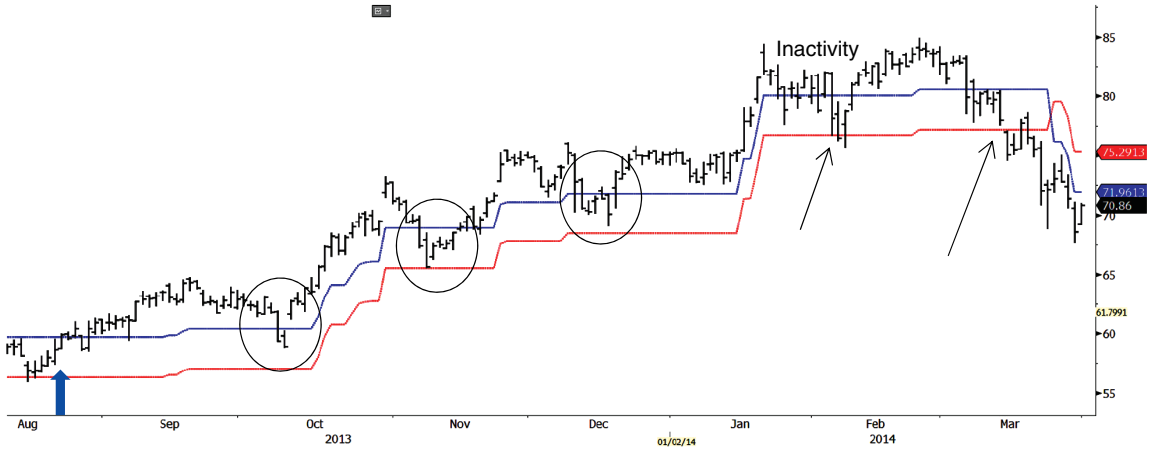
1. $90.00
2. $80.00
3. $85.00
4. $95.00

ANSWER 7.2 C Weekly with SMAs 3, 21



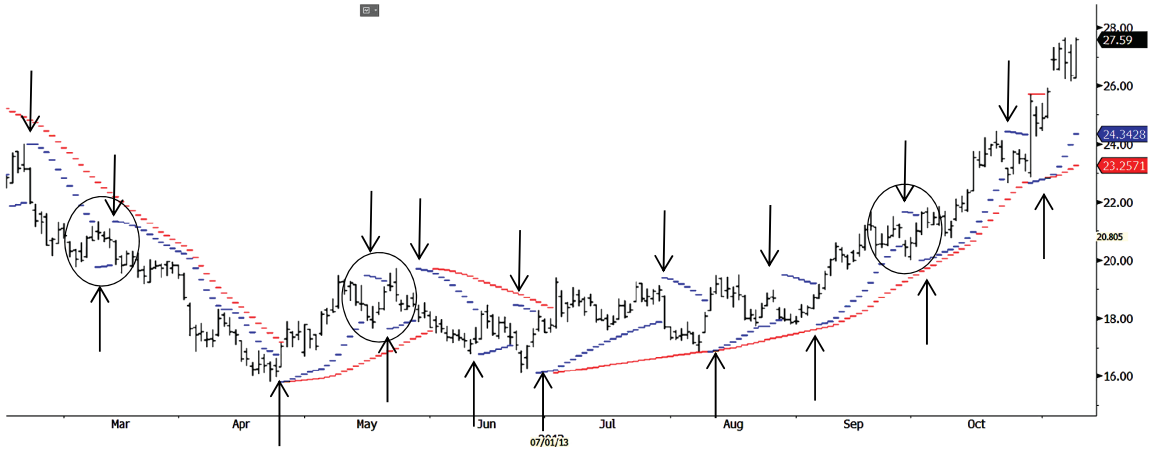
1. An inactivity stop might have been used to exit on sideways activity.
2. There are two long trades where an inactivity exit might have been justified. The first to the left peaked in early July, then fell for five bars. So with no profit for these five bars, an exit here might have been justified. If one had waited until eight bars, an exit might not have been taken there because prices recovered. Then there were another three bars against the trend, but the low formed a mini double bottom with bar five, so at that point, one might have remained in the trade. In January, another long trade peaked, then fell precipitously. In this case, one might have exited after three bars, given the large drop. The fifth bar showed a slight recovery, but still closed there, so an exit could have been taken on that bar.
3. The short trade that followed in late February did decline throughout March. After that, prices rose and then fell off slightly, so one might not have exited after five bars. However, at bar seven there was a close over the fast MA and then at bar eight over the slow MA. So an inactivity exit might have been taken at bar seven or eight.

ANSWER 7.3 GILD with Fixed Value Trailing Stops $4.33 and $7.66



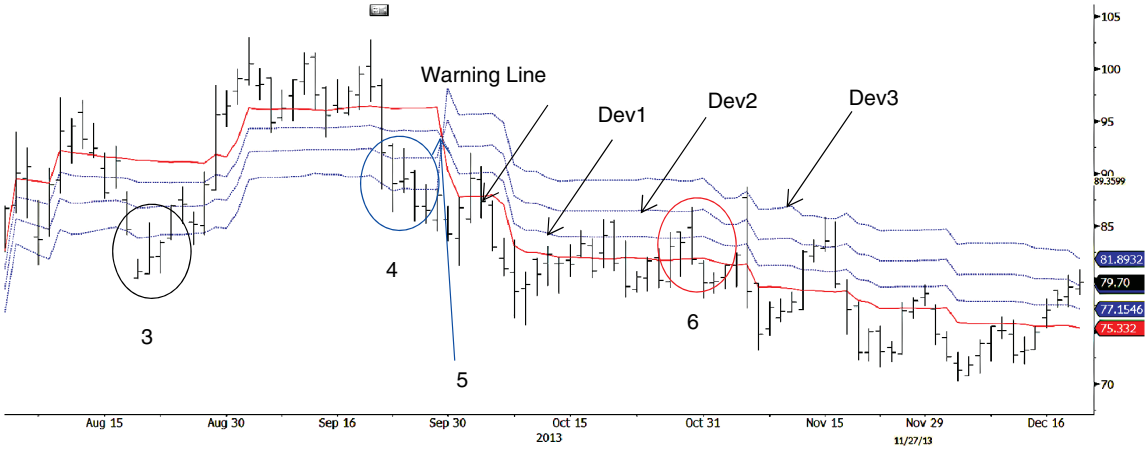
1. Fixed value trailing stop.
2. The wider stop in red, $7.66.
3. Circled.
4. Arrows point to $7.66 stop hits.
5. Following the high in January, there were nine days of sideways activity. One might have taken an "inactivity" exit.

ANSWER 7.4 X with Parabolic with Default Settings and 0.005, 0.10, 0.01



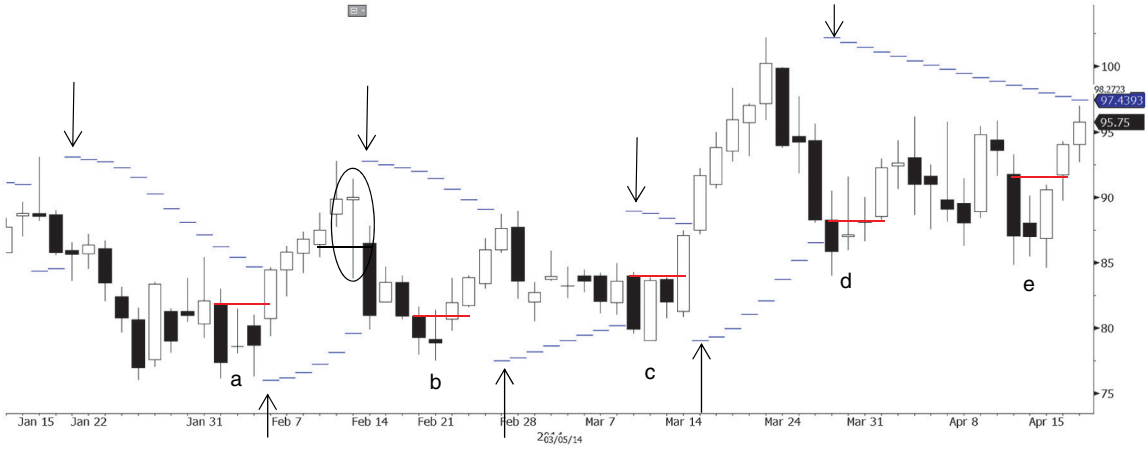
1. Up arrows show "exit short, long," and down arrows "exit long, short."
2. It whipsawed quite a bit.
3. Three whipsaws circled.
4. Decreased the variables. I actually used 0.005, 0.10, and 0.01 (shown in red), but any decreases would have been in the proper direction.
5. The dampened Parabolic flipped later in a number of instances.

ANSWER 7.5 Z Daily with DevStops (34 MA otherwise Defaults)



1. Lines as marked.
2. 1.0, 2.2, and 3.6.
3. See black circle above.
4. See blue circle above.
5. Blue arrow.
6. See red circle above.

ANSWER 7.6 Z Candlesticks Daily with Parabolic Default

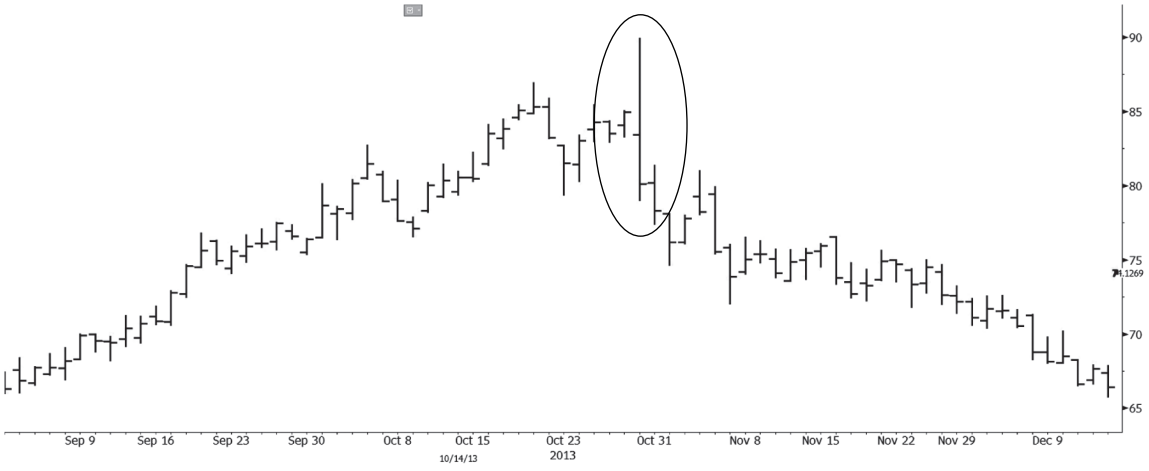


1. SAR points as marked.
2. Bullish candlestick patterns.
   a. Harami line and star.
   b. Morning star.
   c. Bullish piercing pattern.
   d. Harami line and star.
   e. Harami line and star.
3. Circled. I might move the stop to the open of the previous up candle, shown in black.

CHAPTER 8

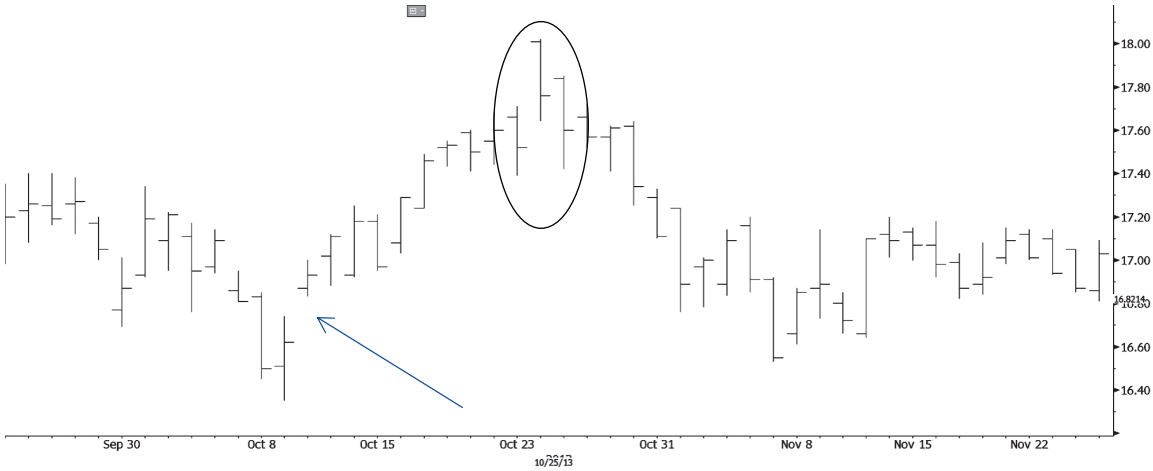
Bar Patterns: Estimating Risk and Setting Bar Size

ANSWER 8.1 EGN with Bar Pattern



1. Closing point reversal.
2. Bar has a higher high and lower low than bar before, and closes below the prior close.
3. It's similar to a bearish engulfing line.
4. A bearish engulfing line must open at or above the prior close. This is not required for a closing point reversal.

ANSWER 8.2 F with Bar Pattern

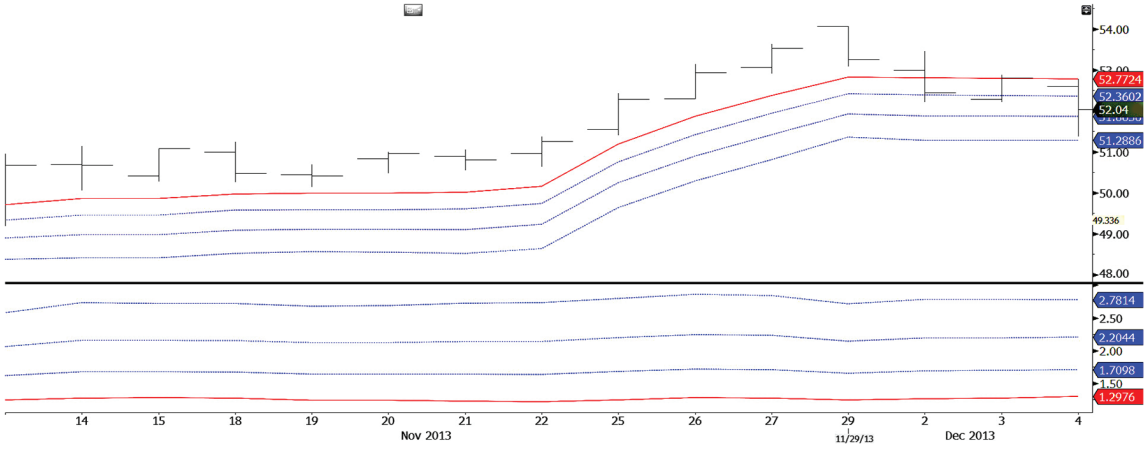


1. Key reversal.
2. Opens well above previous high, and closes toward the low of the bar.
3. Dark cloud cover.
4. The body (open to close range) does not overlap that of the prior bar.
5. Arrow drawn to breakaway gap.
6. Even though the bar extends beyond the prior high, and closes toward the bottom of the bar, it did not open above the previous bar, much less well beyond its high.

ANSWER 8.3 GILD Risk (NASDAQ)

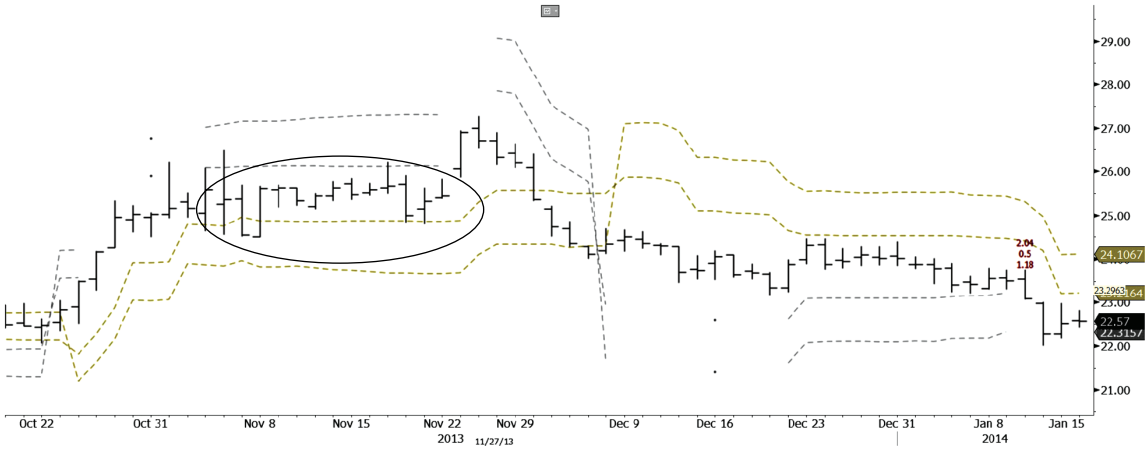
1. $8,000/$7.66 per share = 1,044 shares. One might want to round down to 1,000.
2. Risk is proportional to the square root of time. Therefore, $7.66/$3.13 = 2.45. Target bar length = one day/2.452 = one day/6 = (6.5 hours * 60 minutes per hour)/6 = 65 minutes.
3. Risk of ruin = EXP((70,000 * ((LN(1–.55))–LN(.55 * 1.50))/70,000)) = 0.50 percent.
4. Risk in dollars = 70,000/((LN(.00001))/((LN(1–.55))–LN(1.5 * .55))) = 3,685. Risk in units = $3,685/$7.66 per share = 481 shares.

ANSWER 8.4 M with Kase DevStops and Kase Reversal Amounts



1. Warning = $1.30, Rev1 = $1.71, Rev2 = $2.20, Rev3 = $2.78.
2. $51.29.
3. 1,000 * $1.71 = $1,710.
4. $20,000/$2.78 per share = 7,194. Rounding down, one might trade 7,000 shares.
5. If using TrueRange, one would divide one standard deviation of TrueRange by the average TrueRange (ATR). The reversal value related to the warning line is the ATR, or $1.30. The reversal value, Rev1, is one standard deviation over the ATR, so one standard deviation = Rev1 – ATR, or (1.71 – 1.30)/1.30 = 0.31.

ANSWER 8.5 BLMN Daily with Double Stops and Relative Risk



1. 0.50 (middle value to the right).
2. This chart is more risky because it has a higher relative risk value.
3. The lines are more or less parallel.
4. An inactivity stop might have been appropriate here.

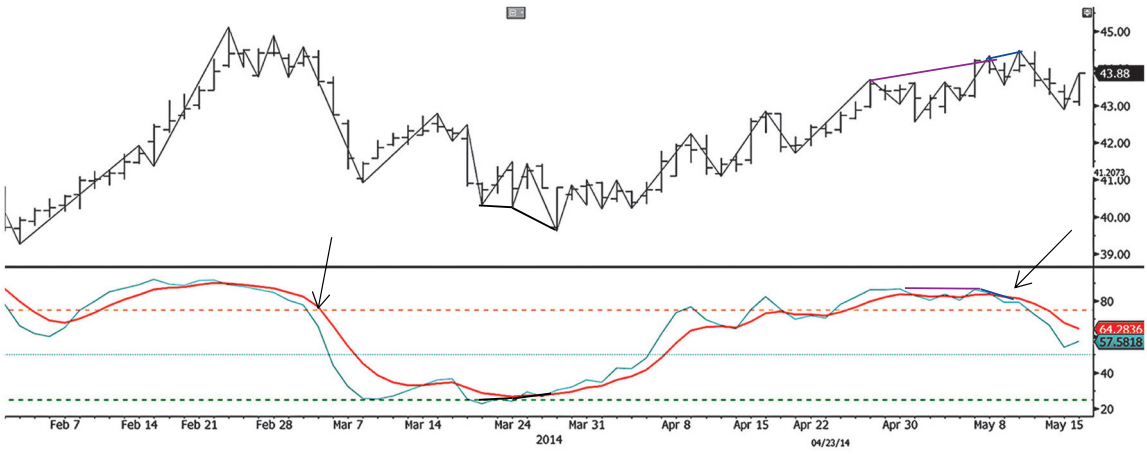
ANSWER 8.6 Risk of Ruin

1. Risk of ruin = EXP((75,000 * ((LN(1 – .55)) – LN(.55 * 1.5))/20,000)) = 10 percent.
2. Risk per trade = 75,000/((LN(.05))/((LN(1–.55))–LN(.55 * 1.5))) = $15,175.
3. 100 – .99 = .01, 10% * .01 = 0.10% = .001. Risk per trade = 75,000/((LN(.001))/((LN(1 –.55)) – LN(.55 * 1.5))) = $6,581. So this is a (20000 – 6581)/20,000, or .67, 67 percent.
4. Cutting the risk per trade down to 33% cuts risk of ruin down to only 1 percent of the original risk. So reducing risk per trade is a good way to reduce risk of ruin.

CHAPTER 9

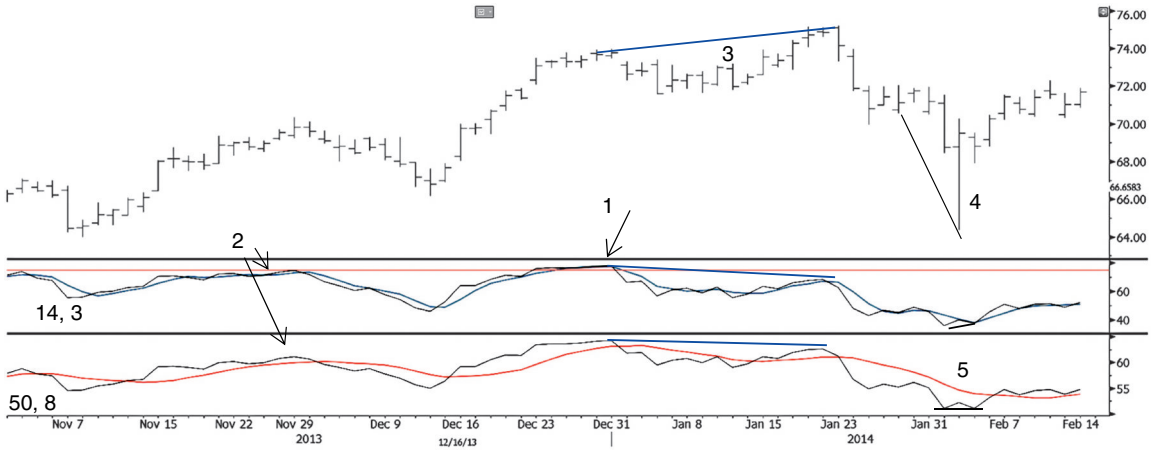
Intro to Momentum, Including Momentum in Trading

ANSWER 9.1 O US Daily with Slow Stochastic



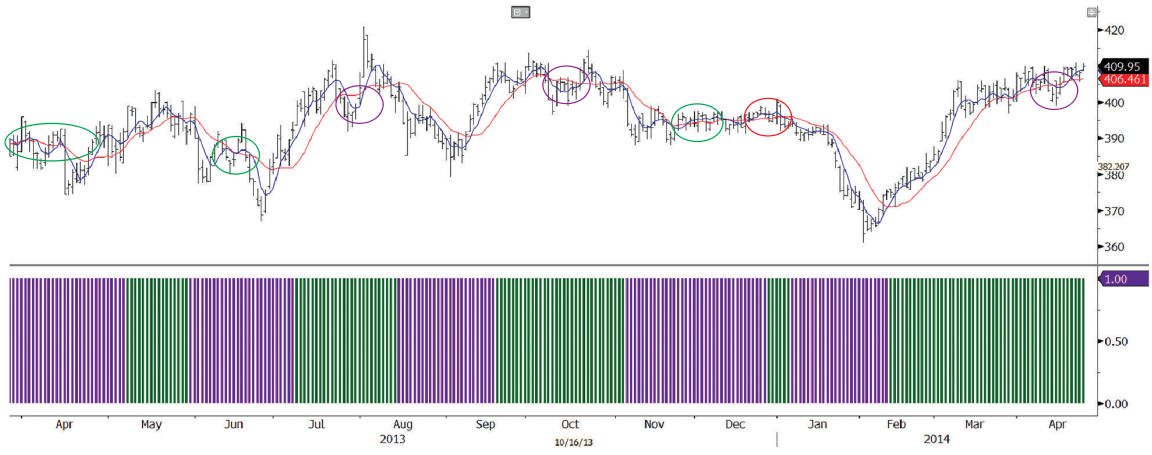
1. This is the Stochastic (slow). It might not be clear that it's the slow Stochastic as opposed to fast, but slow is the default that most technicians use. In any case, the indicator looks similar to the RSI, but can be differentiated as the RSI is choppier.
2. %K and %D (or SlowK and SlowD)
3. Black lines are bullish divergence, purple bearish divergence, and red bearish mini divergence.
4. Arrows show drops out of overbought. There are no instances where both the %K and %D are in oversold territory.

ANSWER 9.2 R US Daily with RSI exponential with simple MA (14, 3) and (50, 8)



1. Here, the RSI(14, 3) rose into and then dropped out of overbought, generating an exit long signal. The RSI(50, 8) did not rise into overbought.
2. The RSI(50, 8) did not whipsaw here, nor to the right of 1, or after the bullish divergence to the far lower right. The RSI(14, 3) whipsawed quite a bit in all three cases.
3. Bearish divergences are shown in blue.
4. Bullish divergences shown in black.
5. The mini-divergence is on the RSI(50, 8).

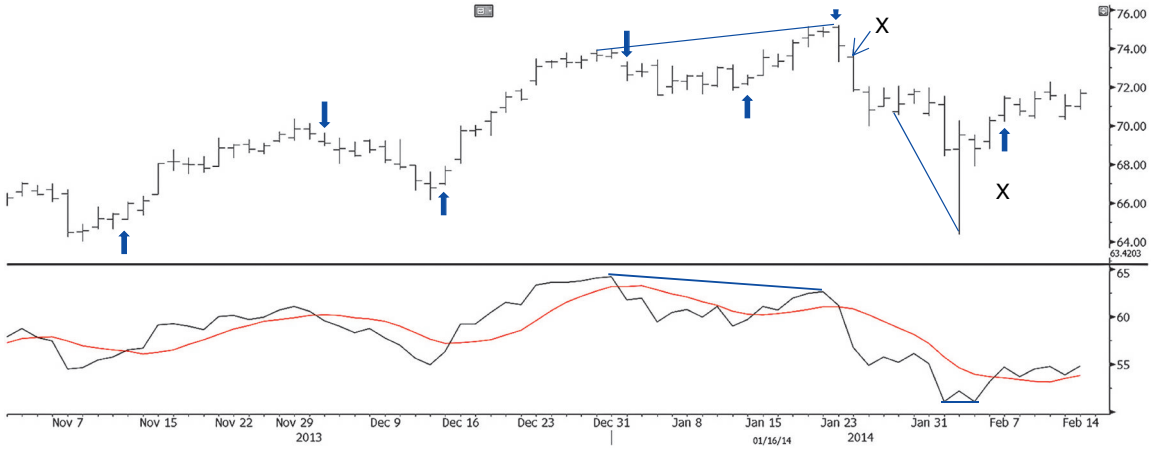
ANSWER 9.3 Y US Daily with SMAs (5, 13) and Kase Permission Screen



A longer bar length filter, Kase Permission Screen, displays green giving permission to go long and purple giving permission to go short.

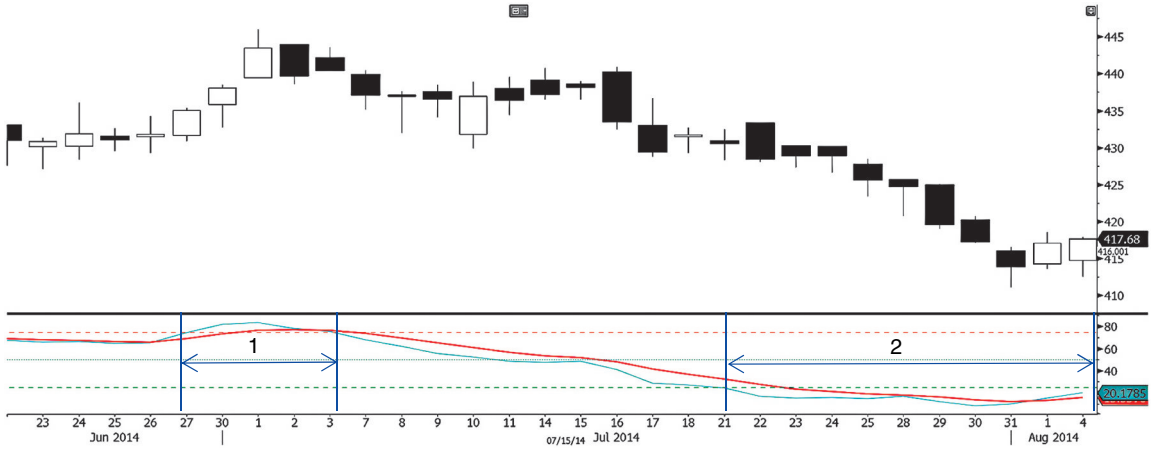
1. Areas where long whipsaws would have been avoided are circled in green. Because the screen was purple, allowing only short entries, the long whipsaws would not have been taken. This, in turn, would have also meant that any short whipsaws would not take place because any short trades taken earlier would still be in place.
2. Areas where short whipsaws would have been avoided are circled in purple.
3. Circled in red, this long whipsaw would have been taken as the screen turns green while the long entry is still in place.

ANSWER 9.4 R US Daily with RSI exponential with Simple RSI Average (50, 8)



1. Stop and reverse points are shown by blue arrows, up for exit short, go long and down for exit long, go short.
2. Exit signals marked by Xs.
3. First X, bearish divergence took place one bar after the crossover
4. Second X, bullish divergence took place one bar before the crossover.

ANSWER 9.5 Y Daily with Slow Stochastic



1. Date range as marked. Filtered for bearish reversal, Stochastic overbought.
2. Date range as marked. Filtered for bullish reversal, Stochastic oversold. Note that the chart ends with the market still oversold.

CHAPTER 10

Forecasting Techniques: Waves and Projections

ANSWER 10.1 MMM Monthly with Swing 2 Labels

1. See table below. I ignored the 90.0 and 95.46 swing highs because the first swing high, 98.19, is higher than these levels. Starting from X, one would only connect to highs that are higher than the initial Y, 98.19.

	X	Y	Z
1	40.87	98.19	68.63
2	40.87	140.43	123.61
3	40.87	146.43	138.43

2. To determine the impulse projection, Target = Z + a(Y – X), a = (Target – Z)/(Y – x). a = (146.43 – 68.63)/(98.19 – 40.87) = 1.35. This is close to the Intermediate target (1.382) of 147.85, and within 0.96 percent of the actual 146.43 high.
3. To determine the corrective projection, Projection = Z + a(Y – Z). a = (Projection – Z)/(Y – Z). a = (147.85 – 68.63)/(98.19 – 68.63) = 2.63. Phi squared, 1.618 squared = 2.618. Thus the 146.43 high fulfills the P2 projection, which is actually 146.00, within 0.29 percent.

4. See table below.

	X	Y	Z	Target	Price
1	40.87	98.19	68.63	L	161.38
2	68.63	95.46	86.74	X	160.90
3	81.99	140.43	123.61	S	159.73
4	123.61	146.43	138.43	E	161.25
5	123.61	146.43	138.43	P2	159.37

5. The next major resistance point might be around 160.5, the average of the targets in the Price column above.
6. See table below.

	X	Y	Z
1	40.87	146.43	138.43
2	68.63	146.43	138.43
3	81.99	146.43	138.43
4	86.74	146.43	138.43
5	123.61	146.43	138.43

7. See table below.

From	40.87	68.63	81.985	86.74	123.61
21%	124.3	130.1	132.9	133.9	141.6
38%	106.3	116.9	121.9	123.7	137.8
50%	93.7	107.5	114.2	116.6	135.0
62%	81.0	98.2	106.5	109.4	132.3
89%	52.5	77.2	89.1	93.3	126.1

8. A price of around 124.7 is the 21 percent retracement of the entire move up, so it's very important as the first key line of support. If this holds, then the correction might be said to be very minor. This is also near the 89 percent retracement of the most recent move up from 123.61, so, in a sense, it's the last line of support for that move. The price is also confluent at the 38 percent retracement from 86.74.
9. The equal to target for the wave, 146.43 – 138.43 –140.89, is 132.9 and the P2 corrective projection is 134.5. The average is 133.7. This is close to the 62 percent retracement from 123.61 and 21 percent retracement from 86.74. Given the confluence of the wave targets with retracements, I'd expect a price around 133.4, the average of the wave projections and retracements, to form interim support.

ANSWER 10.2 M Monthly with Swing 2 Labels

1. See table below. Note wave cycles are numbered for convenience of reference. The numbering system has no further significance.

	X	Y	Z
1	5.07	11.93	6.27
2	5.07	15.29	10.27
3	5.07	20.84	15.34
4	5.07	25.25	16.925
5	5.07	26.32	21.69
6	5.07	30.62	22.66
7	5.07	42.17	32.31
8	5.07	50.77	42.18
9	5.07	61.26	54.82

2. Corrective projections include P1, P2, and P3. P1 = 6.27 + 1.62 * (11.93 – 6.27) = 6.27 + 1.62 * (5.66) = 15.44. This is close to the 15.29 swing high met at the peak of the next wave. P2 = 6.27 + $(1.62)^2$ * (5.66) = 21.09. This is within 25 cents of $20.84, the third Y peak listed. P3 = 6.27 + $(1.62)^3$ * (5.66) = 30.24, near the Y point of 30.62, the sixth wave cycle listed.
3. The P1 projection is 16.925 + 1.62(25.25 – 16.925) = 30.4. This was fulfilled by the 30.62 swing high, and it is confluent with the P3 projection for the first wave up from 5.07.
4. L = 10.27 + 1.62 * (15.29 – 5.07) = 26.83. This is near 26.32. Percentage off = 0.51/26.32 = 1.9%, so within the 2 percent tolerance.
5. For the wave 5.07 – 26.32 – 21.69, which two consecutive impulse projections were met within a 2 percent range? The equal to and intermediate targets were met within 2 percent. Starting with the smaller than, I calculate S = 0.62 * (26.32 – 5.07) + 21.69 = 34.87. Using multipliers of 1.0 and 1.38 for the equal to and intermediate, I calculate 42.94 and 51.02. The smaller than target isn't near any of the values shown in the chart. However, the equal to target of 42.94 is within 1.8 percent of the 42.17 swing high, and the intermediate target of 51.02 is within 0.5 percent of 50.77.

6. See table below.

X	Y	Z	Target	Price
5.07	11.93	6.27	T	66.06
5.07	30.62	22.66	L	64.00
5.07	50.77	42.18	P2	64.67
5.07	61.26	54.82	P1	65.24

7. The average of the targets is $65, so the next target would be around $65.00
8. See table below.

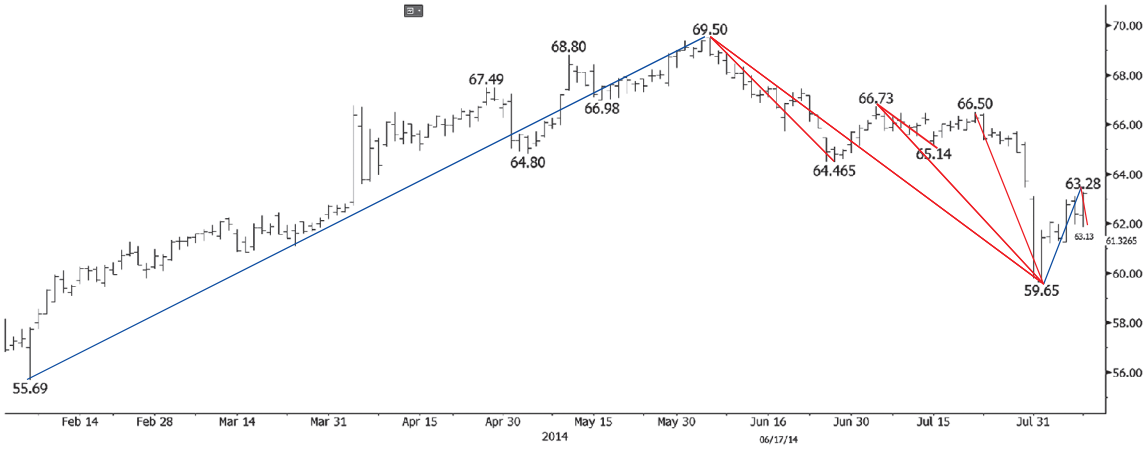
	X	Y	Z
1	5.07	61.26	54.82
2	10.27	61.26	54.82
3	15.34	61.26	54.82
4	16.93	61.26	54.82
5	21.69	61.26	54.82
6	32.31	61.26	54.82
7	42.18	61.26	54.82

9. See table below.

From	5.07	6.27	10.27	15.34	16.925	21.69	22.66	32.31	42.18
21%	49.46	49.71	50.55	51.62	51.95	52.95	53.15	55.18	57.25
38%	39.91	40.25	41.88	43.81	44.41	46.22	46.52	50.26	54.01
50%	33.17	33.77	35.77	38.30	39.09	41.48	41.96	46.79	51.72
62%	26.42	27.28	29.65	32.79	33.77	36.73	37.41	43.31	49.43
89%	11.25	12.32	15.88	20.39	21.80	26.04	26.91	35.49	44.28

10. The next major retracement is around 44.4. This is the 21 percent retracement of the entire move up, the 38 percent retracement from 16.92, and the 62 percent retracement of the most recent wave up.

ANSWER 10.3 K with Waves and Swing 3 Labels



1. Valid up waves marked in blue.
2. See table below.

	X	Y	Z
1	55.69	69.50	59.65
2	59.65	63.28	63.13

3. Valid down waves marked in red.
4. See table below.

	X	Y	Z
1	69.50	64.465	66.73
2	69.50	59.65	63.28
3	66.73	65.14	66.50
4	66.73	59.65	63.28
5	66.50	59.65	63.28
6	63.28	63.13	63.13

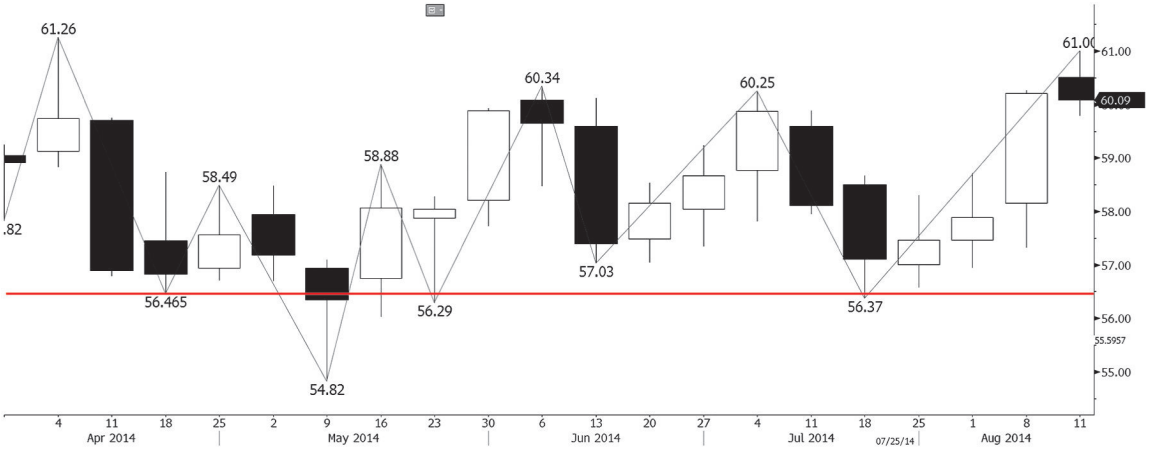
5. The 62 percent retracement for the wave up from 55.69 to 69.50 is 60.94. The $59.65 level is below this, so the retracement has been met. Calculation: 69.5 – 0.62 * (69.5 – 55.69) = 69.5 – 0.62 * 13.81 = 69.5 – 8.56 = 60.94.

6. The 38 percent retracement for the wave down from 69.5 to 59.65 is 63.39. The 63.28 level is below this, so the retracement has not been met. Calculation: 59.65 – 0.38 * (59.65 – 69.5) = 59.65 – 0.38 * (–9.85) = 59.65 + 3.74 = 63.39.
7. The wave cycle 55.69 – 67.49 – 64.80 was valid until the point at which prices dropped below 64.80. Once prices dropped below 64.80 the wave is said to have been "taken out," and isn't valid now.
8. The wave cycle 68.80 – 66.98 – 69.50 was never valid because 69.50 (point Z) is higher than 68.80 (point X). At an earlier point, where Z <= 68.80, the wave cycle was valid.
9. The Intermediate, or 1.38 target for the first wave cycle down from 69.50, 69.50 – 64.465 – 66.73, is 59.78. Calculation = 66.73 – 1.38 * (69.50 – 64.465) = 66.73 – 1.38 * (5.04) = 66.73 – 6.95 = 55.78. The low, 59.65 is within 13 cents or about 0.23 percent so also within the 0.50 percent criterion.

CHAPTER 11

Developing a General Market View

ANSWER 11.1 M Weekly as of August 11, 2014 (Refer back to ANSWER 10.1)



1. Given one down wave, 61.26 – 54.82 – 61.00, what is the smaller than target? The smaller than target is 61 – 0.618 * (61.26 – 54.82) = 57.0.
2. Prices near 57.00 show up in the retracement table. This is the 89 percent and so the last line of support for the swing from 56.37, and the critical 62 percent retracement for the entire move up from 54.82.

From	54.82	56.37
21%	59.7	~~60.0~~
38%	58.7	59.2
50%	57.9	58.7
62%	57.2	58.1
89%	55.5	56.9

3. The 57.00 target is not only confluent in the table, but is Dev6 daily corresponding to Dev1 weekly. Whenever a match like this shows up between the daily and weekly, it makes the stop more significant.

Support	Dev1	Dev2	Dev3	Dev6
Daily	59.2	58.7	58.1	57.0
Weekly	57.0	55.8	54.3	51.8

4. Because there are three swing lows (56.465, 56.29, and 56.37) around 56.4, that's where I've draw the support line. Because of this, I would say that a close below 56.4 for at least one day is needed to confirm support has been definitely broken.

ANSWER 11.2 MMM Monthly (Refer back to ANSWER 10.2)

1. The 133.4 area comprises Dev6 daily and Dev3 weekly. This increases the importance of this support level because it's not only confluent with stops, but also there's correspondence between the daily and weekly stops. Cells that are confluent with 133.4 are shaded.

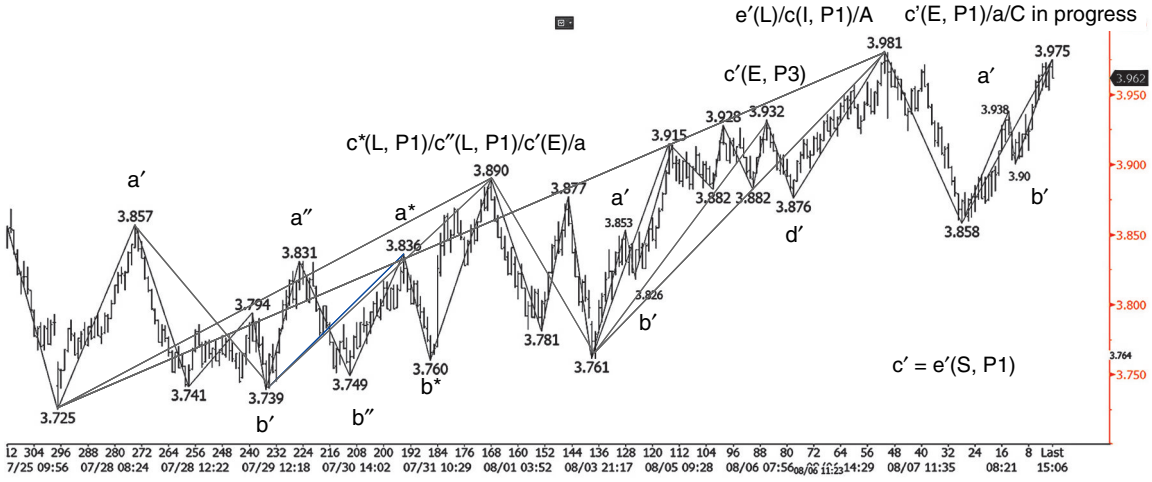
Support	Warn	Dev1	Dev2	Dev3	Dev6
Daily	138.8	138.0	137.1	136.0	134.1
Weekly	141.1	138.9	136.1	133.0	127.6

2. A price around 133.4 is the 52-week simple moving average, adding confirmation to the 133.4 support significance.

Weeks	8	26	52
SMA	143.7	139.1	132.7

3. The 133.1 area, which is confluent with 133.4 support, is the midpoint for MMM's January down candlestick and the open for March. Thus it had been resistance and is now support. This again confirms the importance of 133.4.

ANSWER 11.3 NGU14 60M Equivalent Kase Bars with Swing 4



"Landscape" Table for Up Waves NGU14 as of August 9, 2014

X	Y	Z	S	E	I	L	T	X	P1	P2	P3
3.725	*3.857*	*3.739*	3.82	3.87	3.92	3.95	4.14	4.10	3.93	4.05	4.24
3.725	*3.890*	*3.761*	3.86	3.93	3.99	4.03	4.24	4.22	3.97	4.10	4.31
3.725	3.981	3.858	4.02	4.11	4.21	4.27	4.55	4.57	4.06	4.18	4.38
3.739	*3.831*	*3.749*	3.81	3.84	3.88	3.90	4.02	4.00	3.88	3.96	4.10
3.749	*3.836*	*3.760*	3.81	3.85	3.88	3.90	4.02	4.00	3.88	3.96	4.08
3.749	3.890	3.760	3.85	3.90	3.95	3.99	4.19	4.15	3.97	4.10	4.31
3.749	3.981	3.858	4.00	4.09	4.18	4.23	4.49	4.50	4.06	4.18	4.38
3.760	3.890	3.761	3.84	3.89	3.94	3.97	4.16	4.12	3.97	4.10	4.31
3.761	*3.853*	*3.826*	3.88	3.92	3.95	3.97	4.04	4.08	3.87	3.90	3.94
3.761	*3.932*	*3.876*	3.98	4.05	4.11	4.15	4.30	4.35	3.97	4.02	4.11
3.826	3.981	3.858	3.95	4.01	4.07	4.11	4.31	4.29	4.06	4.18	4.38
3.858	3.938	3.900	3.95	3.98	4.01	4.03	4.10	4.12	3.96	4.00	4.06
3.858	3.975	3.962	4.03	4.08	4.12	4.15	4.22	4.29	3.98	4.00	4.02
3.881	3.975	3.962	4.02	4.06	4.09	4.11	4.17	4.22	3.98	4.00	4.02

1. Waves labeled by gray lines and letter designations.
2. Major waves used for labeling are in italic, with the 3.89, 3.932, and 3.981 swing highs color coded as light red, yellow, and light blue, respectively.
3. I labeled this high as "a/A." All three potential "a" type waves are confluent at 3.89 as shown by the red shaded cells. Additionally the wave I labeled as "a" targets 3.981 with two confluence calculations, the Intermediate (I) and corrective projection Phi to the first power (P1). Additionally, the other candidate for a/A is the first wave listed in the table that doesn't project to 3.981 within a 2 cent range. I chose 3.932 because it was the highest of the three and the corrective wave that followed fell to a lower price—3.876 versus 3.882. The alternative choice might have been to use 3.928 and consider the waves that followed, ending with 3.876, comprising an irregular correction.
4. Wave a, wave a′/c, and c′/c all projected to 3.981 as Wave A. Wave a/A along with its corrective wave b/A project to 3.981 as the Intermediate target and P1 projection.
5. I've chosen 4.10, and 4.22. When there's been an even choice, such as 4.08 and 4.12, I've colored the lower target in order to be conservative.
6. Duplicate targets from YZ waves are shaded. Any duplicate target rows that contain a confluence point were kept unshaded, otherwise the choice of which to shade or not was somewhat arbitrary.
7. Some waves, defined by three prices XYZ, share the same YZ leg. There are three waves listed in the table that have 3.89 – 3.76 as the YZ leg, for example.
8. The waves I labeled A and a/C both project to the 4.10 and 4.22 targets.
9. I would choose 4.16 +/–2 cents as it shows up seven times in the wave table. It's also the next retracement for the entire move down from the 4.874 high (not shown), and otherwise confluent in the retracement table.
10. Yes. As the first column shows, 3.97, which was exceeded by the 3.981 swing high, was met as the 21 percent retracement.
11. For the move down from 4.399 to 3.725, 3.981 fulfills the 62 percent retracement.

Retracements from Prices Shown to 3.725

From	4.874	4.582	4.399
21%	3.97	3.91	3.87
38%	4.16	4.05	3.98
50%	4.30	4.15	4.06
62%	4.44	4.26	4.14

ANSWER 11.4 Forecasting Exercise for NGU14

X	Y	Z	S	E	I	L	X	T	P1	P3
8.474	5.223	5.771	~~3.76~~	2.52	1.28	0.51	1.98	3.21	~~4.88~~	3.45
5.771	4.878	4.997	~~4.45~~	~~4.10~~	~~3.76~~	3.55	3.49	2.53	~~4.80~~	~~4.49~~
5.687	4.878	4.997	~~4.50~~	~~4.19~~	~~3.88~~	~~3.69~~	~~3.59~~	2.76	~~4.80~~	~~4.49~~
5.687	3.582	4.874	3.57	2.77	1.96	1.47	1.42	~~-0.94~~	2.78	~~-0.60~~
4.997	3.582	4.874	~~4.00~~	3.46	2.92	2.58	1.84	0.96	2.78	~~-0.60~~
4.874	3.725	3.981	3.27	2.83	2.39	2.12	2.18	0.81	3.57	2.90
4.582	4.089	4.159	~~3.85~~	3.67	3.48	3.36	3.26	2.80	~~4.05~~	~~3.86~~
4.582	3.725	3.981	3.45	3.12	2.80	2.59	2.46	1.61	3.57	2.90
4.470	4.102	4.159	~~3.93~~	~~3.79~~	3.65	3.56	3.45	3.14	~~4.07~~	~~3.92~~
4.470	3.940	3.981	3.65	3.45	3.25	3.12	3.06	2.52	~~3.91~~	~~3.81~~
4.470	3.725	3.981	3.52	3.24	2.95	2.78	2.59	1.92	3.57	2.90
4.399	4.078	4.142	~~3.94~~	~~3.82~~	3.70	3.62	3.50	3.25	~~4.04~~	~~3.87~~
4.159	3.725	3.981	3.71	3.55	3.38	3.28	2.99	2.78	3.57	2.90

The table above for down waves from the contract high was used to answer the following:

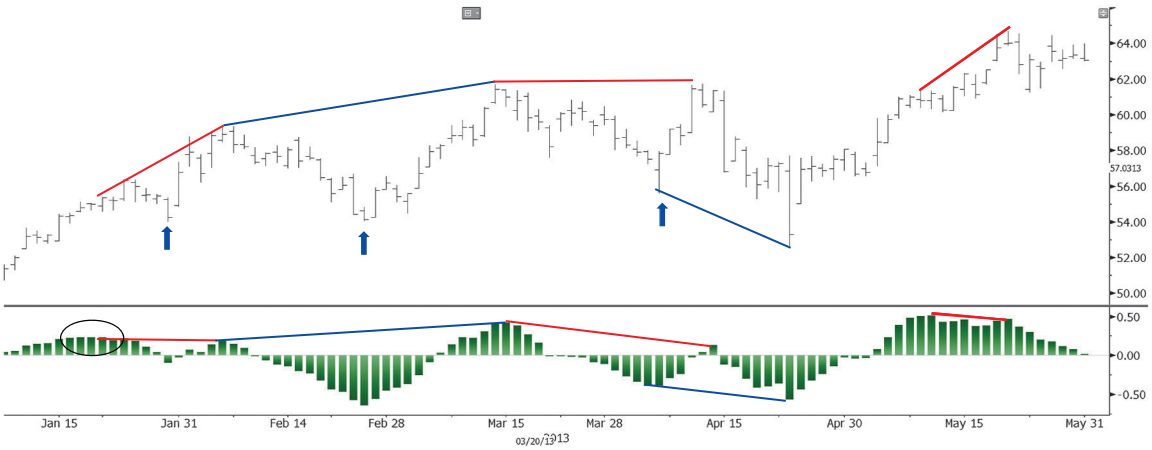
1. Prices that have been met following the related low have been crossed out. The low for the first wave is 5.223, for the following four waves is 3.582, and for the remaining waves is 3.725.
2. Next major support is around 3.47, shown in light blue.
3. This price is particularly significant as it's the next target for the first wave in the table, down from the contract high of 8.474.
4. 3.26 as shown in dark blue.
5. 2.76 as shown in green.
6. See table below. Both 3.47 and 3.26 are confluent with weekly DevStops.

Support	Dev1	Dev2	Dev3	Dev4.5
Daily	3.80	3.75	3.69	3.65
Weekly	3.55	3.45	3.33	3.25

CHAPTER 12

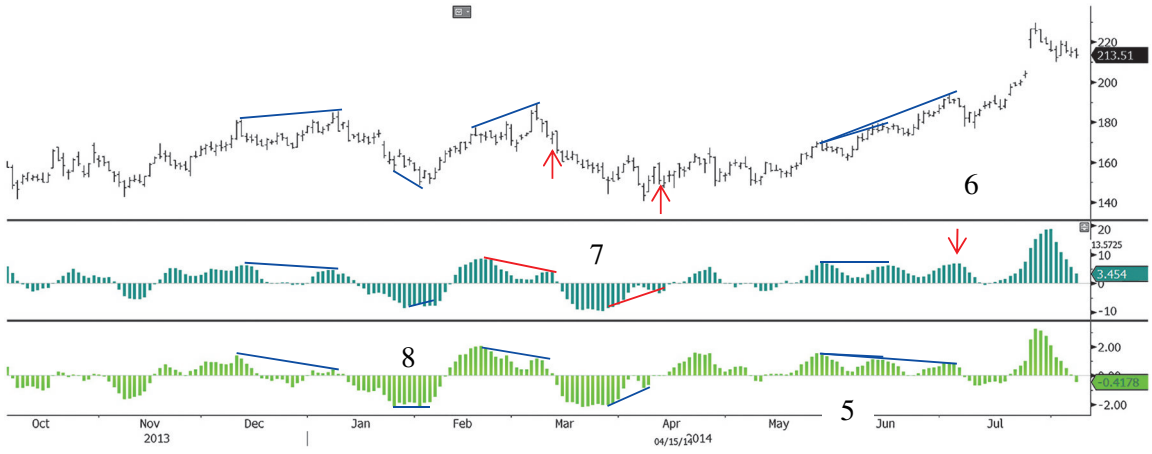
Oscillators: Trading Oscillators Systems

ANSWER 12.1 R US Daily MACD (12, 26, 9)



1. Red divergence lines show turns caught by MACD.
2. Turns denoted by blue arrows, as well as nondivergent comparisons shown in blue.
3. Three-bar plateau on the MACD circled.
4. No, the MACD does not generate OBOS signals.

ANSWER 12.2 BIDU Daily with MA Oscillator, Blue (5, 15, 1), and MACD, Green (default)

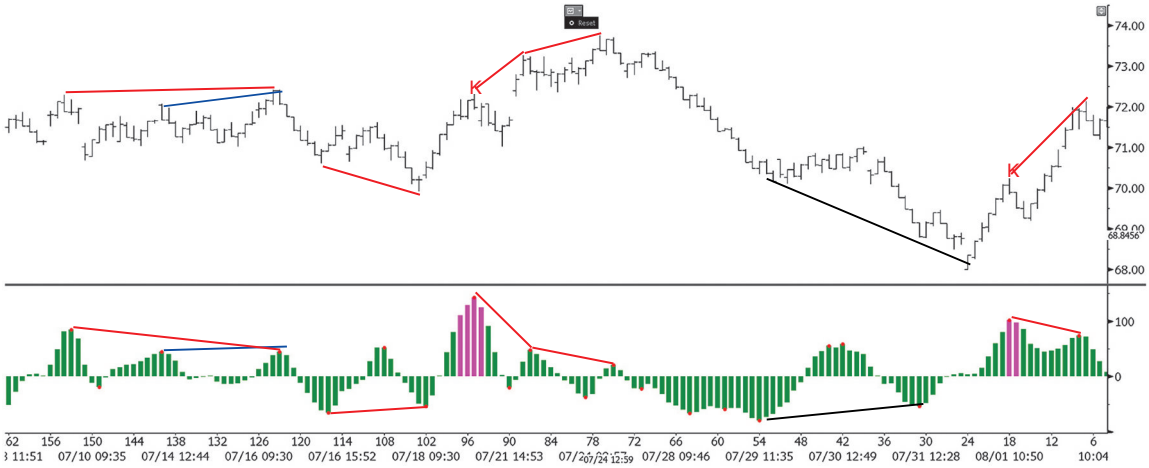


1. No, each has a similar appearance.
2. The reason is that both are moving average oscillators; the only difference is that the MACD always uses exponential moving averages, with defaults of 12, 26, and 9, while a MAOsc is more generic and can use simple, exponential, or weighted moving averages and has no standard default.
3. Blue divergences are valid on the MAOsc.
4. Blue divergences are valid on the MACD.
5. The divergences were from the first to second and first to third peaks at area labeled 5.
6. The divergence the MAOsc missed altogether is labeled 6, as shown by the red arrow. The oscillator has a higher high, not a lower or equal high as required.
7. The MAOsc was "off tolerance" on two divergences, as shown in red, labeled 7. In both cases, momentum peaks took place three bars after the price peaks.
8. The purple divergence line labeled 8 shows an instance of bullish flat divergence on the MACD. This is where the momentum peaks are the same, in this example, same lows.

ANSWER 12.3 Oscillators

1. The Ultimate Oscillator used multiple periodicities, but only three. These are 7, 14, and 28.
2. Kase's indicators use a loop through a range of periodicities to optimize for periodicity.

ANSWER 12.4 WAG 60M Kase Bars with KaseCD (Slope Filter Off, Otherwise Default Settings)

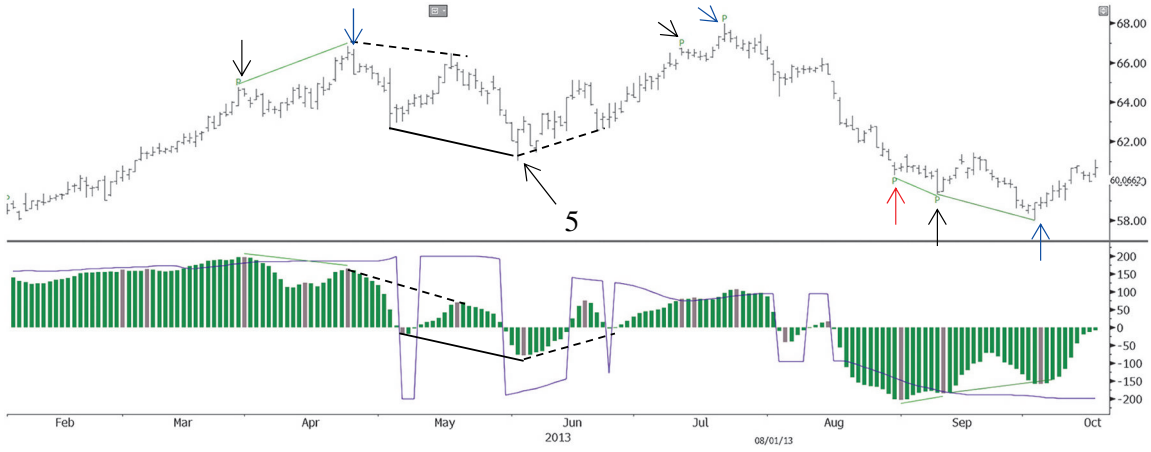


1. Two overbought signals are denoted by red Ks. From the KCD one can identify an overbought signal by the magenta overbought lines, and the red dot showing a peak, coincident with a peak in price. An actual overbought signal triggers one bar after the peak, because a lower high is needed to actually identify that a peak has taken place.
2. A higher high in price is accompanied by a higher high, not lower high, in momentum.
3. The second low in momentum is six bars after the price low, so it's off tolerance.
4. Correct divergences are shown, drawn in red.

ANSWER 12.5 XAU Daily with KaseCD (Tolerance 3, Otherwise Default Settings)

1. See black arrows as marked.
2. Each blue arrow, from left to right a bullish divergence then, a bearish divergence and a KCD peak (oversold signal), allowed for exits earlier and at better prices.
3. The two sets of red arrows, exit long and reenter long, represent divergences that caused whipsaw trades.
4. Both dotted line divergences made new lows without first hitting the top of the channel, so no exits were taken, and thus there's no difference.

ANSWER 12.6 K Daily with Kase Peak Oscillator, Annotated with PeakOuts and Divergences



1. There are three bearish and two bullish PeakOuts, marked by Ps above and below price swings. If the Kase PeakOscillator shows a gray bar, that equates to a valid peak. The blue line denotes oversold above the zero line and overbought below. If a peak line takes place above a positive PeakOut line, that's a valid overbought signal, and below a negative line, that's a valid oversold signal.
2. Three valid divergences are marked in green. The first, from the left, is bearish and the following two, bullish.
3. Two incorrect comparisons are shown by the dotted lines. It's incorrect to compare falling highs or rising lows.
4. Marked by black lines. The comparison is valid become one is comparing falling lows. The momentum indicator also falls, so that's why it's nondivergent.
5. The turn marked by the black nondivergent lines was missed because of that phenomenon.
6. Helpful PeakOuts and divergences marked in blue, as they preceded major turns.
7. Black arrows show points at which exiting would have been helpful, but reentries, albeit likely at better prices, would have followed.
8. The red arrow shows a point at which there was only a minor two-bar bounce. Note, however, that if dropping down to an short intraday chart, like a 15-minute, the signal still would have been helpful in that regard.

CHAPTER 13

Multiple Chart Trading: Using Kase StatWare, and KaseX

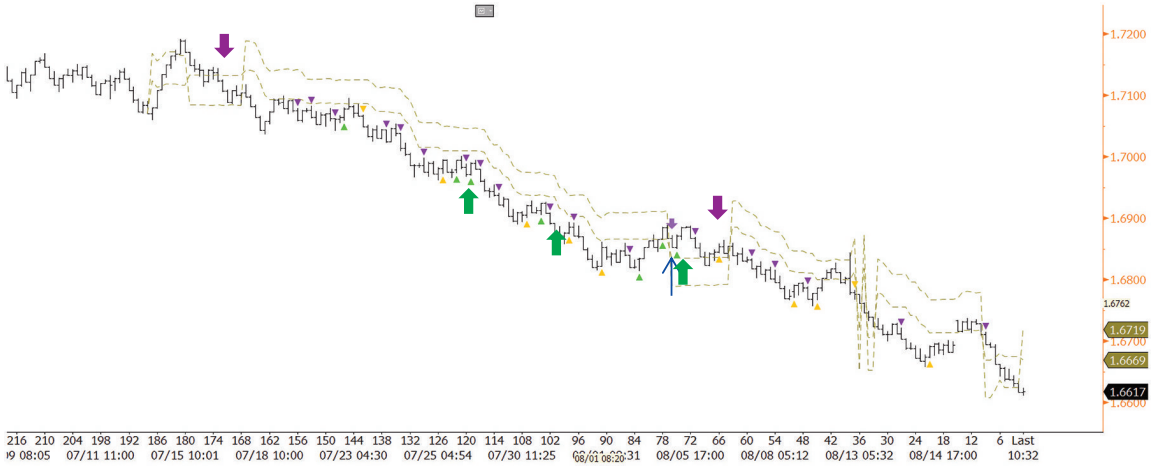
ANSWER 13.1 CMCSA Daily with Kase StatWare and KPO, Wide Stops

1. You would have entered on the first L, shown in green.
2. You would have entered on the second L, shown in blue.
3. All the orange Ss are first signals.
4. Prices peaked on July 29, but KPO divergence didn't confirm until July 31. This is the down bar marked with the orange S. Dev3 would have been hit intraday, so in actuality, the exit would have been on Dev3, not the momentum divergence per se.
5. The magenta S prior to the price peak is a second sell, so the short reversal would have taken place upon that signal.
6. The short signal reversal was better because it was at a higher price.
7. Two bars before the July 8 mark on the X-axis.

ANSWER 13.2 CMCSA Weekly with Kase StatWare and KCD, Wide Stops, Tolerance 3

1. The bar following the price high, with the orange S, confirmed the bearish divergence and closed below Dev1. So one would have fully exited the long trade on that bar.
2. Following the exit, one would have shorted on the second S, magenta. This was the second short signal, so it was valid for a short entry.
3. The bullish divergence was confirmed the week of April 25, and also hit Dev1 at the same time, so one would have exited fully on that bar.
4. The second L, cyan, would have been the second long signal, valid for a long entry.
5. Since the weekly signal is dated May 23, and the daily signal took place on May 29, one could have scaled up immediately.
6. The bearish momentum divergence confirmed on an up bar, as denoted by the dashed line. (This is an upgrade that was discussed in the Q&A for Section 12.) Thus an exit would have been optional. Given that Dev1 was hit, a strategy ranging from not taking an exit at all, perhaps pulling the stop into a close below Dev1, to a full exit could have been justified.

ANSWER 13.3 GBPUSD 33 Percent of Daily Range Kase Bar, KaseX



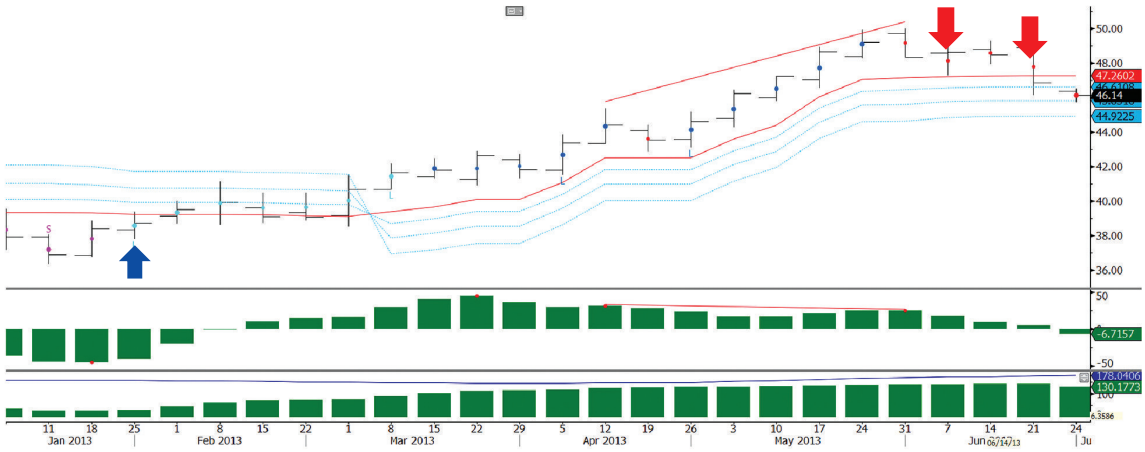
1. After two triangles, there's a Dash1 hit. The reentry takes place upon the next purple down triangle. If one wanted to be more conservative, one might have waited for the following down triangle.
2. Long entries are shown by green up block arrows.
3. The trade taken following the Dash1 hit would have been exited upon momentum divergence as shown by the small light purple down arrow.
4. Short, on the entry discussed in answer 1.

ANSWER 13.4 X Daily with KaseX

1. It would have been about even either way. On the left one would have gotten into the successful short trade earlier, but would have gotten whipsawed during the uptrend, on the right. On balance, I would have preferred to get in slightly later, and avoid the later whipsaw.
2. In this case, if entering long aggressively, one would have gotten whipsawed twice in exchange for entering one bar after the low on the run-up that began in early June. On balance, I would have preferred to get in a bit later than to deal with the whipsaws.
3. There were three instances of up green arrows, but only the one in early June resulted in a stop hit, and thus an exit. Dash1 level stops were hit before the normal buy signal, so it wasn't a reversal.
4. The down purple arrow in mid-July signaled a bearish divergence. This was followed by a Dash1 stop hit, so that's where one would have gotten out.
5. Long as I would have reentered on the sequential green triangle, and after that there have been no exit signals of any kind.

ANSWER 13.5 M Daily with Kase StatWare

M Weekly with Kase StatWare



1. The initial long entry is marked by the blue arrow on the daily chart.
2. The scale-up point is marked by the blue arrow on the weekly chart.
3. Whipsaw areas are circled on the daily chart.
4. The first red arrow on the weekly chart marks the 80 percent exit point due to the KaseCD divergence. The remaining 20 percent would be exited upon the Dev1 hit marked by the second red arrow.

APPENDIX A

FAQs

Why did you choose to become a market analyst instead of continuing to trade?

My goals involved working solely for myself, in whatever setting I liked, whatever hours I decided to juggle, doing varied and interesting work. I enjoy both solitary time writing and designing algorithms, and social/face time with clients during consulting assignments or teaching. It was also important for me to take time out for friends, exercise, and other pursuits, as I wished.

What is the most important aspect of trading?

In my view, there are two: wanting to trade because one finds the process interesting and enjoyable, and having enough money to do so without harming one's finances or the finances of others.

What is unique about your momentum indicators?

Relative to traditional momentum indicators, which generally evaluate current closes relative to past closes or high-low ranges, Kase indicators use entirely different mathematics, while displaying similarly to those indicators.

Kase momentum indicators are based on statistical measures of serial dependency, normalized for logarithmic volatility, and optimized for cycle length. The result is that Kase indicators succeed in triggering signals prior to about 80 percent of significant turns, while traditional indicators signal only about 55 percent.

It doesn't appear that you publish the formulae for your indicators in either the video or workbook. Why is that?

I try to describe enough about my indicators, including the basic math, so that those who understand the concepts explained, and who have the programming capability, could, if they wanted, duplicate or at least come close to duplicating my work, for their personal use.

However, questioners are often thinking about indicators like the DMI/ADX, MACD, Stochastic, RSI, Parabolic SAR, and the like. These indicators can be written with just a few lines of code. For example, the RSI = 100 – (100/(1+ (average of N days' closes UP)/(average of N days' DOWN closes))), where UP close = C – C[1] when positive, and DOWN close when negative (See Appendix D.).

Kase indicators or Kase studies are designated as such because they display on charts similar to traditional indicators or studies. In reality, these displays represent thousands of lines of algorithmic code in C++, Java, and/or C#, including complex arrays and object-oriented programming, that have taken countless hours over more than 20 years to not only fine tune but also to interpret with second-level displays like momentum divergence along with the momentum indicator itself.

In the old days, many technicians made their living by designing trading systems for hedge funds using traditional indicators, running investment funds, or teaching others how to trade, gaining name recognition by publishing simple indicators. There's nothing wrong with that—before about 1990 or so, there just wasn't sufficient computing power for indicators requiring more than a few simple calculations to plot. Therefore, it didn't make any sense for technicians to keep formulae secret.

In the early 1990s, it took 15 minutes to open one chart with my indicators, even with simplified code to speed it up. Now, with much more complex features, the indicators come up as quickly as any others. So, the work I have done, not only to invent good ideas, but also to program them, is valuable in itself, and considered proprietary intellectual property. I make sure to offer my work on a sliding scale, so that even individual, retail traders might use my studies and indicators.

For momentum divergence, what's the difference between an incorrect comparison and a comparison that's correct, but is nondivergent?

All comparisons evaluate peaks in price with peaks in momentum. Correct comparisons require equal or higher peaks in price in rising markets, and equal or lower peaks in price in falling markets, with associated momentum peaks. If the associated momentum peaks also make higher highs, and lower lows, while the comparison was correct, the formation is nondivergent. Conversely, comparing rising highs in a falling market, falling lows in a rising market, falling highs in a rising market, or rising lows in a falling market are all incorrect.

Why wait for a confirmation bar?

Momentum indicators use price and histogram peaks to generate signals. A peak, by definition, is surrounded on each side by shorter bars. Thus, it is impossible to tell that a price level or histogram bar is a peak until it is followed by a less extreme bar, for example a high price followed by a lower price, and vice versa, or a positive histogram peak followed by a less positive peak, and vice versa. Thus divergences and peaks are always identified no sooner than one bar after a peak.

Additionally, price peaks and histogram peaks don't always match. Usually, Kase uses a default of two or three bars for a tolerance where one peak can be before or after the other. Thus signals don't complete until one bar after the latter peak.

What is the correct "tolerance" to use when identifying momentum divergence?

When programming divergence, I find a tolerance of about two or three is good. The looser the tolerance, the more false positives, and the stricter the tolerance, the more turns will be missed. But there's really no correct answer. Under special circumstances large tolerances make sense. For example, very rarely oscillators

can have very rounded histograms where the actual peak leans towards the right portion of the formation. In these cases, whether or not to consider a potential divergence as valid is a judgment call. On the reverse, markets that are trending in a choppy manner (I call these hybrid markets) can generate too many divergences with generous tolerances. In these markets, one might ignore divergences outside of a zero or one tolerance.

Why not sell right after a bearish divergence or buy after a bullish divergence?

The odds of a 3.6 standard deviation turn (based on double TrueRange, DTR) are roughly 33 to 45 percent. For example, with a Kase PeakOscillator divergence, if an average DTR reversal hasn't yet been hit, then the odds are 75 percent to hit one standard deviation over the mean DTR reversal, but only 33 percent to hit the 3.6 standard deviation turn. One way to profit from this is to drop down to a lower bar length and time into the trade there, then scale up if profitable.

What is the best time frame or bar length to use?

The best answer is that it depends. What is your time horizon? Are you managing a portfolio longer term, day trading, or something in between like holding a trade from a few days to a week or so? Most traders who ask this question are day trading or trading short term. Day traders, that is, those not holding a position overnight, should just find the level at which there is activity within each bar, and not flat lines for example, and visually ensure that there are enough bars in the day to reasonably trade in and out. We normally suggest no less than three-minute bars, or their equivalents, as the lowest time frame.

Once I choose a bar length, how do I determine the risk?

Once you've got a bar length, plot the Kase DevStops and look at the risk at Dev3, or KaseX, and then read the higher of the two risk amounts that display to the right. If you don't have either, then calculate the value equal to the average TrueRange plus four times the standard deviation of the TrueRange as a risk estimate.

What if the risk seems too high or too low for me?

If the risk seems too high for you, even at very low bar lengths, then you simply cannot trade that market. If the risk seems low, that might mean that the bar length is too short to overcome slippage and commissions; try a longer bar length. Day traders: keep in mind that the bars need to be short enough for you to enter and exit within a day. Intraday traders, holding trades at least for a few days: enter intraday and perhaps scale into a longer-term daily position. A bar length that yields about eight bars per day is suggested. Typically, one would start with about 34 to 55 bars per day, move up to 13 to 21, then when the trade becomes solidly profitable, up to 8 or maybe even as little as 3 to 5 bars.

What's your opinion on using time, tick volume, Kase Bars, or candlesticks?

The range of, and market activity contained within time bars are highly variable, especially for markets that trade overnight or have quiet periods. Tick volume bars are more regular. During quiet periods, it takes much longer to build a bar, and during very active periods, less.

Kase Bars are equal TrueRange bars. These bars have approximately equivalent ranges on each bar. Thus, the benefits of regular bars are taken to the limit allowable by the actual data.

Do I have to use multiple bar lengths when trading?

There's no overseer enforcing a particular trading style. While it's generally a good idea to use multiple time frames for reasons explained elsewhere, it's not always practical when trading very short bar lengths. For example, if you were to choose to trade a five-minute bar or equivalent as the normal chart you would be monitoring after scaling up; it wouldn't make sense to use a one- or two-minute chart to scale from. In this case, you would only use the one five-minute chart.

How do I know if there's enough room in the trade to profit when I scale down?

This is how I'd answer the question using Kase DevStops or the KaseX stops. These stops are associated with statistical probabilities. If the average reversal hasn't yet been hit (Kase's "warning line"), there's a 75 percent chance to hit the Dev1 stop. If the difference between the current price and the stop is sufficiently large, then I'd take the trade. But again, immediately drop down to the lower bar length where potentially short-lived trades would be more manageable, and use regular trading methods on that chart.

Keep in mind that odds increase for the next stop, should sequential stops be hit. Therefore, once Dev1 is hit, Dev3's odds increase from 33 to 44 percent.

Are stops really all that important?

Yes.

Traders don't enter trades expecting to lose money, so even if one is reluctant to place tight stops on a trade, there must be a point at which, realistically, one must admit the trade must be abandoned. Determine this point ahead of time, before the trade is taken, and stick to it as a matter of discipline. The same holds true even if a trade is profitable. Traders are often reluctant to exit profitable trades, as optimism is frequently blind to the reality that the run is over.

Placing a stop allows one to hold trades overnight without undue concern. If a market turns swiftly, having a stop in place might allow for better execution versus the time it might take to place a stop after the turn. Finally, real life happens. One might have a trade running and encounter a distraction or emergency, and fail to deal properly with the position. Having an "emergency" stop in place will help avoid further disaster in those cases.

What should I do if a candlestick confirmation point I'm using for a stop isn't hit?

The answer is simple, if you are long, stay long, and if short, stay short, relaxing if there's a close over a bearish or under a bullish pattern. This takes advantage of the false positive nature of candlestick patterns. If the pattern is indeed taking place at a turning point, you will be properly stopped out. If not, you will simply stay in the trade.

Should I wait for second long/short signals before entering a trade?

Keep in mind the "second-signal" police are not watching you trade, so you can do whatever you want! However, here's the point to taking second signals. Most formations have at least two impulse waves, such as ABC, where A and C are the two impulse waves, or a five-wave pattern, where there are three impulse waves, I, III, and V. However, in a given time frame a three- or five-wave pattern might condense (the wave pattern is only visible on a shorter bar-length chart) so that on your chart it's a one-wave correction. So the idea is to wait for the second impulse wave to make sure there will be one. If you have a special reason to believe that the trade you are taking is an exception—go for it. But, a much better strategy for trade acceleration is drop down to a shorter bar length to get in faster on its second signal.

Why is forecasting a market important?

Forecasting, or using a forecast, is like drawing, or at least using, a map. It's not that one cannot get from point A to B without a map, but knowing the probable path and likely signs for which to watch are very helpful.

What makes your forecasting techniques unique?

There are a couple of unique elements in my forecasting techniques, such as the use of Kase DevStops and candlestick confirmations and completions. Overall, though, because I use many techniques designed by others, such as wave projections, pattern analysis, and moving averages, what makes up my forecasting methodology—the recipe, so to speak? The answer is the programmatic manner in which I choose waves, calculate targets using a wide range of techniques, and determine confluence is unique.

How should I handle oscillating or choppy markets?

I'd suggest staying on shorter-term charts that are more sensitive to the oscillations, trade fewer contracts or shares, and wait until you have a solid profit buffer before scaling up.

How should I trade choppy markets?

Choppy markets are often corrective markets forming complex patterns, like flags, pennants, diamonds, and the like. These patterns are erratic, and it is never a good idea to trade them with heavy volume or in the time frames in which they are significant. If you want to be "in" a particular market, drop down to a lower bar-length. One bar length's oscillation may be another's short-term trend. (Longer bar lengths also can help, as an oscillation might disappear/condense into an impulse wave, but the risks are greater in the longer term.) So the key is that in any choppy market with a given bar length, regardless of how the indicator is used, the duration of the oscillation has to be sufficient to enter and exit successfully. Changing bar length is the answer to lengthening the duration in terms of numbers of bars or burying the oscillations in larger magnitude waves.

How can indicators help identify choppy markets?

The DMI, if whipsawing back and forth, forms a necklace effect, which is a sign of an oscillating market. A low ADX value, especially if the ADX is both low and

declining, is also indicative of this. Any momentum indicator that has a zero line can indicate an oscillating market if it is oscillating around that line, especially if the values of the indicator are low.

How do momentum exit signals work in choppy markets?

Momentum exit signals work at least as well, if not better, in choppy markets as in normal markets. If you think about it, choppy markets oscillate, reversing up and then down, while normal markets do so less often. Thus, an indication that a turn is imminent is more likely to result in a reversal in a choppy market than in a market that oscillates less often.

Do you back-test your indicators?

Many of my indicators are back-tested for behavioral statistics, but not back-tested per se as part of a black box system. For example, I have tested the statistical performance of the DevStops—if a particular stop is hit or there's been a close beyond it, what the odds are of hitting or closing beyond further stops. Also, I've tested the reliability of the Kase PeakOscillator and KaseCD relative to both how often turns take place following signals, and how often turns were preceded by signals. I've done similar work for the Stochastic, MACD, and RSI.

What are black box or automated trading systems?

Automated trading systems consist of algorithm combinations where buy, sell, and exit signals are generated automatically. Black box systems are automated trading systems in which, for the most part, the indicators and rules employed are undisclosed, or mostly undisclosed.

What's your opinion on black box or automated trading systems?

There's nothing wrong with automated trading systems per se, with a few very serious provisos.

First, any back-testing must be done on real data, or to the extent that normalized data is used, tested for sensitivity to various methods of normalization. Typical high-low range bars, as opposed to Kase's Xrange bars, create bars with exact high-low ranges, filling in any "missing data" by inserting fake data. So, for example, if one sets a range target to 10 cents, and the security issues ticks of, say $2.01, $2.08, $2.15, a range bar will print a bar with $2.01 as the low and open and $2.11 as the high and close, with the next bar's open $2.11 even though there weren't any data between $2.08 and $2.15. Because of this phenomenon, high-low range bars that use fake data cannot be used in back-testing since the data never existed.

In back-testing futures data, it's common to normalize for rollover gaps. However, various methods of normalizing change results. For example, a method that tended to make prices higher would make win and loss amounts in absolute dollars higher and vice versa. So gains or losses could be magnified or lessened for this reason. This must be taken into consideration, especially if the system being tested has a low percent wins, but a high win-to-loss ratio.

Second, back-testing must be done over a sufficiently long historical period, covering a range of market conditions, testing at least a dozen or preferably more uncorrelated securities. For daily bars, for me, this would be at least 10 years or life of

the security, whichever is shorter. The key is that any test should not only span trending markets, but choppy, erratic, oscillating periods as well. Additionally, tests should reflect times when markets might have gapped, making entry points much worse than the close upon which a signal was generated. Typically, Kase uses a minimum of 75,000 data points per study.

For intraday back-tests, even if one were to use dozens of securities over thousands of bars, given the short-term nature of the bars, the market conditions tested might have been only favorable. For example, there could have been a prolonged bull market lasting three years, in which case, a 25,000 10-minute bar test might have only captured mostly favorable conditions. So with short-term bars, both diversification of the test securities and sampling of varied data sets over a historically long period are needed.

Third, it's necessary to make sure that any results are based on realistic execution costs and trading conditions—not just reflecting brokerage fees, but also the difference between the time at which a signal is generated and the price at which the actual execution takes place. If, for example, a stop is hit in a gap, the exit could not take place until the following bar opens.

From this point, an initial step is to look at the stats and perform some simple risk-of-ruin calculations, employing the formulae presented in Section 8 of the video. These formulae have a limitation in that they don't reflect variations in percent wins and win-to-loss ratios, but only use averages. It's very important to look at the statistics on how many runs of losses took place, the maximum drawdown, and so on. The key is that a system might have, say, a 55 percent win rate but over a given three-year period on three of the, say, 20 securities tested, could have been 10 percent.

A better way to get a more realistic view of risk is to run a Monte Carlo simulation employing not only average results, but also considering the risk of bad runs and outliers.

Finally, the key to being successful with automated systems often combines with the ability to trade diversified portfolios. This way, if you are trading, say, 20 uncorrelated securities with the system, some markets might be favorable, while others are not. One can trade with relatively modest back-test results and still do okay, as profitable trades are allowed to run, while the losers are closed. Remember, taking trades in parallel is much less risky than in series.

What I really am asking is this: "What's your opinion on retail traders trading relatively small portfolios, using black box or automated trading systems?"

If a trader chooses not to trade a portfolio large enough to diversify risk, the key is having enough risk capital to withstand rare but possible long strings of losses, or unexpected hits from large losses. It's important to remember that even with stops, large unexpected losses sometimes occur. Gaps can occur on surprising news or random events by orders of magnitude relative to your stops.

One way to mitigate losses is to day trade, but even in this case, I would only suggest trading a system with a rigorous risk management system or exits and stops.

Personally, I think the best way to trade is to learn how to do it, using any fixed-rule trading system as a guide only. If a person is an aspiring trader, and has absolutely no execution experience, sticking to an automated system just for long enough to learn how to execute in a disciplined manner might be advisable. However, I would only recommend this after the trader has paper traded for a significant period, and again, transitioning to one's own style after a while.

How do you use volume in your work?

I don't use volume in my work for a couple of reasons. I've always focused on futures. As a futures contract becomes more prompt, it becomes more active. There might be lower and higher volume days, sure, but overall the time to expiration overwhelms any volume considerations. So, that's one reason why I haven't focused on volume.

The other reason is that I've always used either tick volume bars, or range bars, which tend to correlate with volume. Thus adding volume becomes unnecessary for this reason as well.

Can you explain how to differentiate between an expanding wedge and a broadening top or bottom?

If the formation is sloping up in a down market, or down in an up market, it's most likely corrective, so most likely a bearish or bullish expanding wedge. Again, if the formation is taking place well above a prior low for a possible broadening bottom or below a prior high for a possible top, that classification is less likely to be incorrect. The formation is probably an expanding wedge. Alternatively if the formation is at the top or bottom of a prolonged trend, and doesn't exhibit a slope, or at least not much of a slope, the classification is probably for a broadening top or bottom. When in doubt, other factors can help determine market direction.

APPENDIX B

Recommendations for Further Reading

Publications by Cynthia A. Kase

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APPENDIX C

Legend of Symbols

This Appendix presents a legend of symbols used in the Kase on Technical Analysis Workbook and Video Course.

Equities

All units for symbols below are U.S. dollars per share, except Alstom, noted by asterisk, which is euros per share.

Symbol	Equity Full Name	Exchange
AA	Alcoa Inc.	NYSE
AAL	American Airlines Group Inc.	NASDAQ
AAPL	Apple Inc.	NASDAQ
ACE	ACE Limited	NYSE
ALO	Alstom*	Euronext
AMGN	Amgen	NASDAQ
AMZN	Amazon.com, Inc.	NASDAQ
ATI	Allegheny Technologies Inc.	NYSE
AVAV	AeroVironment Inc.	NASDAQ
AXP	American Express Company	NYSE
BA	The Boeing Company	NYSE
BAC	Bank of America Corporation	NYSE
BAX	Baxter International Inc.	NYSE
BBY	Best Buy Co., Inc.	NYSE

(*Continued*)

Symbol	Equity Full Name	Exchange
BCRX	BioCryst Pharmaceuticals Inc.	NASDAQ
BHI	Baker Hughes Inc.	NYSE
BIDU	Baidu Inc. ADS	NASDAQ
BK	Bank of New York Mellon Corp.	NYSE
BLMN	Bloomin' Brands, Inc.	NASDAQ
BMY	Bristol-Myers Squibb Co.	NYSE
BSX	Boston Scientific Corp.	NYSE
CAT	Caterpillar Inc.	NYSE
CBK	Christopher & Banks Corp.	NYSE
CEO	CNOOC Ltd.	NASDAQ
CI	Cigna Corp.	NYSE
CKEC	Carmike Cinemas Inc.	NASDAQ
CMCSA	Comcast Corp.	NASDAQ
COF	Capital One Financial Corporation	NYSE
COP	ConocoPhillips	NYSE
COST	Costco Wholesale Corporation	NASDAQ
CPB	Campbell Soup Company	NYSE
CPE	Callon Petroleum Company	NYSE
CSCO	Cisco Systems, Inc.	NASDAQ
CVX	Chevron Corporation	NYSE
D	Dominion Resources, Inc.	NYSE
DAL	Delta Air Lines Inc.	NYSE
DANG	E-Commerce China DangDang Inc.	NYSE
DDD	3D Systems Corp.	NYSE
DE	John Deere & Company	NYSE
DIS	The Walt Disney Company	NYSE
DVN	Devon Energy Corporation	NYSE
EXC	Exelon Corp.	NYSE
F	Ford Motor Company	NYSE
FB	Facebook Inc.	NASDAQ

(*Continued*)

Symbol	Equity Full Name	Exchange
GFF	Griffon Corporation	NYSE
GILD	Gilead Sciences Inc.	NASDAQ
GLD	SPDR Gold Trust (ETF)	NYSE
GM	General Motors Co.	NYSE
GOOG	Google Inc. Cl C	NASDAQ
GOOGL	Google Inc. Cl A	NASDAQ
GPS	Gap Inc.	NYSE
HPQ	Hewlett-Packard Co.	NYSE
HUM	Humana Inc.	NYSE
IBM	International Business Machines Corporation	NYSE
INTC	Intel Corporation	NASDAQ
JNJ	Johnson & Johnson	NYSE
JW/A	John Wiley & Sons Inc.	NASDAQ
K	Kellogg Co.	NYSE
KO	The Coca-Cola Company	NYSE
L	Loews Corporation	NYSE
LAZ	Lazard Ltd.	NYSE
LNKD	LinkedIn Corporation	NYSE
M	Macy's Inc.	NYSE
MET	MetLife Inc.	NYSE
MMM	3M Company	NYSE
MO	Altria Group Inc.	NYSE
MSFT	Microsoft Corporation	NASDAQ
O	Realty Income Corp.	NYSE
ORCL	Oracle Corporation	NYSE
OXY	Occidental Petroleum Corporation	NYSE
P	Pandora Media Inc.	NYSE
PEP	PepsiCo Inc.	NYSE
PLD	ProLogis Inc.	NYSE
Q	Quintiles Transnational Holdings, Inc.	NYSE
QCOM	Qualcomm Inc.	NASDAQ

(*Continued*)

Symbol	Equity Full Name	Exchange
R	Ryder System Inc.	NYSE
SN	Sanchez Energy Corp.	NYSE
SNMX	Senomyx Inc.	NASDAQ
SPCB	SuperCom Ltd.	NASDAQ
SUBB	Suburban Minerals Corp.	OTC
T	AT&T Inc.	NYSE
TGT	Target Corporation	NYSE
TSLA	Tesla Motors Inc.	NASDAQ
TWX	Time Warner Inc.	NYSE
UNH	UnitedHealth Group Inc.	NYSE
USO	United States Oil Fund LP (ETF)	NYSE
VIPS	Vipshop Holdings Ltd. ADS	NYSE
VISN	VisionChina Media Inc.	NASDAQ
VTNR	Vertex Energy Inc.	NASDAQ
VZ	Verizon Communications Inc.	NYSE
WAG	Walgreens Co.	NYSE
WFC	Wells Fargo & Co.	NYSE
WMB	Williams Companies	NYSE
WMT	Wal-Mart Stores Inc.	NYSE
WY	Weyerhaeuser Co.	NYSE
X	U.S. Steel Corp.	NYSE
XOM	Exxon Mobil Corp.	NYSE
Y	Alleghany Corporation	NYSE
YHOO	Yahoo! Inc.	NASDAQ
Z	Zillow Inc.	NASDAQ

Futures

Futures	Futures Full Name	Units
C	Corn Futures	U.S. cents per bushel
CL	Crude Oil Futures	U.S. dollars and cents per barrel
ES	E-mini S&P 500 Futures	U.S.$50 × S&P 500 Index
GC	Gold Futures	U.S. dollars and cents per troy ounce
HO	NY Harbor ULSD Futures	U.S. dollars and cents per gallon
HOCL	NY Harbor ULSD/Crude Oil Crack Spread	U.S. dollars per barrel
NG	Henry Hub Natural Gas Futures	U.S. dollars and cents per mmBtu
S	Soybean Futures	U.S. cents per bushel
XB	RBOB Gasoline Physical Futures	U.S. dollars and cents per gallon

Futures	Exchange	Number of Units/Contract	Months Traded
C	CME/CBOT	5,000 bushels (~127 metric tons)	H, K, N, U, Z
CL	CME/NYMEX	1,000 barrels	All
ES	CME	N/A	H, M, U, Z
GC	CME/COMEX	100 troy ounces	All
HO	CME/NYMEX	42,000 gallons	All
HOCL	CME	1,000 barrels	N/A
NG	CME/NYMEX	10,000 million British thermal units (mmBtu)	All
S	CME/CBOT	5,000 bushels (~136 metric tons)	F, H, K, N, Q, U, X
XB	CME/NYMEX	42,000 gallons	All

Futures	Expiration Rules
C	The business day prior to the 15th calendar day of the contract month.
CL	Trading in the current delivery month shall cease on the third business day prior to the 25th calendar day of the month preceding the delivery month.*
ES	Trading can occur up to 8:30 a.m. on the third Friday of the contract month.
GC	Trading terminates on the third last business day of the delivery month.
HO	Trading in a current month shall cease on the last business day of the month preceding the delivery month.

(*Continued*)

Futures	Expiration Rules
NG	Trading of any delivery month shall cease three (3) business days prior to the first day of the delivery month.*
S	The business day prior to the 15th calendar day of the contract month.
XB	Trading in a current delivery month shall cease on the last business day of the month preceding the delivery month.

*See www.cmegroup.com for full details.

Indices

INDEX	Index Full Name
INDU	Dow Jones Industrial Average
SPX	S&P 500 Index

FOREX

FOREX	FX Full Name	Units
AUD	Australian dollar spot	U.S. dollars per Australian dollar
CADUSD	Canadian dollar/U.S. dollar cross	U.S. dollars per Canadian dollar
EUR	Euro dollar spot	U.S. dollars per euro
EURUSD	Euro dollar/U.S. dollar cross	U.S. dollars per euro
GBPUSD	British pound/U.S. dollar cross	U.S. dollars per British pound
JPY	Japanese yen spot	Yen per U.S. dollar
USDJPY	U.S. dollar/Japanese yen cross	Yen per U.S. dollar
XAU	Gold spot	U.S. dollars per troy ounce

APPENDIX D

Algorithms and Formulae for Public Domain Indicators and Studies

Slow Stochastic

%K = 100 * {[C – min (L, N)]/[max (H, N) – min (L, N)]}
%D (SlowK or %Ks) = average (%K, X)
%Dslow (SlowD or %Ds) = average (%D, Y)

Where:
N = number of periods for %K
X = number of periods for smoothing %K
Y = number of periods for smoothing %D

Relative Strength Index

U = If C > C[1], C – C[1], Else 0
D = If C < C[1], C[1] – C, Else 0
RS = Exponential Average(U, N)/Exponential Average(D, N)
RSI = 100 – [100/(1 + RS)]
Average Line = Average(RSI, Y)

Where:
N = number of periods for RS
Y = number of periods for average line

Simple Oscillator

FastMA = Simple Moving Average, X
SlowMA = Simple Moving Average, Y

Oscillator = FastMA – SlowMA
Histogram = [Oscillator – Average(Oscillator, N)]

Where:
X = number of periods in fast moving average
Y = number of periods in slow moving average, and
Y > X
N = number of periods for Histogram

DMI and ADX

If Inside Bar, Both DM+ and DM– = 0
If (H – H[1]) > (L[1] – L)
DM+ = H – H[1]
DM– = 0
If (L[1] – L) > (H – H[1])
DM– = L[1] – L
DM+ = 0
DMI+ = [Sum (DM+, N) / Sum (TR, N)] ∗ 100
DMI– = [Sum (DM–, N) / Sum (TR, N)] ∗ 100
DX = [(DMI+) – (DMI–)]/[(DMI+) + (DMI–)]
ADX = Average (DX, Y)

Where:
TR = max (H, C[1]) – min (L, C[1])
N = number of periods for DMI+ and DMI–
Y = number of periods for ADX

MACD

FastEMA = Exponential Moving Average, X
SlowEMA = Exponential Moving Average, Y
MACD Line: FastEMA – SlowEMA
Signal Line: Exponential Moving Average(MACD Line, N)
MACD Histogram: MACD Line – Signal Line

Where:
X = number of periods in fast moving average
Y = number of periods in slow moving average, and
Y > X
N = number of periods for Histogram

Parabolic SAR

PSAR = PSAR[1] + [AF ∗ (EP – PSAR[1])]

Where:
AF = Acceleration Factor or Starting AF
EP = Highest High for Uptrend or Lowest Low for Downtrend
Initial PSAR = EP[1]
Variables:
Starting AF Factor, and Increment = 0.02
Maximum = 0.20

Ultimate Oscillator

BP = C – Min(L, C[1])
Avg7 = Sum(BP, 7)/Sum(TR, 7)
Avg14 = Sum(BP, 14)/Sum(TR, 14)
Avg28 = Sum(BP, 28)/Sum(TR, 28)
UO = 100 ∗ [(4 ∗ Avg7) + (2 ∗ Avg14) + Avg28]/(4 + 2 + 1)

Where:
TR = max (H, C[1]) – min (L, C[1])

TrueRange and Average TrueRange

TR = max (H, C[1]) – min (L, C[1])
ATR = Average (TR, N)

Where:
N = number of periods

Double TrueRange

DTR = max (H, H[1], C[2]) – min (L, L[1], C[2])

APPENDIX E

Contact Information for Kase and Company, Inc.

Headquarters Location

Kase and Company, Inc.
P.O. Box 226
Cheyenne, WY 82003

Courier Deliveries (Headquarters)

Kase and Company, Inc.
Attn: Mr. Douglas Fowler
408 W. 23rd Street
Suite 205
Cheyenne, WY 82001

Phone and Email

Kase Call Center: 505-237-1600
Fax: 866-526-2350
Questions: askkase@kaseco.com
Admin: kase.admin@kaseco.com

Websites

Kase's Corporate Energy Site: www.kaseco.com
Kase's Trading Software Site: www.kasestatware.com
Twitter: @kaseco
Facebook: www.facebook.com/kaseco
LinkedIn: https://www.linkedin.com/company/kase-and-company-inc-
www.linkedin.com/in/kaseco
YouTube: www.youtube.com/user/KaseAndCompany

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