VOLUME **3**

HARMONIC TRADING

Reaction vs. Reversal

1.618

1.27

1.13

A

C

0.886

0.786

B

0.618

D

0.50

0.382

T - I

T - II

Scott M. Carney

Harmonic Trading Volume Three:

Reaction vs. Reversal

By Scott M. Carney

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Dedication

For Priscila,

If Not for You,

This Would Not Be.

Love,

Scott

Acknowledgments

Throughout my journey of work, I have encountered many outstanding Harmonic Traders - fantastic individuals whom are dedicated to the financial markets and understanding how they tick. I have immense respect for those whom have dedicated themselves to the study of harmonic phenomenon in the financial markets. I encourage future generations to pick up the mantle of harmonic patterns and move forward with this advanced material to continue to unlock even deeper relationships. The most important acknowledgement to all Harmonic Traders is my appreciation to the standard of character that most uphold. Harmonic Traders possess motivated and pragmatic perspectives regarding the financial markets. They seem willing to share ideas in good faith, promote a larger positive engagement and do the work required to be successful. This represents the essence of the work that I have presented and the core values of Harmonic Trading

I would like to thank all of the people that I have thanked in prior material again. Many of these individuals – family and friends - continue to be tremendous influences on my life and have helped directly and indirectly supported the development of Harmonic Trading material since its inception.

I would like to thank all of the fantastic friends and family that I have in Brazil. My experiences and connection to this amazing culture and these incredible people has made a profound difference my life. Obrigado!

I must recognize Keegan McClellan for his overwhelming contribution and collaboration throughout the past few years. I am indebted to you for helping me automate these long-standing ideas and advance these complex environments into quantifiable strategies. Thank you!

I want to recognize Stephanie Kramer for being one of the essential individuals who "kept the lights on" and has been integral to the cause of realizing a larger effort over the past several years. Thank you cuz'!

Raul Valin and Nadia Franca – If there was ever a way that I could permanently say thank you, this is it. Thank you for all!

Robert Troy Hulmes – You lead by an example that has taught me much. Rooftop!

Michael Hausmann – It's always happening. Never forget!

Alan Kuenhold – It started because you opened your door. Much appreciated!

Mark Douglas, in memory. Your honest insights helped me bypass many avoidable mistakes.

Foreword

Next trade. Win, lose or draw – it is always about the NEXT TRADE! This perspective keeps us open to new opportunities and helps to maintain a balanced mindset with respect to current positions. As traders seeking to define market conditions from a natural framework of price movements, we must always be open the flow of opportunity available to us. There is unlimited opportunity in the financial markets but it requires a comprehensive measurement approach to effectively define clear possibilities. This has been my underlying purpose throughout my work with Harmonic Trading.

It has been quite a bit of time since I have written a book. I never intended to produce books and other resource material to this degree. But, my discoveries in Harmonic Trading have continued to evolve. Over the past 20 years, I have expanded upon the initial concepts that define unique technical situations. As more natural cyclical relationships have been distilled, the basic tenets of pattern recognition have solidified the foundation of measurements that comprises this methodology while integrating advanced strategies to refine those characteristics that consistently provide reliable signals and technical information.

Initially, trading was a personal endeavor that I experienced alone and was a passion that few in my life shared. From time to time, I would meet individuals who had experience trading markets or were employed in the industry to some degree. This was a time before the Internet and all of the devices that now seamlessly connect us. For someone whom most would not consider old, I find myself continually repeating things that my grandparents said to me growing up about how the world has changed. But, the world has changed, and it continues to evolve on a larger *digital* paradigm.

When I initially released *The Harmonic Trader*, the Internet was exploding but only as fast as your dial-up connection would permit. In the early 2000's, I released both *Harmonic Trading Volume 1* and a few years later, *Harmonic Trading Volume 2* that established the principles of Harmonic Trading. In my opinion, the amount of technological progress in the financial industry since the release of *Volume 2* – which was nearly a decade ago – has surpassed the total of the preceding 25 years combined. It is important to emphasize this phenomenon, as it is changing not only the way information is disseminated in the markets but it has transformed how money is even transacted. The barriers are gone. Anyone on the entire planet within reach of an Internet connection can participate in the financial markets and attempt to be a successful trader.

New Ideas and Applications of Harmonic Trading

Over the past two decades, I have experimented with combinations of measurements to define unique situations that offer a great deal of reliable information regarding the future probable price action of any market. Initially, these ideas were founded in pattern rules which now have been readily accepted by traders as an effective analytical framework. Once people are introduced to harmonic patterns and apply the measurement strategies, they quickly realize the predictive value of these techniques. Remarkably, the patterns and confirmation strategies enable an understanding of natural limits of price action within any market. Although the trend is always your friend, opportunities are omnipresent depending upon the timeframe considered. The key understanding to getting the most out of harmonic patterns is derived from their categorization and the expected outcomes to differentiate nominal reactions versus larger reversals.

One of the greatest advantages measuring harmonic market movements is the derived understanding and set of expectations that provide a framework to explain price action. As we know, the market can only move so far within a period of time. Therefore, a basic awareness of the market's trading history is a critical foundation for any methodology that is looking to buy and sell for profit with some degree of reasonable understanding of what is possible. Within the Harmonic Trading approach, the measured strategies define unique and precise market conditions that validate opportunities unlike any other approach. When combined with traditional Technical Analysis, the entire structure of market movements can be identified, classified and quantified accurately to define price levels that effectively price the opportunity.

The remarkable accuracy of harmonic patterns is well–known. Although I do feel that some statistical claims have been manipulated by other online outfits for marketing gain, I believe that the high degree of accuracy associated with harmonic patterns is valid due to the sheer impact it has had on numerous traders' lives. One of the reasons why these methodologies have grown so immensely over the years is because they DO provide an accurate and effective framework to outline potential opportunities. However, price pattern recognition requires an enhanced set of conditions to truly capitalize on this phenomenon consistently.

Many have stated that harmonic patterns are 80 to 90% accurate. But what does this mean? Does this mean that 90% of all harmonic patterns will make you rich? No - 90% of all harmonic patterns will not make you rich! 90% of all harmonic patterns will give you a framework to analyze specific price zones that represent the completion of a specific set of trading history that comprises a prescribed structural alignment to denote a change in future direction. With all that being said, the only question to consider is how far does the price action move in the desired direction before testing the prescribed stop loss limit. This is an important consideration for any overall measure of accuracy. There must be a measured parameter that explains how much of a price move could be expected following the completion of harmonic pattern. Upon further

inspection, it is easy to see that a standardized assessment of multiple markets, timeframes and pattern structures must be analyzed more specifically to offer consistently accurate results.

As the creator of the harmonic patterns, it is difficult to quietly watch others misrepresent the true value of these measurements. Yes, the patterns can be extremely accurate but there must be a realistic and reasonable rationale to attempt to trade these opportunities successfully. The notion that a trader can click a button and employ a methodology that works 90% of the time is extremely suspect. Confirmation variables are required to separate minor reactions from substantial trading opportunities but the "home-run" outcome for every situation - unfortunately being circulated by less informed actors in the industry - is simply not the norm.

So, What is the Harmonic Norm?

As a proponent of understanding market strategies that define precise expectations, I am always looking for phenomenon in price action that can consistently guide my decisions. My understanding of harmonic patterns and the realistic expectations that I possess regarding possible outcomes facilitate my decisions and dictate how I handle each situation. From the very beginning, I have stressed the importance of a realistic perspective and the need to use the pattern structures as a starting point. I am a firm believer that multiple confirmation of market analysis frequently yields accurate and reliable signals. Therefore, I understand that not all patterns are opportunities and the possible candidates that I consider must possess multiple elements to be a valid consideration.

This perspective is derived from the basic assumption that harmonic patterns offer a reaction on the initial test of a distinct pattern and usually experience a secondary test before exhibiting a larger price move. I will discuss this in detail later in this material however this is an example of just one expectation, and a standardized model of how harmonic patterns exhibit definable and repeatable behavior. There are other expectations involved with execution and trade management, as well as advanced identification. All situations can be categorized and classified according to their proportional structure. In my opinion, these are types of trading cycles that I consider to be a type of "micro–price mechanisms within the overall functioning process of the market.

We all know that the market ebbs and flows, moves up and down, and money flows in and out. This is the market in action. This is the market's primary function – to exist! It does not matter if the market trend is up or down. The basic function of the market is to exist and prices must fluctuate to create such an environment. Therefore, the fundamental function of markets is driven by cyclical trading phenomenon that frequently exhibit harmonic pattern properties. When we identify these situations, there are specific expectations that are associated with the completion of the structure. This demands that we accurately measure and understand which ratios are significant, especially within structures that may appear the same.

My main interest in this book is to establish a standardized measurement basis that crystallizes the material initially presented in the first three books. These rules have become the industry standard for harmonic patterns, although others have attempted to present alternative interpretations that only distort the effectiveness of the natural structural measures. I do not nor will I remark on these *Harmonic Traitors* other than to say "Google it" but I have found that sooner or later most eventually learn the proper way to measure the structures.

Personally, I have rededicated myself to the work to create a standardized start-to–finish framework and provide the thorough explanation for traders to learn this measured approach correctly. In particular, my focus with the material in this book has been to clarify the proper expectations while explaining why harmonic patterns work. The strategies presented throughout this material seek to foster this basic understanding and share the insights to those situations where the patterns have maximum significance.

Most traders learn that harmonic patterns possess the ratios that are exhibited in nature and therefore, identify natural cyclical turning points. It is an ideal model but quite accurate. It provides a price range with "natural limits" to assess execution opportunities and profit objectives while reducing risk. These measurements serve as the foundation for a potential opportunity to differentiate when price action will slightly react from the targeted level as opposed to providing a significant reversal shortly after completing the measured area. The key is to know what factors are critical at the completion of distinct patterns to guide decisions and provide the proper expectations of what will happen to optimize the opportunity.

Once You Know What to Look for...

As I have said from the very beginning – even in *The Harmonic Trader* back in 1998 – harmonic patterns are a starting point but an effective means to analyze price movements that exhibit these properties. Of course, harmonic patterns are not going to appear in every market all the time but these structures inevitability materialize time and time again to mark important changes in the future price action. However, I must stress that the proper measurements are required to realize such success. It seems that other interpretations that been promoted as improvements are mere distortions from immutable basic harmonic ratios that categorize price action as such. The key take away from the whole pattern debate is to always apply those measures that are directly related to the elements of harmonic opportunities. Simply stated, the harmonic measurements serve as primary framework that cannot be skewed without distorting results and destabilizing the essence of analyzing the markets from this perspective.

When I released the initial pattern rules in my first book, *The Harmonic Trader*, the entire subject of Technical Analysis lacked respect. However, two vicious bear markets and the advent of trading technology have changed the market's focus to chart and quant-style computational analysis. These factors have altered "The Street's" focus from reputation-based to more of a meritocracy where market perspectives are

assessed upon quality and not zip code of origin. I believe that the strategies have proven themselves through challenging environments and continue to gain credibility in the trading world. Incredibly, nearly 20 years has already passed and the once obscure harmonic pattern discoveries are now common knowledge within the trading community.

Most of the pattern discoveries arose from a great deal of research that identified overwhelmingly clear technical situations that possessed defined structural signals. For example, the importance in differentiating Bat patterns from Gartley structures was an enormous breakthrough. However, it now seems to be a simple fact. In essence, the pattern definitions made it easier for people to find trading opportunities once they knew exactly what to look for.   Through it all, the strategies have been tested to provide statistically reliable expectations.

As the industry continues to migrate most of its operations online, market participants will find themselves looking for advantages by analyzing price action and chart history. As the community has embraced Harmonic Trading, the online discussion and interpretations have expanded the total engagement to the point where my initial work is now a separate entity from me. In my opinion, <u>I encourage interpretations and advancements that seek to improve the overall understanding</u> of what I have put forth over the past two decades. I can only stress that the primary pattern measurements that are founded in the essence of what is harmonic remain as the standard for future application. Otherwise, traders will find themselves attempting to identify random movements as repeatable behavior that simply is not a true phenomenon.

Realistically Harmonic

Many traders often search for one tool or method that can tell them when to buy and sell. It seems that these individuals are overwhelmed by the market in general and are looking for a lottery ticket more than a logical approach to understanding price action.   Like anyone who has spent countless hours in front of the screen looking at endless of charts, it becomes apparent that certain market conditions possess clearer signals than others. I think one of the biggest misnomers of the market is that to be successful one must understand everything that is occurring all at the same time. Certainly, the news outlets attempt to tie all of the various market moves together to package one big story. Real traders understand that not all markets can be traded all of the time. In fact, successful traders are typically spending as much of their time preparing for the trade than actual trading itself. If you're not spending as much time preparing for trade than trading, you're probably going to make mistakes. This type of discipline can be difficult for most as they are unable to be patient and wait for opportunities to develop. A degree of selectivity is mandatory to focus on only those opportunities that present overwhelming conditions for a successful trade. All of these considerations are critical throughout the trading process and assessments must be made to minimize risk and maximize profit. Most important, I believe that a realistic perspective of what is possible is an essential trait to stay grounded and navigate a

professional course in your trading endeavors. In my opinion, most people who are dedicated to measuring the market do realize that it takes more than one strategy or simple tool to develop the skills necessary to succeed. Remarkably, there are broad elements within the industry that still operate on this type of unrealistic hype. I do believe that the larger public is becoming more aware of these unsavory elements, especially as more traders are dedicated to learning the proven strategies to succeed in the financial markets. I have spoken about this general disdain for the bad actors in the industry in each of my books. I have been forced to address a variety of issues, especially due to the unusual degree of disregard for fiduciary responsibility up and down Wall Street. Ultimately, I want the work to speak for itself and always remain the focus of what is important. Although sometimes these distractions must be dealt with, the fiduciary responsibility that I maintain to consistently put forth the best work that I can create is a driving principle of Harmonic Trading.

The History of Harmonic Trading

In my own life, I have experienced a variety of positive and negative relationships that have had a profound impact on my personal trading journey as well as my perspective of the industry that I love. I feel that I have created a special foundation where individuals can actually learn predictive strategies that help them understand future probable price direction. However, it is important to share the personal journey that has shaped me to advance my work with harmonic patterns and expand the knowledge base of Technical Analysis in general. It is an interesting story and I believe it is an essential element to finally explain how the strategies were developed, where I initially released my work and provide the proper citation of those who came before me – the predecessors to what is now known as Harmonic Trading. It is important for me personally to recognize these predecessors from the inception of my initial discoveries to clearly delineate the Harmonic Trading advancements that have been put forth over the past two decades.

So, let's start at the beginning. The history of Harmonic Trading has its roots in my initial market endeavors nearly 30 years ago. It started with me at a time where I was transitioning from primarily fundamental analysis to Technical Analysis. My observations about financial fluctuations in fundamental values of companies led me to focus on price action. In doing so, I was able to begin my formal study of all books related to Technical Analysis of price action. I started with the older books from the 1930s and 1950s since I felt that these were they forefathers of modern Technical Analysis. I also read numerous pop culture market books during this time. Probably the most infamous of these was Peter Lynch's *One up on Wall Street*. This was one of the first books that clearly defined the ability to look at the market from an individual perspective and begin to look for relationships that were outside of fundamental numbers. Peter was always looking for that good story where he could make his "multi-bagger" on trades – that means making many times his money. However, his book ignited an excitement where I started to pay close attention to what was happening in

the economy and the financial markets. I became an avid reader of any recommended financial book. I found myself increasingly wanting to know more about the indicators and other technical measures that were frequently discussed by traders more so than brokers' recommendations. I always felt that the traders were more in tune with what was happening in the markets than stockbrokers or financial advisors tied to a recommended buy list. Regardless, I understood early on that the answers were not going to be handed to me and there was much to consider when it came to the world of trading.

This became ever apparent for me during a college summer internship on the floor of the Philadelphia Stock Exchange. As a CRT operator, I was in the options pits manually adjusting the quote prices displayed at the market maker's terminal as he barked them out. I spent the first few weeks trying to keep up with the regular employees whom had been there for a while. I was intrigued by the overall operation, the excitement and the basic understanding that people were making large sums of money working at a dynamic place of employment. For me, it was clear that those who understood probable future price direction were able to successfully navigate the chaos that was the trading floor of this time. Albeit a physically small exchange, the floor in Philadelphia was as busy as any frenetic day in New York. I learned a lot during this time and a few individuals took the time to teach me some complex option strategies even though I barely knew what a put or a call was. It was all special and certainly different from any other corporate environment that I had previously experienced. I came away from that internship with a passion to further explore what this industry was all about.

I rededicated myself to studying books on charting and Technical Analysis. The more I investigated the measurement of the market using technical tools, the more I realized that this was the true means to know when to buy and sell for profit. In those early days, I was considering fundamental information but quickly into this discovery, I also learned that most of it that attempts to describe what is unfolding in the market actually has little value when it comes to determining price. Therefore, I finally made the jump in the early 1990s to full Technical Analysis as my exclusive means of determining trade opportunities in the market. Although this was the right move, there were a few years of study required of all methodologies before I could fully grasp which technical tools worked the best. In this research, I spent tens of thousands of dollars on books and seminars to discover who had the real deal and who was able to clearly define opportunities in the market.

I was fortunate to encounter a retired former floor trader as I was finishing my college degree who mentored me on many old-school methods of Technical Analysis. I have mentioned him before but I would like to recognize him again. Although he never wrote a book and he was an extremely private person in nature, Bill Sourbey was my primary mentor in Technical Analysis. He was a former floor trader in the Minneapolis grains pit in the late 1950s. He shared many stories of the old days – and this was back when they were still writing quote changes on a chalkboard! Regardless, he showed me unique charting methods. And, he would create by elaborate charts by hand. He

stressed the importance of trendlines, channels and various price action phenomenon that he painstakingly measured. His discipline and focus on measuring every data point of individual price action showed me that charts were merely a collection of information that told a story. He believed that specific points and price levels served as critical to finding limits of possibility. These all helped to shape my predictive abilities and understand that price action moves within definable constraints that can be measured must be measured! In fact, I did not truly understand the nature of what he taught me until I had a few years of experience studying his charts.

I met him at the University of Arizona where he was a volunteer. Bill and I formed a friendship and we shared an interest of Technical Analysis. Bill was an old-school market guy he kept meticulous notes, developed his own indicators and was able to predict market moves with phenomenal accuracy. His methods were quite simple – trendlines, price action analysis and clear break out and breakdown triggers. The other side of Bill was that he developed indicators such as Viscosity. This is a very interesting concept that tries to measure the thickness or thinness of support or resistance within the market. Bill has since passed in my life and he never imparted to me the entire formula of how to determine this. I do have numerous charts and I have been analyzing for years trying to figure out exactly what he was talking about. He was somewhat vague in his descriptions of his analysis but he was an influencing factor and encouraged me to continue my technical studies which I did in earnest.

My first introduction to various pattern formations was simple wedge and triangle formulations that denoted breakouts or breakdowns in trends. Trend analysis proved quite accurate and quite effective as a starting point for my studies, as well. The simple fact that I could analyze a price action by drawing a basic trendline along the general direction was a breakthrough unto itself for me as simple as it may seem. It opened up the perspective that actually monitoring price action is the most effective means of gauging what potentially could occur. From this, I then began to focus on the phenomenon that markets frequently trade within ranges and cycles. In my discussions with my friend Bill Sourbey, he constantly reminded me of the importance of certain trendline violations as important structural signals. In fact, he frequently cited Richard Wyckoff's books from the early 1900s and another author named Ted Warren's relatively unknown book *How to Make Money in the Stock Market*, which provided in-depth resources that explain why the market is always in a process of moving through stages. Armed with all of this information, I began to really focus in on the things that I knew were consistently yielding the proper information and correct predictive value for my trades. I made a lot of mistakes in those early years and lost quite a bit of money – probably more money than I even had to lose but I knew that this was all in the endeavor to eventually make breakthroughs to become a consistently profitable trader. To do so, I needed a framework of strategies so I could understand market action in any environment on any timeframe.

During this time, I started to encounter other traders in my area, especially as the internet provided a direct means of reaching other traders unlike ever before. In 1995, I was living in Tucson, Arizona and I encountered a group of traders that met once a month. Although initially intended as a local group support group for Tradestation users, the discussion soon focused mostly on trading strategies relevant to the unfolding bull market mania of this era. Founded by Alan Kuenhold who was a broker with UBS Advisors, the initial group of 10-15 people met at the Williams Center regularly to talk about the markets. It was a great discussion group and it is also the first place where I publicly began to divulge many of the strategies that became Harmonic Trading. After a few months, we officially named ourselves *The Gartley Group*.

The pattern alignments, the trade management strategies such as the 38.2% trailer, the discoveries with Relative Strength and general price action analysis were all new ideas that eventually became the foundation of Harmonic Trading. I am grateful to Alan and that group for giving me the format to present these ideas. Now, I must admit this was during a time where the market was moving straight up so anything that you bought had a good chance of actually working out. Almost every significant retracement pattern led to a significant reversal. This made harmonic patterns look great. And, when I was able to differentiate which patterns were the most significant and where to execute the trades, the level of precision increased as did the number of people attending the Gartley group. After about two years, the Gartley Group tripled in size as we started meeting nearly every week. On average, we would see nearly 30 or 40 people show up. It was kind of funny because I would walk in there, they would hand me the laser pointer and then I would go through any charts that people wanted to look at based on the way that I was differentiating patterns. The whole experience became extremely emotional as other individuals in the group began to talk about certain penny stocks and talk about the future of technology. The NASDAQ Composite I had increased 300% in a few years and was quickly on its way to the initial test at 5000. However, the mania had gripped the masses in soon several people in the group were investing in speculative penny Tech stocks.

E-Digital (EDIG): The Epitome of Dotcom Mania

Well, there was one stock that actually worked. It was called eDigital - the symbol was EDIG. There was one guy in the group who said that this was going to be the next Microsoft and had recommended for everyone to buy the stock at about $.50. Shying away from such penny Tech stocks, I was more accustomed to following the leaders of the market and the more heavily traded issues. For me, I felt that this mania was problematic and the fact that the group went from a constructive discussion of technical methods to focusing on penny Tech stocks.

E-Digital (EDIG): Jumping the Shark

It was where the group "Jumped the Shark" and I knew the end was near. Incredibly, it all culminated over the course of six weeks where this penny stock started to move from $.50 to a $1 to $3 to $7 to $11 and higher. Soon, the stock was going parabolic and the person who had initially recommended it said that he had put his whole life savings into it because he predicted that this stock would go to $200. So, according to him even though the stock was up 1000% in a short period of time, he assumed it would continue. Well, nothing goes straight up! Wrecking day was near and I stayed clear. Despite the post-crash squabbles, the entire experience was the perfect case study in Dot Com mania!
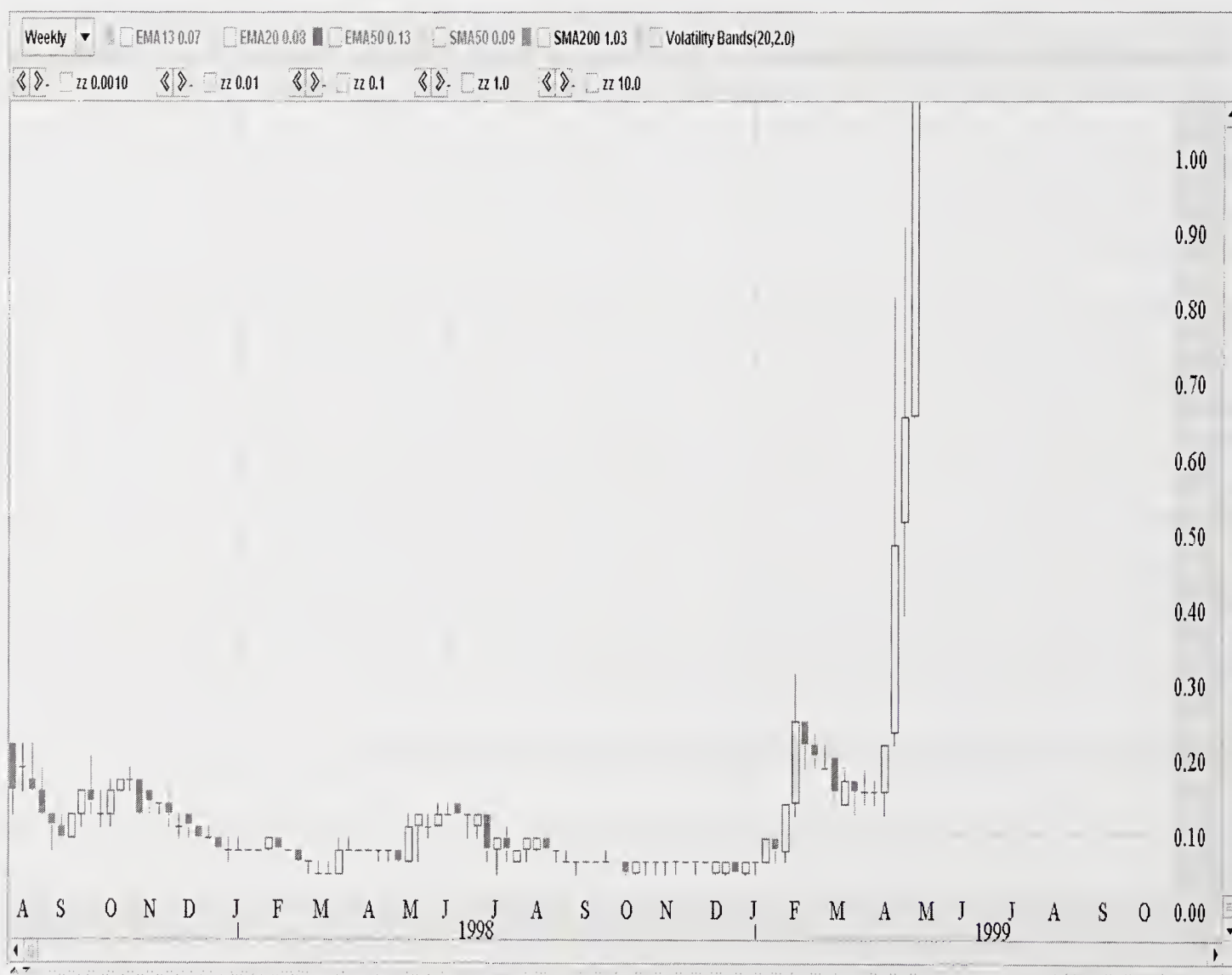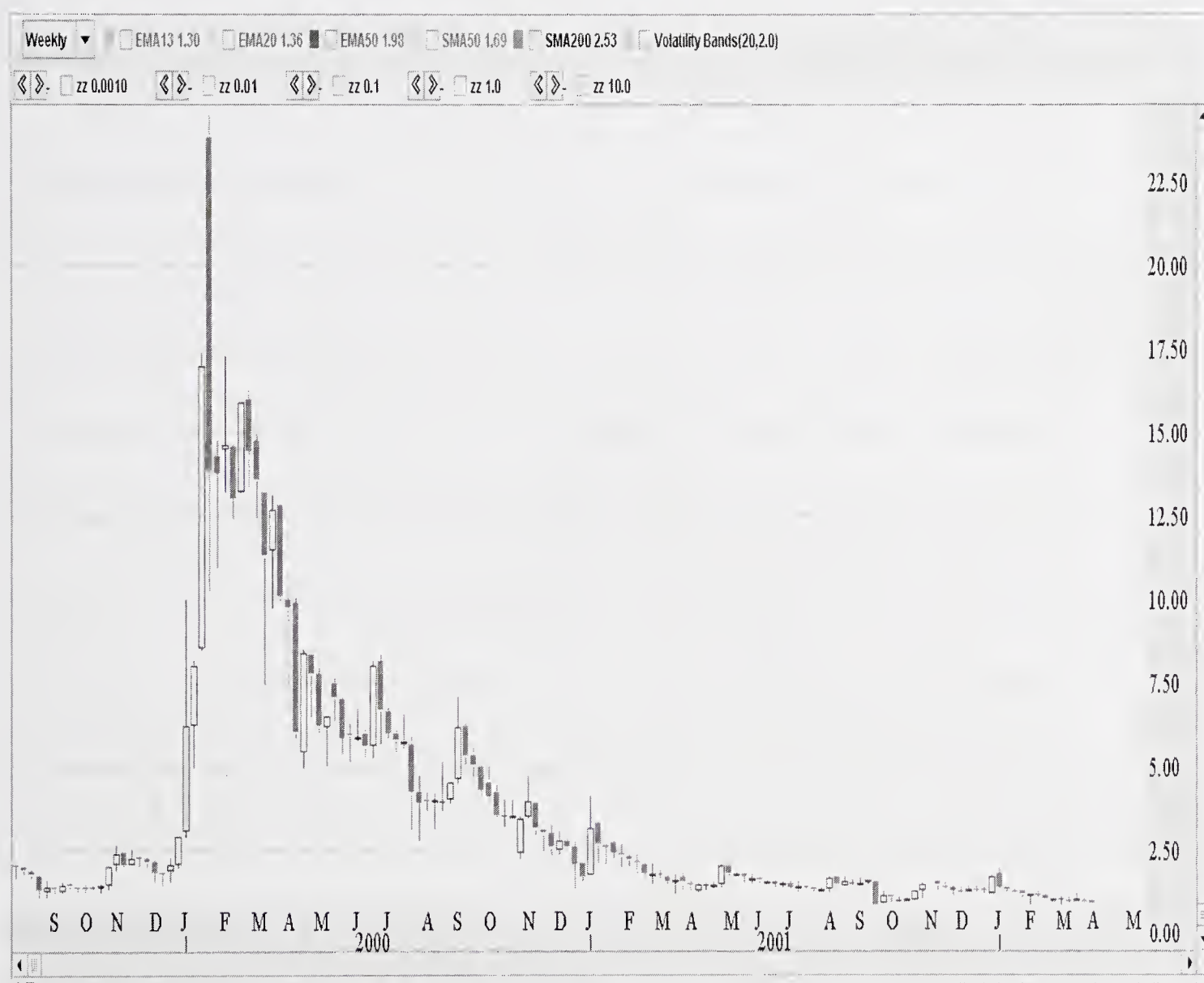

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After some time, it was still recommended as a buy. And people bought! Eventually, the stock went to $21 a share. I remember the exact meeting on the day it hit the $21 mark. There were approximately 50 people there that night. I was late arriving and there were so many that I couldn't even get into the room. I watched

from outside the door. At that point, I knew that the Gartley Group was over. I also knew that this eDigital stock would not end well. People were asking me if I had bought the stock and I said that I didn't touch those types of positions.

E-Digital (EDIG): The Meltdown

Despite my concerns, many people continued to buy. The stock peaked out at the $21 level and then quickly lost half its value back to $10 a share. It was only a matter of time before the whole stock would collapse and that's exactly what happened. I won't even go into the other details of the post-crash arguments and squabbles that ensued, including potential legal action from one person to the next but the clear lesson to be learned from a mania like that taught me how to read the public and understand when certain market periods are exhausted.

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EDIG @ 3.14 Bearish Extension

Being known as the harmonic guy in the group, the only analysis that I could provide was a simple 3.14 extension that projected immediate resistance at the $10 level. After the stock rallied vigorously through this price, I distinctly remember hearing comments such as the fact that harmonic measurements don't work in situations like this. Nothing have could have been further from the truth because the 3.14 extension typically signals a parabolic state of price behavior. Even in the early days, I understood that an extreme ratio measurement in a stock such as this would result in only one conclusion. The stock peaked above $22 a share only to immediately lose half its value within a few weeks. By the end of the year, the entire bull-run was over, as the stock was back at the $1 level.

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Many of these people lost a ton of money. I felt bad. But, I had nothing to do with it and I knew that things had to change. So, the remaining core Gartley Group actually decided to disband and begin to meet "secretly." It was during this time that I started to create the differentiations of all of the retracement and extension patterns. I was even working on new harmonic structures such as the 5-0 pattern and the Shark

pattern. I also was beginning to investigate which indicators served as the greatest confirmation techniques for the patterns.

I go out of my way to cite those real technical forefathers who have laid the foundation for what modern Technical Analysis is today. Most of my inspiration for these ideas has been derived from the "old-school" books. Based from this technical foundation, I have created the system of trade identification execution and management strategies that effectively defines the Harmonic Trading process. These strategies create a framework so that traders understand what to do in every instance of every trade. From this perspective, an entire skill set has been established based on harmonic measures. Although these are some of the most accurate means of measuring, the business of trading is not easy. If you do the work and you want to understand which strategies are vital, a professional skill set that identifies harmonic opportunities facilitates the ability to execute with an optimal efficiency. This comprehension takes time. Furthermore, I urge everyone to do their own research, look at the materials and assess what I have done as a unique system in way to look at the market, especially now that it is now widely embraced.

After I released *The Harmonic Trader* people began to take notice. I was having great success, and I was sharing my information and charts with many people freely. Maybe this was a naïve step of mine, but I believed in sharing the information with people that I knew and others whom requested it. I felt that we were on the same boat as traders trying to succeed in a challenging market environment. Everyone was trying to figure out how to trade the market, especially during a time where the Internet stocks were going through a historic bull market. Against the backdrop of a frenzied market environment, my goal was to share the information and make it available so that people could understand the power of harmonic patterns and realize the importance of being as precise as possible. From this, I was motivated to explore the subject, refine the strategies and develop the most accurate tools available. I was confident from the start I was using the right measures to analyze price action.

Although it is easy to get caught up in the mystique, I was more focused on relating the theory of these natural cycles with harmonic ratio proportions to define turning points in the financial markets. It was my goal to take that knowledge to new areas of experimentation and capitalize on the natural advantages of harmonic measures. I wanted to refine it as far as I could to differentiate patterns structures, interpret price action at those completion points and make larger assessments of the trend. From this, Harmonic Trading thrived and led me to produce two more books *Harmonic Trading Volume 1* and *Volume* 2. In 2010, I received an offer from Financial Times Press who was able to promote the material globally. Furthermore, the validity of this strategy was reinforced as more traders became aware of harmonic patterns, their popularity has grown.

On a final note, I want to stress that for me it is always about the work. I always felt that if the work was excellent people would respond people. Traders have responded! For that Harmonic Traders, I thank you. This is become something far greater than I could ever imagine. I feel that with the limited time that I have left on

this planet that I want to share this knowledge. I want to leave behind a legacy where people can not only trade the markets effectively but actually realize the amazing natural wonders and natural cycles that are occurring in the universe and in the world, every day.

For me, integrity and character is everything. My goal in this material is to preserve the value of the Harmonic Trading approach to show people the correct way to measure the markets not just the well-chosen examples. This has been something that I have seen quite a bit in recent years. People are teaching harmonic patterns based straight out of my book but they're doing it incorrectly and in most cases, are unable to do it in real time. My goal is to bridge this faulty promotion and clarify the ambiguity in the execution and trade management process that optimize trading decisions.

By now, most people know the definitions of the ratio alignments in the patterns. But as I've always said, the harmonic patterns are a starting point. They require a precision and a dedication above and beyond what most offer. Yes, I have products to sell. I have a software program, webinars, etc. But, I have made it my fundamental goal to provide the bulk of this information that presents the foundation of Harmonic Trading approach for free. Why would I do this? I have met so many people from around the world who want to learn about the markets but they don't even have the money to be able to buy my book. This is disheartening. I am not going to sit by and dismiss these people because they can't afford to buy a $50 book. So, I offer numerous resources online for free. Having lived abroad for a few years, I understand the struggle that most people face when they must live on a limited amount of money. However, with the advent of the Internet Age, we have an opportunity to reach people in a way like we've never done before.

I believe this is the true accomplishment of Harmonic Trading - an open dissemination of the information to educate people about the market to empower individuals whom are willing to do the work, and ultimately improve their lives. I have talked to people from Africa, Iran, China, Saudi Arabia and many other countries that otherwise might have been previously out of reach. These interactions have been inspiring to say the least. In fact, many of these people volunteered to translate my first book *The Harmonic Trader* into their native language. Without this type of response, I would never be able to have the first book translated into five languages. I am grateful for these experiences and I feel confident that the work is reaching traders in a positive manner. Most have related to me that they are able to avoid the pitfalls of the learning curve that can often be quite expensive, as well as the confidence a defined measurement framework instills. There is a profound comprehension in the understanding of the phenomenon of these natural laws and the associated ratios to define clear structural relationships.

Introduction

A Reintroduction to Harmonic Trading

My main goal in this book is to set the whole record straight to reinforce the established structural measures while emphasizing the need to precisely confirm harmonic pattern opportunities with "environmental technical indicators" that optimize all situations. I have been reluctant to write another book, as I knew that it would take quite a bit of time to put together a comprehensive advancement of the existing material. Although I have been aware of many of these techniques for years, I have not shared these with too many people. Initially, I needed a great deal of time to test each strategy and completely refine the rules to effectively complement the basic Harmonic Trading approach. This book is comprised of nearly 80% new material that builds upon the existing strategies and optimizes specific pattern situations to improve overall results. The advancements presented in this material represent a new stage in the evolution of the Harmonic Trading methodology. The material in this book picks up right where *Harmonic Trading Volume 2* left off, and defines unprecedented situations that are as distinct as harmonic patterns themselves to improve the effectiveness of the entire approach. Although many of these strategies can be learned as individual concepts, I reference much of the material from *Volume 1* and *Volume 2*. Simple pattern rules, trade execution strategies and other guidelines serve as the essential model for the trading process. This book represents an advancement of that process, especially in the area of trade execution and trade management. Although the first few books detailed effective strategies to comprise the identification aspect of the Harmonic Trading approach, this material coalesces a variety of individual techniques to assess a more comprehensive perspective of critical measures.

My evolution of measuring the market has led me to realize that my primary source of material information for trading decisions must be derived from the price movements themselves rather than any outside influences. Although most traders will consider a variety of sources of information to formulate a strategic approach to define opportunities, ultimately every participant is trying to profit from price movements. Therefore, the business of trading is inherently a game of skill and strategy that must predict future price direction and profit from the buying and selling of these defined opportunities. Thus, financial reports and news stories become less relevant over time

as signals for trading opportunities. After reaching this point, traders begin to base decisions upon the readings of the market.

Harmonic patterns provide a strategic approach to measure these opportunities and they can define those exact price levels where to pinpoint the parameters of the trade. Other technical measures can help us monitor secondary readings, where the total market bias is reflected in something other than price. All of these techniques are designed to gauge some sense of order within the chaos and randomness of price movements. I believe patterns provide that order, especially since all parameters are defined in advance and measured based upon the market's historic price action. In addition, analysis of Relative Strength readings is one example that helps to monitor the environment in which patterns complete. We will look at this integration in detail later in this material. We will examine price behavior with measured technical environments and show those conditions that possess the optimal characteristics for positive confirmation.

The Harmonic Learning Curve

Personally, I still feel there is room to improve optimization but this actually made one of the easier tasks within our process once the coordination of variables has been established. Despite my attempts to simplify all of this, I know that I am overloading everyone with a great deal of information. Please take your time to review my notes and look at the resources provided for a greater understanding. For anyone that is new to this perspective, I like to use the phrase "live with it for a little while" where you walk through the analytical steps to create a greater awareness of these relationships. The common experience for most is a "light bulb" that goes on and the relationships become almost obvious. Therefore, I recommend a full comprehension-n of identification strategies first to reach a level of basic awareness that is required to integrate more complex measures. I will thoroughly explain details and finer relationships that will answer most questions that typically arise in the discovery phase of these strategies. The common experience for most Harmonic Traders is a clearer comprehension of all relationships after mastering the identification of exact scenarios.

Consistency in the Application of Identification

One of the important broader principles always to be mindful of is the fact that Harmonic Trading is a defined and quantifiable technical model to define opportunities in the financial markets. This means that the prescribed measurements merely serve as a minimum framework upon which the actual expression of real trading must be compared. I emphasize this point in an attempt to reduce unrealistic expectations of patterns as signals on their own and implore traders to intelligently assess other market conditions that clearly contribute to the overall understanding of the harmonic opportunity. Furthermore, the true advantage of these identification strategies is founded upon the consistency in the definition of what is a potential opportunity.

Specifically, each pattern has its own set ratios. Regardless of the timeframe or the price of the structure, each situation is defined by the relative harmonic measurements that validate random price movements as specific opportunities.

It is important to note that these ratio alignments identify opportunities differently than other structural approaches to the market such as Elliott Wave, which is continually counting three and five segmented price structures. Unfortunately, practitioners seem to be reworking wave counts all the time. This is a profound difference than the identification of harmonic patterns. Valid harmonic opportunities must possess the prescribed structure and ratio alignments to validate structure. Regardless of size or price range, the proportional aspects of the structures are uniformly measured and analyzed. In doing so, we can assess multitude of markets that possess such ratio proportions and compare them uniformly across all time periods. Furthermore, these rules create distinct classifications that are precisely quantified.

Harmonic Trading strategies can be applied to all markets on any timeframe uniformly. That is, all techniques possess the same interpretive qualities and must be applied in the same manner in every market and on every timeframe. From stocks to futures to currencies, Harmonic Trading principles possess the same implications in all markets. Although some argue that certain markets may behave differently than others, our primary concern with analyzing price action is to discover consistent relationships that can be derived without differentiation. This is critical because the strategies are hence standardized, and define market opportunities in the same manner. Furthermore, the same relationships that occur on a daily or weekly chart can be found on intraday or even tick price movements.

Some structural market approaches have a tendency to adjust their analysis and fit derived results to conform to the overall picture. This type of interpretive analytical approach is dangerous when it comes to assessing price action because such variation of measurements leads to inconsistent results. Harmonic Trading employs proportional measurements that can be deciphered regardless of the price range. This is one of the true advantages that separates Harmonic Trading from all other methodologies. Finally, such universal application possesses enormous strengths in deciphering market movements that can frequently diverge from the norm. When this happens, traders tend to adjust their analytical findings and begin to create a biased assessment of what is happening. Essentially, when a trader is confused they start guessing and nothing is more expensive than trying to guess which way the market will go. Nine times out of ten that guess will be wrong. Therefore, any market approach must have the ability to be uniformly applied and assess price action from an unwavering basis. There should never be any divergence or adjustment for the abnormal case, as these conclusions are flawed and often wrong.

This has been one of the guiding principles throughout my research. I am always looking for the market relationships that consistently and clearly present readings that can reliably defined probable future price action. Many of the market methodologies that I have studied make room for slight variation of the application of their principles. However, I found that these circumstances led to incorrect assumptions and created

more confusion within the trading process. As I mentioned previously, Elliott Wave is a prime example where traders will conform their structural counts to best fit the current market environment. In fact, the "Elliott recount" that readjusts structural calculations in the event that the market does not adhere to the ideal situation creates inherently flawed structural signals.

Founders of M and W Structural Analysis

There are many people whom have discussed price patterns in the market. However, few assigned ratios to the structures. Robert Prechter and A.J. Frost advanced wave analysis and were among the first to discuss 61.8% and 1.618% ratios with price structures. But, as most people know, Elliott wave counts are quite subjective. For me, I never understood Elliott Wave sufficiently to use it as an accurate and consistent predictive system to trade the markets. Yes, it's a great structural model but it is very difficult to predict accurate waves and trade off that information. Regardless, the real focus of the history of Harmonic Trading must credit those predecessors that laid the foundation for simple structural analysis.

It is incredible to think that 100 years ago people first started writing about the stock market and various strategies to profit from market movements. These were more anecdotal stories but many of the basic technical methods such as Dow Theory were the first to describe market movements and ratio measures. Later technicians focused more on simple percentage moves and also try to identify simple trendline formations.

It is important to understand that Technical Analysis has not evolved too far from the simple trendline/channel analysis established over 100 years ago. Some of the more prominent methods such as Relative Strength, Stochastics, harmonic patterns, Elliott Wave, ratio analysis and other measured techniques have advanced strategies that quantify market movements. Despite this history, I feel there is plenty of room for advancement and for an evolution of Technical Analysis to focus on the realization that market movements possess all of the answers traders need to facilitate trading decisions. It is within this principle that I believe Harmonic Trading derives its greatest strength.

XABCD->Harmonic Patterns

There are a number of technicians over the past century whom have presented individual concepts that have inspired Harmonic Trading discoveries and provided the primary foundation of market research to advance harmonic concepts. Harmonic Trading encompasses parts of many theories and expands upon a variety of basic technical measurement strategies. I have studied most of the prominent technicians of the past hundred years and I have learned a great deal from their initial insights. I believe that it is imperative to recognize these individuals for their contribution. They

have created a basic science around the recognition of market movements, and these works have created the body of knowledge that is Technical Analysis today.

Harmonic patterns are an advancement of a vague identification strategy that labeled structures as five-point XABCD formations. Although the initial tenets of five-wave price structures was first prescribed by R.N. Elliott, the notion that a complex price formation contains relevant predictive value of future price action has been refined by many other technicians since then. Furthermore, the application of ratio measurements has evolved ever since Charles Dow first introduced his rules for Dow Theory that analyzed the market in relation to 1/3, 2/3. Other practitioners of Technical Analysis have added to this foundation and expanded the envelope of understanding over the past hundred years.

Historic Technicians (1890-1970s)

Once I was committed to the study of Technical Analysis, I researched the oldest materials I could find. Historic market insights that were presented decades ago have relevance to modern-day markets. In fact, many of the forefathers of Technical Analysis were keen to emphasize the importance of price analysis over advisor opinion. Illegal speculation and manipulation were rampant 100 years ago and a motivating factor for these pioneers to uncover the truth from price analysis.

The following technicians must be sought out and researched. Most are known for a seminal book or method that distinguished their work from many others. In fact, most people do not know that there are dozens of technical pioneers whom have presented amazing work but they never realized much recognition. I mention a few of these individuals throughout this material and recommend them as well.

- *Charles Dow & Dow Theory*
- *R.N. Elliott*
- *Elliott Wave Principle (Prechter and Frost)*
- *W.D. Gann*
- *Richard Wyckoff*
- *H.M. Gartley "Profits in the Stock Market"*
- *Arthur Merrill (& Edward Levy) = Merrill Waves*
- *Welles Wilder*

Modern Day Technicians (1980-Present)

- *Robert Miner "Dynamic Trading"*
- *Bryce Gilmore "Geometry of Markets"*

There are numerous individuals whom have put forth a dearth of resources but most have simply regurgitated the works of the past masters. It is important though that I recognized two individuals whom have immensely inspired my work with Harmonic Trading. Robert Miner's *Dynamic Trading* (1997) is an Elliott Wave masterpiece that introduces new applications of the standard rules, including unique time and price projections. I have had the pleasure of meeting Mr. Miner one time at a presentation he generously gave to the Gartley Group. Bryce Gilmore's *Geometry of Markets* (1989) is another must-have technical book that correlated ratios with wave analysis in an unprecedented manner. Mr. Gilmore's application of Gann-style ratios and trendlines were applied to his thorough explanation of the XABCD framework. In fact, he presented some interesting combinations of the structures but did so to identify multiple types of complex five-wave Zig-Zag formations. Additionally, his *Wave Trader* was the first program to scan for M & W-type formations. Bryce Gilmore deserves the primary credit for establishing the general measurement principles for XABCD structures. I am immensely grateful for his contributions and I recognize his work as a direct forerunner to Harmonic Trading.

HT Combines Two Schools of Technical Thought

It is important to outline the basis of measurement for harmonic structures. The strategies borrow from two general categories of technical analysis. Harmonic Trading employs ratios with structural analysis in a unique manner but resembles many of the primary strategies from the past masters.

1. Wave Theory-Market Structure (R.N. Elliott/Charles Dow+Others)

Charles Dow was among the earliest of technicians who categorized market movements and proposed general percentage retracements (1/3, 1/2, 2/3, etc.) in his articles for *The Wall Street Journal*. A few decades later, the writings of R.N. Elliott were some of the most comprehensive structural analysis ever presented of his time. His classifications of three and five wave price phenomena were the first prescribed structural analysis that identified the importance of multiple segments. Although the initial work with these structures lacked precise ratio measures, the general wave count rules provided an effective framework to assess the state of the larger trend.

In the same manner, Harmonic Trading distinguishes structural opportunities in the markets. The refinement of M&W-type patterns was a significant step forward in the structural analysis of five-wave price formations. The proprietary concepts of harmonic patterns advanced the primary body of knowledge as it relates to structural analysis of price segments in the same simple differentiation principle as the following:

Does this **M** look like this *m*?

Does this **W** look like this *W*?

I have outlined this concept in prior books but this key recognition of structural differences is the essence of harmonic pattern analysis. When validated by specific ratio alignments, these structures quantify all relevant parameters in the determination of the trade.

2. "Sacred Geometry" Ratios (W.D. Gann)

William Delbert (W.D.) Gann presented numerous measures that have become a primary foundation within Technical Analysis. Tools such as Gann angles, Square of 9, Hexagon, and Circle of 360 became his primary market forecasting methods. Although I agree with many of his Geometric principles, Harmonic Trading has nothing to do with his other areas of study, most notably Astrology.

Although cyclical in nature, Astrology has little relevance to exact prices structures, regardless of what its proponents might argue! In my opinion, the Gann mystique is overblown while I feel his basic technical measures do not receive the credit due. W.D. Gann can be considered as the forefather of ratio differentiation, as he effectively refined concepts from Ancient Mathematics into trend analysis. In this regard, harmonic patterns and their measurements respect the natural phenomenon of cyclical movements of growth and decline in the same manner as Gann's principles. When related to the market, Harmonic Trading also considers trendline analysis similarly, as well. Therefore, immense respect is due to Mr. Gann.

H.M. Gartley

Most popular of all harmonic patterns, the origins of the Gartley have been mired in a haze of misinformation and misrepresentation. I have discussed this previously in a variety of materials, including an article entitled "The Great Gartley Controversy." (Google it) First let me say, I have the utmost respect for his book, *Profits in the Stock Market* (1935). This masterpiece was ahead of its time and it is one of the most detailed technical resources I've ever read. The problem that I had with the initial interpretations of the Gartley pattern was the lack of precision to define exactly what

constitutes valid trading opportunity. This was not Mr. Gartley's fault, especially since he mentioned little in regards to patterns and did not integrate ratios with their measurements, despite contrary opinion. The Gartley pattern that many improperly attribute to his book does not resemble anything to what the industry standard is today. Since I have been unable to obtain permission to feature a copy of the entire page from his material, I have presented the following illustration that resembles his initial structural presentation from his book, *Profits in the Stock Market* (1935). I encourage all serious students of the market to invest the money and buy this rather expensive resource. The painstaking detail and explanation provide accurate technical insights that are still relevant to this day.

Profits in the Stock Market (1935) Gartley, H.M. Lambert-Gann Publishing, p.222.

This illustration represents what he presented in his book. No harmonic ratios. No AB=CD. This was the extent of his identification of patterns structures. I have studied this book intensely and learned much from his work. However, the core focus of his material has been more on cycles and general wave structures. This is immensely important as a clarification of the source of harmonic patterns. Although others have presented various interpretations, the personal breakthrough in my first book, *The*

Harmonic Trader integrated the M and W-type structures on an unprecedented level. Whether I fully understood the uniqueness of this integration or not, the complex rules that defined harmonic opportunities advanced the general XABCD knowledge to convert this structural analysis into predictive trading capabilities.

Arthur Merrill & Merrill Waves

Arthur Merrill in his book, *Filtered Waves, Basic Theory: A Tool for Stock Market Analysis* (Analysis Press, 1977) presented illustrations of a few dozen different M&W-type structures these were more Zig-Zag formations and lacked any ratio measurements. The number of classifications that Mr. Merrill presented seems to have the intention of structural differentiation. It seemed to me he was trying to identify those wedge and consolidation formations that resemble the rules of Elliott Wave. In fact, on page 11 of the book, Mr. Merrill outlined one of the earliest definitions of an *ABCD Filtered Wave.* Although others have presented this illustration around the same time, I have yet to find a more precise presentation that preceded this work. Regardless, his work has been an important bridge between the writings of R.N. Elliott and the modern-day advancements of the XABCD structure.
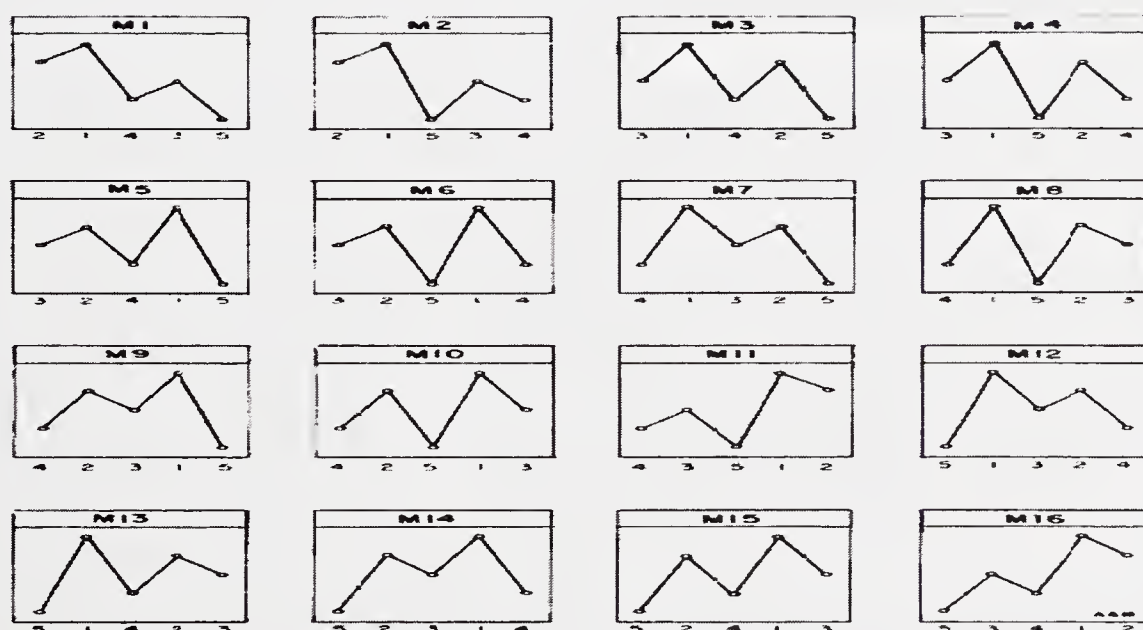
"Filtered Waves, Basic Theory: A Tool for Stock Market Analysis"
pg. 46 Analysis Press, 1977

Welles Wilder

I believe it is important to clarify the focus of the meaning of "technical environmental measures" as more than just indicator analysis. I have long cited Welles Wilder for his ground breaking work with the Relative Strength formula. He presented the indicator in his book *New Concepts in Technical Trading Systems* (1978). He is a pioneer in the field of indicators and developed some of the most popular tools used today. In that one book, he presented Average True Range, the Relative Strength Index, Directional Movement, Parabolic Stop & Reverse, Pivot Points, and Volatility among others measures that are available on every major software platform, including my own. His work has been an immense inspiration to me and it was a driving force behind the creation of the Harmonic Strength Index.

The Relative Strength concepts were revolutionary when he released it nearly 50 years ago. He is to always be lauded for these remarkable contributions. Although it may have been difficult to foresee the magnitude back at this time, he did freely share a wealth of knowledge that has been a game changing perspective on the markets. You could call him a disruptor long before disrupters existed. Furthermore, I personally learned from his work that an integrative perspective will always find new relationships and clarify analysis moving forward. It is essential to learn upon mistakes and proactively optimize these measures, especially with the technology capable today.

Harmonic Patterns > *Harmonics*

The evolution of my research led me to realize that a more precise classification of market movements was required to further my understanding and improve consistency of my analysis. From a technical side – that is, the pure analysis of price action – I was disappointed in the vagueness of many well-popularized methods of the day. Over the past 30 years as a student of the market, I adapted concepts and combined new ideas to create a greater standardization of price structure. As they say, "*Necessity is the mother of invention.*" For me, I realized that price action history could be measured and categorized. Initially, the categorization of price structures as harmonic patterns created specific guidelines for the identification of a trade opportunity. Beyond this, my analysis evolved as I was able to further define unique states of price action, especially relative to measured price environments. This has defined a larger analytical science of structural wave behavior of price action in the financial markets that possesses unique technical conditions as measured by harmonic ratio formulae. These pattern rules and larger technical measures have become collectively known as the study of *Harmonics* in the financial markets.

Theory of Market Mechanisms

My journey into Technical Analysis was the result of following daily stock prices. This was long before the internet and for most beginners if you wanted to create chart analysis you had to track the prices by hand and plot the results manually. As charting technology was introduced in the late 80s and early 90s, the ability to quantify market movements expanded rapidly. Well-known concepts such as Elliott Wave, wedge patterns and standard indicators could finally be automated. I know that sounds like talking about ancient history but in relation to what is happening today, yes those were antiquated markets. Now, the awareness has shifted. Traders are more statistically driven to look at those strategies that can be mathematically proven. Anything that can have a definable edge is of value. Gone are the days of gossiping stock tips. Technology has removed many blatant inefficiencies and the next generation of online trading will eventually replace the need for a physical exchange. Maybe someday the New York Stock Exchange will be a museum? The pace of technology is helping to facilitate this revolution and the focus of market analysis has shifted to unlock those characteristics that define consistent situations that have predictive value.

There is some standardization required in markets analyzed – mostly is important to stick with the markets with the highest liquidity. However, the price action in most major markets expresses unique technical conditions that define predictive opportunities. Market mechanisms such as pattern structures, RSI BAMM combinations and other distinct confirmation strategies provide the analytical tools to interpret price history for an accurate assessment of future prices.

Harmonic patterns are one example of a multi-segmented structure that possesses unique expectations unto the pattern. Other singular measurements provide technical insights especially when combined with distinct indicator strategies. All of these definable phenomena are micro price action mechanisms that facilitate the functional buying and selling that makes the market go. The collection of various technical events manifested by the population of price data provides the relevant signals to define the possibilities of future trend direction. Remember, it is not essential to have every possible harmonic phenomenon to validate an opportunity but the recognition of the primary elements regardless of type will always confirm a trade opportunity.

The Natural Harmonic Reaction Principle

The Natural Harmonic Reaction is the mechanical response of trading behavior at prescribed measurements of ratios that are related to the Fibonacci sequence, and the structural assessments that possess basic wave properties in the same manner as manifested throughout nature. I believe this to be the common characteristic all Harmonic Traders initially realize but it is a concept that needed to be labeled to better understand this phenomenon. Simply stated, correctly measured harmonic patterns provide important inflection points – whether temporary or permanent in their strength

– defining material cyclical points that affect natural growth processes and trend changes in the market. Depending upon the structures themselves, the simple phenomenon of the Natural Harmonic Reaction exhibits a pausing behavior at the completion of patterns that can be quantified to determine its potential in advance. That is, there are important structural areas that measure the extent of how far any market can go in one direction without some type of countertrend. This is simplifying the theory. However, this is the basic structural harmonic measurement technique to provide a uniform means of quantifying random price structures. The key to determining patterns with the greatest potential begins with the understanding that all price moves can be categorized to technical classifications. A potential opportunity as defined by harmonic patterns will always provide either an early signal of impending failure or demonstrative confirmation in most harmonic states of price action.

The Reaction Mechanism

In the financial markets, this harmonic reaction is the natural mechanism of buying and selling that makes it possible for the entire system to exist. This natural mechanism that makes the financial markets go is the exact process that creates opportunity. A market can only move so far in one direction within a certain period of time. Price action must go up to go down and vice versa. Price action must fluctuate to create opportunities for participants to buy and sell. This behavior is cyclical and finite. This price action exhibits a frequency over time that can be charted, analyzed and categorized to define opportunities that possess our probability reactive properties. What does that mean? Essentially, it is possible to look at a market's trading history, analyze critical turning points that have previously dictated predominant trends and seek to capitalize on this repetitive nature.

Within the framework of harmonic patterns, these ratio measurements effectively quantify the finite nature of price action. It is possible to measure the market within such a model and optimize those situations that possess the ideal technical elements to define those price levels that precede significant profitable moves. The patterns present "signposts of future price action" that provide a framework to separate the noise from the meaningful signals in the market. In fact, most price action is merely a reaction within the larger reversal or continuation of a predominant trend. The reaction of price movements can be affected by a number of technical levels that define mini-cycles that play "Tug-of-War" between buyers and sellers as the market attempts to discover equilibrium. The culmination of all my years of work has led me to realize the market provides measurable natural reaction opportunities, where the market can move only so far within a certain period of time. These patterns and larger measurements encompass that limitation and exploit the "finiteness" of any market situation within a certain period of time.

Reactive Rates

This has led to the ability of programmers and researchers to quantify statistically what we can expect from each pattern. This has been a goal of mine for a long time. The technology has progressed to the point where we have the functionality and access to data that makes it easy to crunch these numbers. I spent a great deal of time analyzing and specifying situations that provide proof that certain conditions are more favorable than others. There are many combinations of technical factors that can be considered in an attempt to find the best situations. This too has been apparent process. Nothing is absolute and the understanding of statistics like these must be mindful of the importance in considering any real-life event. That is, anything can happen at any time during the trading process. Therefore, if an aberrational event occurs affects you positively or negatively, it is essential not to lose sight of the fact that nothing is 100% guaranteed. With that in mind, the research that I sought out was geared with the notion that it is important to provide some type of reliable baseline of EXPECTATION regarding the rate of success for each pattern. In addition, other complex conditions do offer higher degrees of accuracy but require patience since these situations take time to develop.

The major breakthrough that Harmonic Trading presented was the notion that the market can be structurally measured to a more complex degree. The differentiation of price formations that appear similar but possess different ratios resulted in a specialization that identified pattern-specific strategies. In essence, the refined structures needed to be treated differently. Once categorized, it was important to discover exactly which measurements were most important for each pattern. The classification of harmonic patterns provided this. After many structures were distinguished, other complementary measures were discovered and optimized to improve the accuracy of the patterns. Throughout all of the refinements of this methodology, the ability to decipher information more effectively has been the primary goal.

Historically, market opportunities were defined by two basic types – fundamental and technical. When we examine all of the news disseminated about the markets including analysts' reports, media commentators and company announcements, there is no clear-cut analysis of these information sources. They can be interpreted and twisted to fit whatever analysis is desired. In particular, fundamental information such as earnings and business forecasts may possess the same progress report but their meaning depends upon the market environment. The markets are easily influenced by news headlines and media coverage. Regardless of the exact trading history, one consistent conclusion of such commentary seems to always point to the next potential problem – whether real or imaginary – that could tank the market's current progress. These varying assessments influence market participants who continually argue a biased bearish or bullish opinion. But, this is what makes a market! The most intriguing part from this process can be found in the prevailing wisdom derived from the recognition that certain sources of market information do not necessarily represent the

true trend of the price action. This is where the comparison of actual analysis of trading history deviates from media mantra. In terms of technical expectations, the importance of measuring the history of price action has less variability and greater reliability. Although accurate technical information may be applied improperly, the purity of the mathematical expression that the harmonic perspective encompasses provides a more unbiased means of assessing the character of the market than relying on subjective data sources.

The Quest for Equilibrium

The market is always seeking to find value. Buyers and sellers are competing against each other because of perceived value. One participant may believe that a certain asset is worth more in the future while another may believe that same asset will be worth less. This is what drives the market's pricing mechanism in action. Therefore, the willingness of buyers and sellers to put a value on to the market comprises the process of price action where the equilibrium value that satisfies all participants is constantly pursued. I say pursued because equilibrium is never actually fully achieved. If it was, there would be no price movement and no desire to participate due to lack of potential opportunity - or even better stated, perceived opportunity. This is the eternal market struggle. The market moves up and down seemingly in a random manner while other times it does nothing at all. This can be confounding to those market participants who do not understand that these are merely phases that have definable characteristics within each opportunity.

Some of the most fundamental impacts on the way that trading is executed and assets are allocated are derived from the perceived expectations of market conditions. Within the entire trading process, the importance of defined possibilities and what to expect specifically from any opportunity is what dictates the outcome. This is an important basic concept that most traders fail to realize. Whether they know it or not, every person has a prescribed set of expectations when they come to market. This can be based on life experience, education or other factors that shape our world. The problem lies within the distortion factor that such preconceived outlooks present. For most, the general expectations of market performance are shaped by what they hear from other people. It may be a financial news channel or an investment advisor. Regardless, there is a problem that arises from a regurgitated analysis that does not properly assess the true possibilities within any situation. Therefore, professional traders develop their own skill sets and rely on their own decision framework to define opportunity in the financial markets. Besides, I have not met too many people whom have relied exclusively on others for investment advice with much success without needing to learn some trading skills.

Defining Bias

The collection of Harmonic Trading measurement strategies is all designed to provide insight to the probable future price direction of the market being analyzed. One of the advantages of basing decisions upon measurements of the market's movements is the defined categorization of expectations that are derived from each ratio. For example, a price segment that reaches a 1.618 extension can be deemed as having moved too far in one direction. Although the price action can continue beyond a 1.618 level, the expectation to favor some type of retracement within this general vicinity will typically guide the proper trading decisions It is important to remember that these ratios are employed within the Harmonic Trading approach because they best reflect the natural growth cycles within many of life's processes. There are numerous examples of such natural cycles that manifest these ratio relationships. Applied to the markets, the analysis of price action considers the "living organism" that is the market. Comprised of buying and selling, the total sum of these actions possesses natural cyclical elements that can be measured. It is in this purest application of Harmonic Trading measurements that we can consistently define the state of the market and relevant targets that are comprised from future price action possibilities. As defined by the rules within the approach, each measurement possesses its own meaning to the overall technical picture. Whether it is a distinct harmonic pattern structure, a significant retracement/extension level or a combination of both, certain price formations and their relevant technical readings define an environment of what is possible within the realm of possibility.

Technical Entities

A harmonic pattern must be regarded as a specific *technical entity* that possesses precise numeric ranges, where all elements, such as execution points, stop loss limits and profit objectives, are defined relative to the set-up. Reversals must be allotted a certain time period relative to the size of the pattern. In addition to the price parameters, all patterns possess ideal harmonic time constraints - as measured from the structure – that create a defined range of duration to gauge the action following the reversal. I have discussed this concept in previous material and have always stressed the importance of defining expectations within a specific limit to guide trading decisions. I believe this transition of converting analysis into concrete scenarios is an important aspect of Technical Analysis in general. Essentially, we must search for those overwhelmingly clear situations as defined by prescribed strategies that define future market movements in a consistent and effective manner with a high degree of certainty.

One of the biggest mistakes by most students of the market is that they only look for the one the tool or one big software program that might lead them to the Holy

Grail. My perspective has always been realistic. In that vein, I have avoided those types of pursuits and have always sought to develop an arsenal of skills that are comprised of precise measurements that signal common characteristics that precede the most substantial price movements. Many of these confirmation strategies are often smaller complementary measurements that can tell a great deal more about the probabilities of a potential pattern. At a minimum, patterns with price levels that have multiple readings that are confirming each other provide a substantial advantage than a random structure. In fact, the harmonic pattern opportunities with the greatest potential are technical entities that include a conglomeration of market measurements that distinguish a unique environmental scenario. Later in this material, we will outline the exact conditions of that distinguish these distinct opportunities with favorable risk-to-reward parameters.

Harmonic patterns can be considered as the primary technical entity of the entire methodology. In this regard, the structural measurements represent the starting point for any opportunity and define the general price range that encompasses the totality of the pattern signal. However, other price action mechanisms such as trend considerations, indicator calculations and timeframe applications are essential in further categorizing these unique technical entities. In concert, the conclusion derived from the structural information provided by harmonic patterns can be clarified to an advance degree.

One of my early challenges was simply respecting the information that the harmonic measurements provided. In fact, I frequently found myself in situations where my analysis of certain patterns tended to indicate price objectives and ultimate possibilities that were seemingly unattainable. For me, I had to change what I thought might happen and focus on the possibilities that the measured harmonic scenario presented to me. I know that many others have shared a similar learning experience.

For many individuals learning these techniques for the first time, the basic ability to calculate harmonic patterns and predict their resulting possibility ignites an awareness of possibility. This typically leads to an experience where their ability in measuring these scenarios motivates them to further understand the harmonic phenomenon. I have seen this in numerous students and I have received many emails from people who begin to realize the importance of understanding these market mechanisms. Once they begin to put together the foundation of measurements, a broader understanding quickly emerges.

Confirming Structural Readings

There are distinct signals that help define when to capitalize on structural opportunities but the general focus should always be on the immediate environmental scenario at hand relative to the price levels established by the pattern. In actuality, the entire concept of technical confirmation in Harmonic Trading is relatively new. Much of my work in this technical area did not begin until several years after the basic rules for harmonic patterns were defined. Once I was able to integrate effective measures, the

importance of confirming pattern structures in this regard became more apparent. In the beginning, I was somewhat of a staunch purist – stating the importance of price action alone. However, the "student-of-the-market" in me always sought to research other perspectives and refine those consistent identifiers that provided reliable predictive capabilities.

It is important to note that although many market measures can be applied to harmonic patterns, I have found most lack a consistent ability to filter the best opportunities. In *Harmonic Trading Volume 2*, I detailed the advantages of Relative Strength and presented new ideas that integrated harmonic measurements with basic structural interpretations. Furthermore, the concepts of Divergence and Confirmation have been expanded to quantify the exact technical environments that best foster the valid reversal of a harmonic pattern. This is achieved through the complex integration of indicator readings, individual price action and trendline assessments. These strategies serve the basic identification principles well, as they define unique conditions where pattern signals are most likely to yield profitable moves.

Triggers and Signals

As I have defined the strategies within the Harmonic Trading approach over the years, I realized that certain points and specific subsets of data history frequently marked important turning points that signal potential future price action well in advance. One of the earliest strategies that I developed was the identification of individual price bars. Specifically, the Terminal Price Bar relies on one specific interval for the determination of behavior at that measured price level. I defined the Terminal Price Bar in *Harmonic Trading Volume 1*, primarily as a means to define the exact point where the opportunity becomes a LIVE TRADE because the execution process can be tricky at the completion of harmonic pattern. Also, it can be difficult to know which exact number is the most important within the specific range of Potential Reversal Zone (PRZ).

Although I believe specific numbers in certain situations are more significant than secondary measures, the importance of analyzing the entire zone comes down to the ability in knowing exactly when the pattern has completed. In doing so, this definitive price point establishes expectations that go a long way to guiding the overall decision-making process. In the same way that defined patterns provide specific price levels to execute a trade, other aspects of this process must be defined to clarify the parameters and the probability of the opportunity. If the price action does not act properly at the initial completion of a pattern, the nature of this behavior in the area of these important technical measures usually provides a warning sign of something other than what is expected that is actually unfolding. It can be difficult to trust that individual price bars can have such an impact and signal potential future price action but the evidence is quite clear. We will look at precise situations that define these levels and the signals that initiate the anticipated price behavior.

It is important to note that the significance of the price action depends upon the nature of the structural measurements in that area. The best examples are found when extreme price action is realized at the completion of multiple important structural measurements. Other conditions that are not essentially at extremes still can describe the true character of a particular anticipated move based upon monitored readings and specific price objectives. In this regard, the arsenal of measurements used to explain the character of a particular market's action considers more than price conclusions. Therefore, the categorization of these situations provides a framework of substantial technical information that can reasonably define finite possibilities in any situation.

Conclusion

As we examine the advanced material - especially trade execution and management strategies, the importance of uniformly defining pattern structures will become more apparent. I go to great lengths in this book to outline exact specifications for each pattern in an unprecedented manner. Much of this information I have not disclosed in any previous material, although I have been aware of these distinctions since the inception of harmonic patterns. It is important to share these details to define these structures as precisely as possible. Not to mention, the categorization of harmonic structures has effectively defined the proper expectations of price behavior. It is imperative to learn the pattern–specific strategies that require different treatment of situations depending upon the measures at hand. From an identification perspective, this book outlines those advanced measurements and goes to great lengths to describe why these specifications work in each situation.

As you begin to study the following material, it is important to be aware from the start that we are quantifying immutable mechanisms of price action in the financial markets. The perspective of harmonic measurements provides a natural framework to assess market movements. Although markets can be influenced by a variety of factors and even manipulated for finite periods of time, the natural function of buying and selling experiences a variety of price behavior phases that are immutable. Simply stated, the market manifests harmonic pattern-related measures without regard to external influences including news events, analysts' reports and even artificial trading behavior. Any trader who understands the basic measurement parameters of harmonic patterns does realize this fact regardless of timeframe or market traded. The most important insight to it all is that our ability to succeed depends upon a framework of measures that reflect the very natural element we are trying to define. Therefore, the harmonic strategies employed cannot be altered or modified because they represent the essence of identifying these natural opportunities in action.

Chapter 1
Core Principles of Harmonic Trading

The Foundation of Harmonic Trading

This book establishes the foundation of the entire methodology to define each step in the trading process. The new strategies are designed to work seamlessly with the identification principles that establish trading opportunities. I think it is important, and I want to take a minute to review the established Harmonic Trading material. My initial work with harmonic patterns required a great deal of manual research to discover the optimal ratio combinations that defined structural signals. Although many of these techniques are common knowledge today, the basic measurement tools were quite limited back then, while few even back-tested their ideas to validate their sstrategies.

The Harmonic Trader and *Harmonic Trading Volume 1* were similar in nature, as they focused on the identification rules for harmonic patterns. Although there were concepts that provided strategies for execution and management, most of the initial material covered only identification of patterns. After nearly ten years of Harmonic Trading, I released *Harmonic Trading Volume 2* in 2007. This was an important advancement of the identification rules. In fact, I was concerned during this time that many were overlooking the importance of confirmation strategies to validate harmonic patterns as trading opportunities. I wanted to share these insights as I discovered more about the relationships of harmonic measurements with respect to price action in the financial markets. In fact, I have been refining many of the new ideas presented in this book for the since then. As I tested new combinations of technical possibilities, I was able to unlock deeper relationships that function like automatic price mechanisms. Of course, many of these situations require a variety of conditions to be satisfied but the derived analysis has become as reliable as harmonic patterns.

From a general standpoint, I have been able to clarify some important concepts within my own journey of market research that has guided my trading decisions in a more efficient manner. Starting from the primary assumption that the market can be measured, the more complex situations that were unfolding manifested characteristics that continually repeat. Many of these conditions were outside of the basic pattern strategies but have proven to be extremely effective when pattern structures are present.

The Market's Signal

The important consideration in this pursuit is to understand that the market is providing its own answers every day. As traders, we must measure and define such price action phenomenon that consistently repeats. Understandably, it can be easy to get overwhelmed within this process but we must never forget that these signals can be unlocked. As I have previously mentioned, we can measure the market to discover the necessary signals of probable future price action. Although this is not an easy task, as many are overwhelmed by the pace of the financial markets, it is this type of chart analysis that separates the everyday noise from the decisive signals within price action trading history.

All participants should be aware of the relevant price history of whatever market they want to trade. Although fundamental and quantitative analysts frequently cite disdain for technical methods, it seems short-sighted for these individuals to overlook the trading history of a particular market as irrelevant. Within this record of price history, charts clearly exhibit the material trading events that help to define important levels support and resistance. In my opinion, any technical information that helps clarify the total picture to facilitate the trading decision-making process must be considered. Beyond this, the collection of harmonic measurements provides this framework of reliable indications of future probable price targets. While other conditions must exist to confirm what any price measurement indicates, Harmonic Trading's predictive ability to define levels of support and resistance makes the difference between success and failure.

The Process of Reaction versus Reversal

I think this one dilemma, one challenge, one conceptual framework – analyzing the difference between a price reaction and a price reversal – describes how to gauge the strength of any harmonic pattern opportunity. That is, what is the likelihood the pattern structure will yield a profitable reaction while assessing the potential for a larger result? I believe there are fundamental tactics that facilitate these assessments and effectively guide decisions in an effective and disciplined manner that optimizes the process. It is this extent of precision that I must emphasize to those traders whom are relying on harmonic patterns as a sole decision module for trade opportunities.

It seems that many – especially traders with less experience whom encounter the harmonic pattern community, seem entrenched in the singular possibility of a "magic box" – a one trick pony approach to easily uncover the "home-run" trades unlike any other approach. Whether this is some hot story from *The Wall Street Journal* or a "Wolf of Wall Street" type scam outfit, it is easy for the uninitiated to fall into the trap of false claims. Although many of these people are actually promoting the harmonic pattern cause, they are doing more harm good by broadcasting unrealistic expectations

with incomplete trading strategies. Yes, harmonic patterns provide some type reaction at the completion of the most distinct structures. In my opinion, this has a tendency to create an image of higher success than what is truly happening. Furthermore, the failure to adequately handle these situations will certainly lead to disappointing results. Much of the material in this book is geared towards the clarification and specification of precise scenarios to help traders understand the importance of a comprehensive execution and management plan as well as identification.

I will cover the strategies in detail however, I must emphasize that blind execution of any harmonic pattern without regard to other technical considerations sows the seeds of failure. To truly distinguish those opportunities with the best chance for success, it is essential to analyze the larger picture relative to the pattern being considered. Furthermore, those who promote the notion of "Set-and-Forget" automatically executed trades ignore the majority of factors that must be considered to navigate the entire process profitably. A trading plan that is designed to automatically sell or buy a position based solely upon identification rules ignores the essential execution and management strategies that are required to understand when price is merely reacting as opposed to establishing a more substantial reversal. I go to great lengths to clarify these issues in this book but it is a fundamental issue that many new Harmonic Traders face. Obviously, traders will make mistakes as they integrate new strategies and this trading plan. However, I feel that many of the errors committed today are a result of distorted information rather than one's ability to execute the prescribed strategies. Therefore, I will emphasize these important points and stress a clear understanding of the concepts that distinguish smaller reactive moves versus substantial reversals. Without properly instructing or educating the full realities to turn this analysis into profitable trading, I believe that the identification strategies would eventually become distorted due to others' inaccurate interpretations.

Throughout the process of writing this book, I have realized "how" traders are learning this material as much as "what" they are focused on. I have spent the past several years talking to dozens of traders to improve my own communication of the strategies that I have initially presented. Clearly, there were many things that I had yet to discuss in any book previously that I considered every day in my analysis. Some of the ideas were proprietary that I wanted to keep to myself but I realized there were a number of other factors that I needed to communicate to traders so they could see the same picture I was envisioning in my mind. Of all of the additional strategies that I assess, I realized that the most important aspect of what I do is to FIRST position myself to benefit from the natural reaction that the market exhibits every day.

As price action "breathes" to buy and sell as its basic functional mechanism, I utilize harmonic measures to define the finite limits of possibility. Since the market can only move so far so fast, the signals that are generated at the completion of a harmonic opportunity will typically provide a pausing phenomenon which represents the initial change in character of the current trend. No matter what time interval is traded, this is the starting point for every opportunity where I seek to capitalize on this limit as I assess other confirmation factors to manage the larger reversal that may be possible.

These situations must be quantified and classified further but these conditions can be measured with precision. Most Harmonic Traders are able to quickly incorporate identification strategies and predictive capabilities. However, most fall short in confirming reactions to ascertain the larger reversal potential at hand. However, I feel that over the years and now in this material, I have closed this gap to pinpoint the early signs that provide insight to know when to be aggressive in profit anticipation versus allowing more time for positions to materialize. Again, this is an area that all traders must deal with but I believe that computer technology has optimized these variables to make high probability decisions with the proper input variables even more efficient.

The Harmonic Trading Process

The steps that outline the Harmonic Trading approach present a simplistic but effective means in navigating any opportunity. I discussed this three-step trading process in my *Harmonic Trading Volume 2,* and I always emphasize the procedural importance that these steps engender. Within each step, a set procedure defines the decision-making process throughout the entire trade. From the identification of an opportunity to the closing of the position at a particular profit target, these are the defined rules that engender consistency and promote success over the long-term.

Three Steps to Harmonic Trading

1. Trade Identification
2. Trade Execution
3. Trade Management

Phases of Trading

Each stage in the trading process possesses its own framework of decision-making guidelines to facilitate and optimize actions. It is important to break down the trading process and define various segments that focus on important sequential events that must occur to ensure success. First, the trading opportunity must be identified accurately. Second, the execution must be determined with coordinated confirmation tactics. Finally, the management of that trade must be defined in advance to optimize results. Anything outside these three considerations is meaningless. From a Harmonic Trading perspective, I have been always focused on those strategies that decipher and highlight the overall picture of each stage in the process and the relevant confirmation strategies along the way.

1. **Trade Identification:** The prescribed measurements define unique conditions that possess overwhelming predictive capabilities. In fact, any trading system must possess uniform requirements that identify particular market conditions as a potential opportunity. These techniques utilize historically proven and repetitive price patterns that capitalize on overbought and oversold signals generated by the market's technical price action. The consistent ratio framework facilitates identifying and differentiating harmonic price patterns as quantified by their structural alignment aspects. Understanding these identification parameters is critical in defining the proper expectations among the various harmonic patterns as an essential trading skillset to capitalize on specific opportunities.

2. **Trade Execution:** At the completion of the harmonic structure, a hyper-focused perspective must assess immediate factors that provide the confirmation of the actual trade. Several considerations must be assessed within a specific time period that is defined by the potential opportunity. The validity of the pattern must be determined and the final action of executing of the trade or not must be considered.

3. **Trade Management:** A prescribed set of guidelines and price objectives dictate actions once a position has been executed with a variety of general considerations involved within the process. The position must be managed with specific rules to maximize the profit while minimizing the risk. Most harmonic pattern situations require a degree of responsive management to maximize the result from the featured opportunity.

Breaking Down the Process

Throughout the evolution of my research, it has always been my goal to clarify the existing principles of the Harmonic Trading approach and to integrate the new concepts that enhance the effectiveness of the entire methodology. I have stressed in each of my books the importance of understanding the three steps of the trading process. Trade identification, execution and management are the three primary steps for the decision-making process. In this book, I go to extensive lengths to discuss trading within the three-step process of identification, execution and management because it represents the fundamental process that all market participants experience - win, lose or draw. More importantly, this is the framework we must revisit when performance is lacking and mistakes are experienced. It is only through such examination can we break down the process of trading to analyze each element of the experience to isolate issues and devise specific strategies that corrects faulty behavior.

In the past, students have mentioned to me that they felt like these classifications were not necessary and confusing for beginners. I typically respond that such terminology helps to distinguish elements of the decision-making process where traders can examine each stage as a building block within a larger sequence of events required to realize a profitable move.

Quite frankly, I feel that there is a lack of understanding regarding these technical processes that are evident every day, in all markets and on all timeframes. Also, it has been helpful in my own understanding, as each concept has coalesced into a larger comprehension that has transformed complex analytical situations into clear and concise conclusions. In fact, when mistakes are made and trading results are negative, it is possible to examine the behaviors and applied strategies that were the cause of these losses. Moreover, these can be identified over the course of a population of trades to isolate issues and integrate improvements in future opportunities.

Measure the Market

More than being a proponent of Harmonic Trading, I am an avid fan of recommending to all Harmonic Traders to underline measure the market. It is the singular phase that I repeat for anyone interested in any technical style of trading. It is critical to make sure traders measure the market's movements and be aware of important trends that can easily be traced out within the overall outlook the particular timeframe. In fact, the phrase "*Measure the Market*" is important for anyone trying to understand the framework of price action the financial markets for profit.

Measured Expectations

Expectations are essential when assessing price action of the financial markets. It is essential to analyze the markets movements within the relevant range no matter what. The measurement of Harmonic Trading strategies such as the Potential Reversal Zone (PRZ), RSI BAMM and reversal types for example, establish common characteristics that repeat within each scenario and help to define where the anticipated price action should unfold. At a minimum, patterns and the other confirmation strategies guide expectations during times in particular when price action behaves unexpectedly or varies from what is anticipated. These expectations associated with the completion points of patterns and the other relevant confirmation strategies facilitate the execution and trade management process by establishing price objectives in advance that are outlined quite clearly. When all actions are defined in advance, the collection of measured moves defines the situation and facilitates analysis to interpret specific technical events that can be anticipated. This approach effectively defines the critical "action spots" within any trend that indicate the future potential direction.

Expectations in the Harmonic Trading Process

In general, properly identified Harmonic Trading opportunities that possess ideal structural measurements and other confirmation elements provide a tradable execution within a definitive price limit will yield some type of anticipated and measurable REACTION in nearly 80% of all cases. Clearly, this is a generalization but represents accurate rate of affected price behavior at the completion of properly defined harmonic opportunities. Sometimes, the initial reaction is temporary or merely consolidates at the completion of a harmonic price level. The degree of this reaction will vary but the pausing phenomenon is one of the basic expectations once a properly pattern is pleaded.

It is important to emphasize that the quantifiable limits that ascertain a successful result of a measured harmonic pattern must be delineated clearly. However, the initial reaction phenomenon related to these measures is nearly one example that is consistently reliable and provides valid assumptions in properly prescribed situations. Other prescribed expectations in the execution and management phases employ predetermined measures, as well. Complementary confirmation strategies and standard price objectives formulate proper expectations in these states of the process.

These are general expectations of the overall process that we will discuss in detail later in this material. The important take away before we even measure is to understand that we are following a step-by-step procedure where all actions are defined. After mastering the framework of expectations that best guides trading

decisions, most traders are able to assess complex harmonic environments within the natural measured limit possibilities. It is important to note that these assumptions do not account for human error nor other external issues. In fact, if traders are having a problem even being in the "ballpark" of being right in a majority of their positions, they are likely doing something fundamentally wrong and/or need to take a look at how they are identifying trading opportunities. This is extremely important because any system that is unable to even quantify the uniform variables that comprise their method of determining what represents a potential opportunity is inherently flawed. Not to mention, there are few methodologies that are able to produce the results these measures provide, especially when all parameters are defined in advance. Again, the ability to analyze each step within the Harmonic Trading process and assess decisions to improve future results is a unique conceptual advantage that helps to analyze one's performance. Harmonic measurements distinguish that phenomenon in their ability to not only read the natural cyclical movements that most markets manifest but establish limits of possibility where the opportunity is finite relative to the completed pattern. More on that later however, it is possible to define precise individual price points that establish reliable markers of direction even in the most confusing situations.

Although this is a simplistic outline of the general trading process, it is important to note a few general conditions regarding each phase. When harmonic patterns form the foundation trading opportunities, those price levels serve as a finite possibility of price on which other measures can be important. The importance of a pattern's completion point is another profound example of determining proper expectations, especially since he anticipated change in price action is one of the fundamental phenomenon we are attempting to predict. Again, the strategies speak to the ability to categorize price movements as specific entities and the measurability of the market to generate its own relevant signals of future product price direction in general.

Within the framework of a harmonic pattern, we see that each phase varies in time which requires the basic awareness unto itself. For example, the execution phase of the most harmonic patterns is typically much shorter than the identification and management phases. The recognition of this fact alone underscores the importance of preparing in advance to properly measure the market, identify all variables relevant to the trade and manage the position optimally. Furthermore, the identification phase of the trading process can vary immensely depending upon the price action for completion point. Therefore, there are instances in the process where one must be more diligent while at other times passive as opportunities develop. This type of "flow chart" analysis is simplistic but it will serve as the foundation for even the most advanced strategies, as all decisions will be related back to the trade identification, execution and management framework.

Bullish Phases of Trading

The following illustration of a Bullish Gartley outlines the procedural stages of the Harmonic Trading process. As a pattern begins to form, the final leg of the structure will not trigger an opportunity until the B point has been violated. Many people attempt to project patterns immediately from the C point but fail to realize the larger complex structure is not officially become a valid opportunity until four of the five price points have been established.
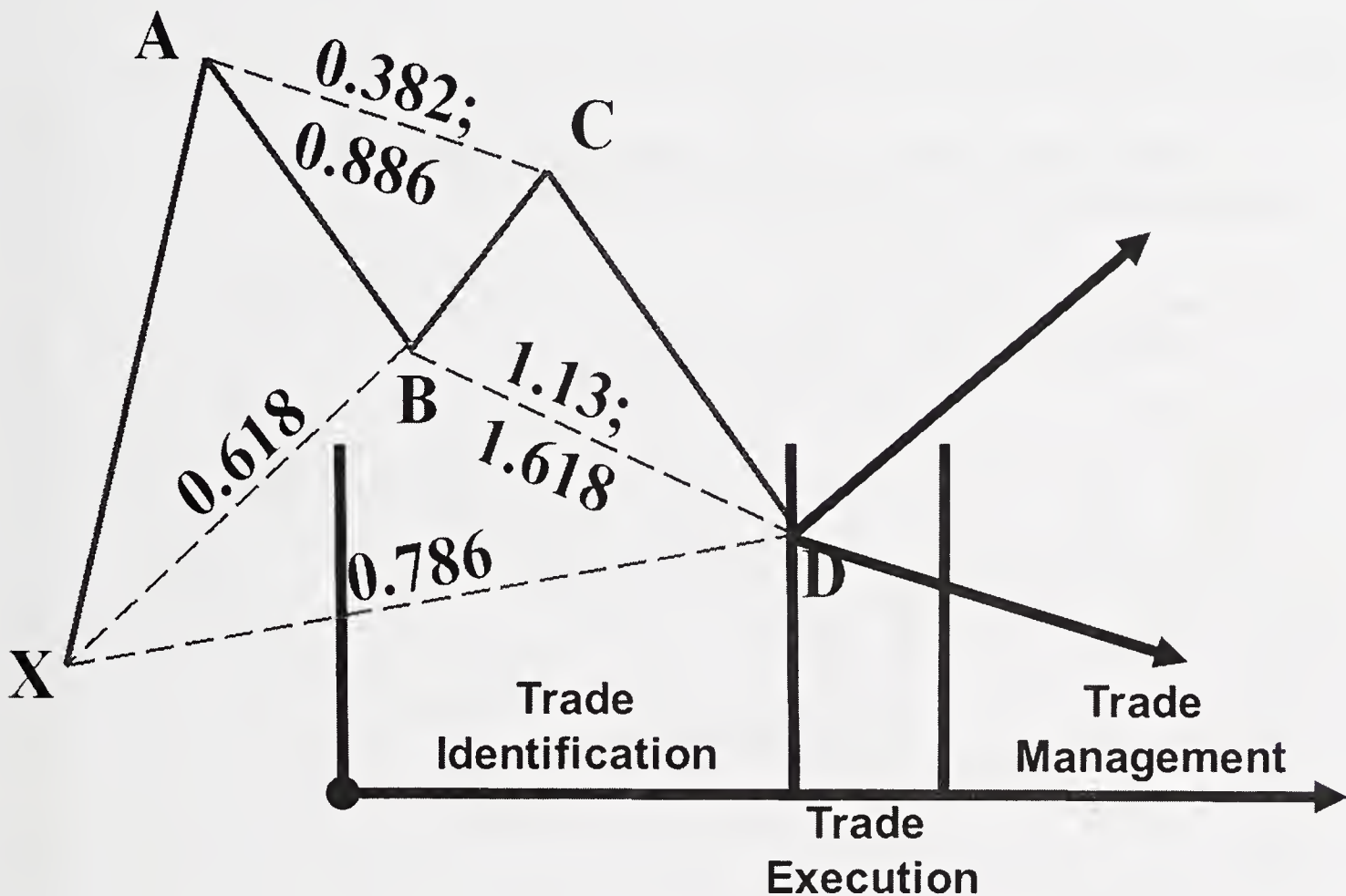
In nearly every instance, the trade execution phase will be the shortest aspects within the process but there are as many things to consider as identification rules and management parameters. I recommend studying trade execution strategies and slowly integrating these techniques into your trading plan to fully grasp these concepts. The identification parameters are now optimized with the latest trading software but still require a basic understanding to ensure proper pattern measurements. Meanwhile, the prescribed trade management approach must be studied in advance to incorporate

effectively the more complex strategies. In each phase, the strategies are not complex but require comprehensive understanding to develop an effective framework of expectations to optimize trading decisions relative to real-world circumstances.

This chart of the US Dollar/Japanese Yen exemplifies the phases of the Harmonic Trading process. Regardless of timeframe, the identification of the opportunity is uniform. In this case, it was quite clear and unfolded over the course of a few hours during an intraday session on the following 5-minute chart. The price action tested this area and reversed relatively quickly in comparison to the total amount of time required for the pattern to complete. In fact, the pattern required nearly 4 hours to develop while the reversal unfolded over the course of less than 30 minutes.
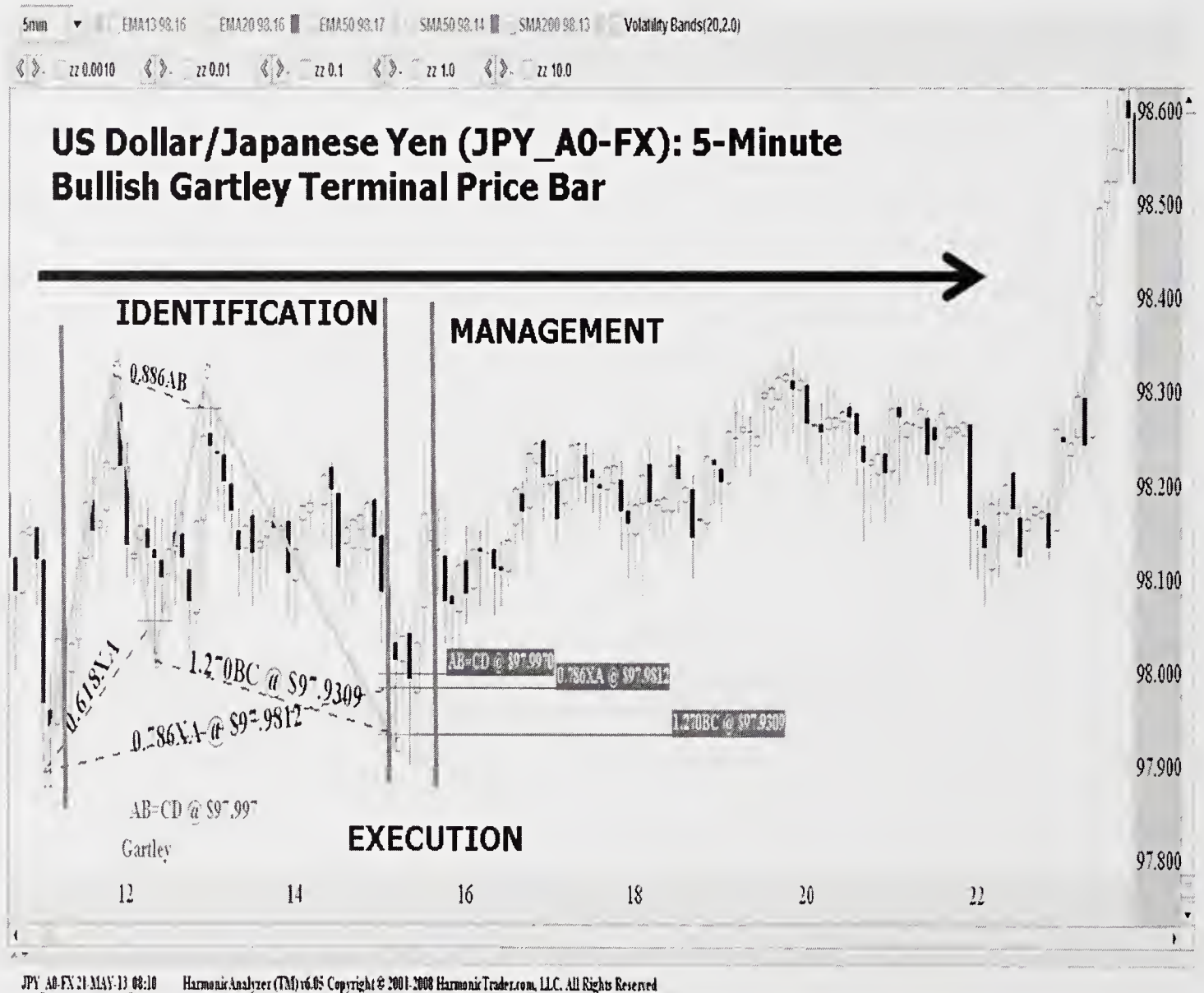
Although current software programs do make it much easier to signal when these situations are developing, the understanding of this constraint facilitates executions and creates a perspective where the analysis of price action at the completion of the pattern must occur within a specific period of time. Meanwhile, the

management of position was fairly straightforward, as it accelerated shortly after completing the pattern and continued higher after a brief period of consolidation.

Bearish Phases of Trading

We will examine each stage of the trading process utilizing harmonic measurements. For this material, it is assumed that you have a basic knowledge of harmonic patterns. Each process has definable and repeatable decisions that must be assessed from start to finish. Regardless of the methodology, all traders must correctly navigate confusing environments to the fine profitable opportunities.
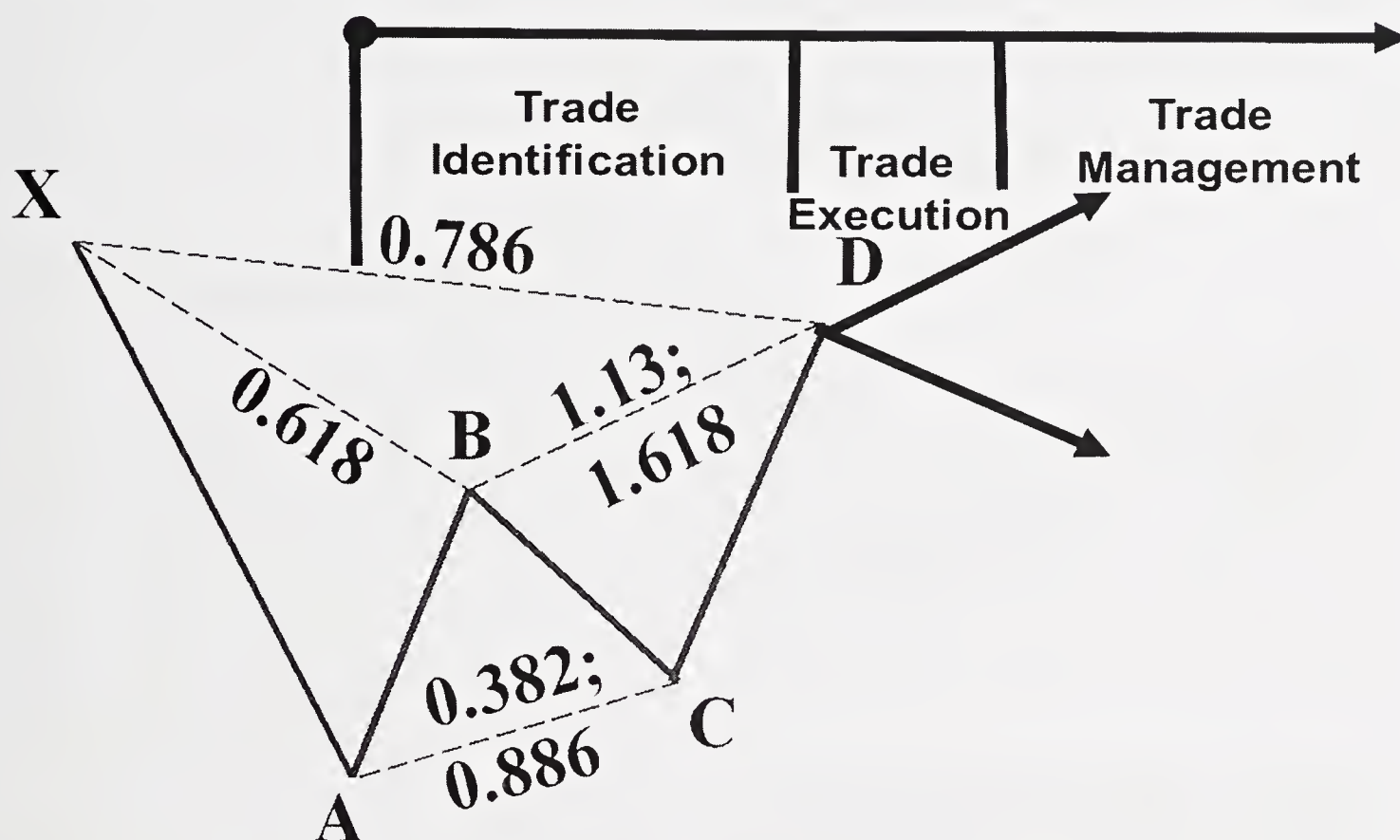
Of all the other approaches that I have reviewed throughout my life, I have noticed that there are common elements each of these methods employ in their strategic plan to be consistently successful. The goal of this book is to impart many of these strategies from a harmonic measurement perspective as well as a more precise framework for traders to assess price action. At a minimum, harmonic pattern provide this framework. Whether a trader bases their decisions on harmonic patterns or not, most agree that the information provided by these structures cannot be ignored. In conjunction with other methodologies, most traders come away with a heightened awareness from the measurements employed within Harmonic Trading.

The following example of the Australian Dollar/Canadian Dollar shows a distinct Bearish Gartley on a 15-minute chart. Clearly, the execution phase was quite narrow. Although these can be tricky at times, the simple awareness of a finite window of opportunity facilitates decisions when the price action reaches the measured harmonic level. This is one example of how expectations can dictate decisions. Although a rapid execution may be required, traders whom are prepared for such realities will be able to pull the trigger when the pattern completes without hesitation. In the case of AUD/CAD, the larger reversal ensued after an initial reaction and consolidation phase. This is common in many reversals as the change in the primary trend frequently requires more time to realize a larger price move.

Australian Dollar/Canadian Dollar
(AUDCAD_A0-X): 15-Minute
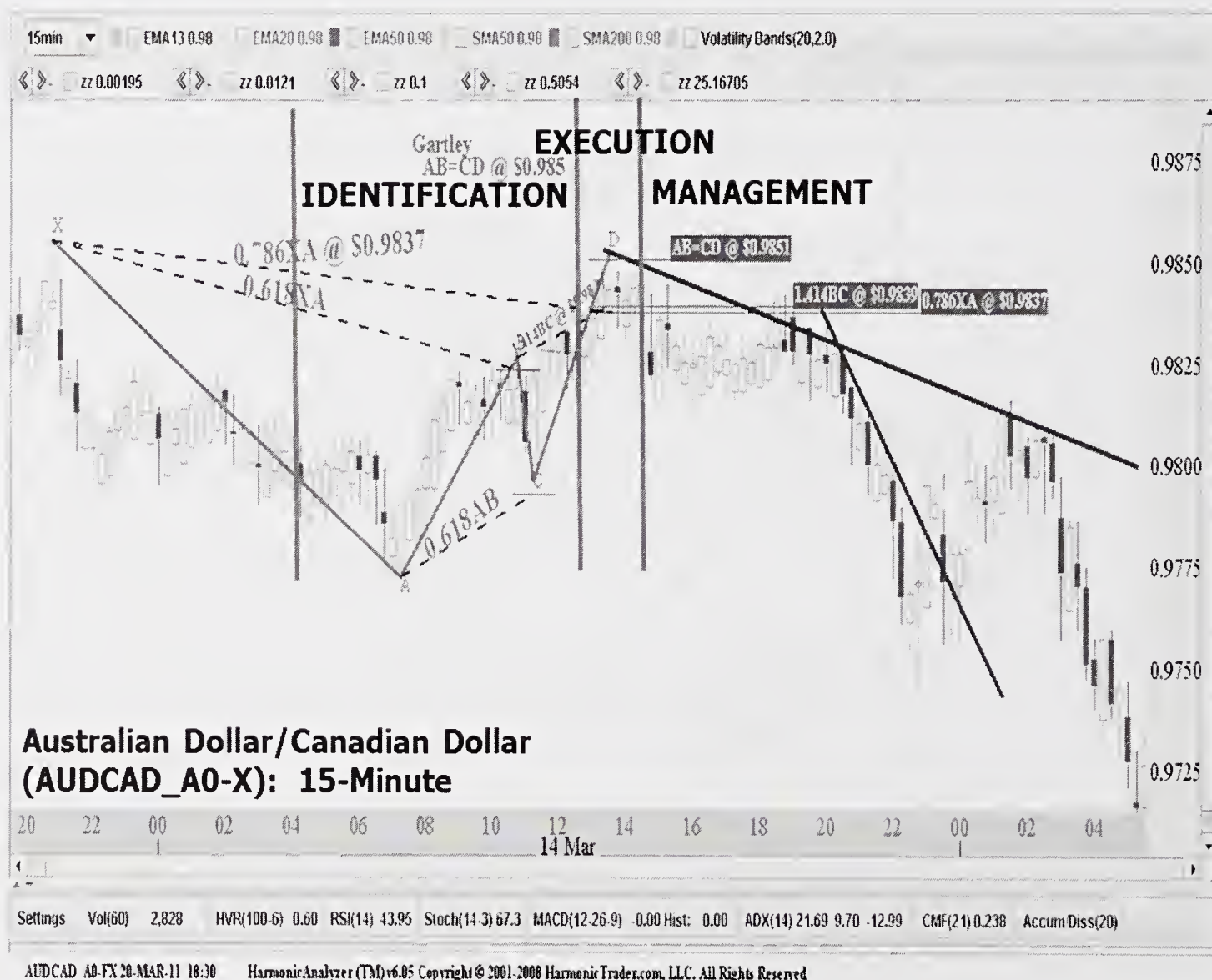
Regardless of your level of Harmonic Trading comprehension, I encourage all traders to assess the specific strategies that define opportunities. There are other well–established and credible analytical approaches to quantify price action. I have reviewed most of them in detail. For me, the research with Harmonic Trading is my interpretation of a variety of prior technical authors integrating a broad array of strategies that I have

developed over the course of my career. It is important to note that not every measure is applicable in every situation. However, an arsenal of reliable signals provides the framework required to understand what is possible in most situations. I will present several detailed scenarios that exemplify these conditions but the most important consideration is the clear delineation of what validates an opportunity. These measurements are defined in advance and provide a prescribed framework that is not subjective. Compared to other market approaches, Harmonic Trading is quantifiable and measurable to a detailed degree that is unparalleled. This is a common distinction that new traders realize quickly, especially as they are able to discover their own strengths and weaknesses within each step in the process. Most important, it is essential to take a thorough review of your current trading skill set and compare the Harmonic Trading strategies to discover the synergies that will guide your decisions in an optimized manner. Again, it is not necessary to integrate every aspect of each strategies presented herein. Rather, the broader comprehension of price action and the critical measurements that define important targets will outline a larger framework that is most effective when the clearest technical readings confirm the primary structural measurement.

Price Reaction

One of the initial breakthroughs in my early work was to provide explanations for specific measurements. Although the most substantial discovery was the differentiation of M and W structures, the larger breakthrough of providing a reliable framework of anticipated price behavior based upon harmonic measurements. Furthermore, the direct link of prescribed expectation with an exact measurement started to create a detailed understanding of what is possible in any trading scenario. Of course, anything can happen in the markets but the majority of the time, the markets will exhibit normal price behavior that will be contained within the harmonic limits of what is possible within any period of time.

For me, I realized the combination of price measurements was the key to accurate assessments and expectations. The patterns are one example of these combinations of measurements. These initial breakthroughs were quite effective but their focus was predominantly measuring the price reaction. Any simple harmonic measurement – a projection or a retracement – possesses the potential to be a material level of support or resistance enough to provide a minimum reaction that can be profitably defined. Important ratios such as the 61.8% or 161.8% measures frequently will realize some degree of consolidation. This is the natural harmonic price reaction phenomenon experienced by these measures. At a minimum, Harmonic Traders are able to understand what these measurements mean, incorporate them in their existing strategies and begin to realize the larger dynamic that this approach provides. We will look at specific price reactions in further detail but it is important to distinguish this type of market mechanism as its own phenomenon.

Technical Environmental Measures

Much of my work has focused on the factors that consistently materialize that provide the highest degree of confirmation to validate opportunities that seek to capitalize on harmonic reactions in the markets at a minimum. The strategies analyze price and other relative measure to define how far any particular price action has traded in one direction. As I mentioned previously, all markets must "breathe" as the buying and selling fluctuates throughout each session. Price action can only move so far in one direction within a limited period of time. Although structural signals of harmonic patterns are powerful, my research has shown that the environmental measures required differentiating where these patterns form on the chart is as important as which pattern forms. So, the combination of both of these measures properly integrates the price and environmental reaction that can be anticipated.

Although the price action of most reversals provides a minimum reaction – the harmonic pausing effect offering immense predictive capabilities in its own right, the larger integration of environmental assessments such as Relative Strength and now harmonic strength indicators refine those structural possibilities to highlight the best situations. There are certain alignments and retracements that are more effective, especially when you need technical conditions exist. The research shows that this integration is essential in all trade decision optimization.

Harmonic Trading Expectations

One of the most important concepts that I will emphasize throughout this book stresses the use of expectations to facilitate trading decisions in definable situations. Some of my earliest discoveries were relationships that identified that consistently provided the proper set of expectations of probable future price action when precise measurement conditions were present. If it was a pattern, important ratio measurement or a clear confirmation trigger, all of this analysis must yield uniform results and provide consistently reliable measurement parameters to assess any situation. For example, one of the benefits of employing ratios to identify opportunities is that the analysis is derived from proportional assessment of the total market action rather than an individual price measurement. Personally, the assignment of expectations and guidelines associated with specific measurements provided me with a plan to handle nearly every situation. Although anything can happen in the markets, the realm of possibility in most situations is actually quite small. In fact, the catastrophic "Black Swan" situation (big loss) and the "Home-Run" situation (big win) are often feared but rarely realized.

Misunderstood Expectations

Other people can employ different confirmation methods and have preferences regarding technical measurement strategies. I want to encourage "The Whatever Works" theory but I have my preferences as well. I think that the public has tested harmonic patterns and found them to be interesting but not satisfied with statistical evidence. I have my own case studies and statistics – proprietary and otherwise – that I have shared over the years. Others have misrepresented results in unauthorized software that has questioned the effectiveness of these measurement techniques. Furthermore, there has been an unrealistic expectation that has been promoted in other courses that does not represent the proper mindset for converting patterns into trading opportunities. I always stress a conservative approach to Harmonic Trading and integrate these strategies only after they are clearly understood to avoid mistakes.

Harmonic Confidence

Although it may take some practical experience for building confidence in these measurements, it won't take long before their effectiveness is realized. Over time, the spread of ratios that help measure structural formations consistently provides reliable price levels to consider. Although not every pattern will unfold as expected, the critical reality that price action does tend to adhere to these natural ratio levels provides an immense degree of certainty to measure where a market may be headed. Harmonic ratio measurements can be used to identify trading opportunities, confirm executions and optimize management decisions. Furthermore, distinct pattern formations have a high degree of pinpointing ultimate price objectives as measured by the complex structure. Again, these situations do not happen all the time but when they do, especially in the clearest of circumstances, the technical possibilities that define the trading opportunity are quite clear.

Core Principles of Harmonic Trading Conclusion

The core principles of the Harmonic Trading approach are founded in realistic expectations. This realism comes from a thorough recognition of what is possible in the markets as well as defining exactly where the trader is relative to the opportunity. It is essential to develop trading skill sets first before trying to navigate the markets with real money in order to achieve long-term success. One of the primary means to understand price behavior in the financial markets is to develop a framework of expectations that defines opportunities and guides trading decisions. I have outlined a few examples. The material in this book will detail other complex strategies that are designed to identify those consistently reliable factors that outline unique opportunities.

Many of the strategies that I have created to describe the phenomenon of Harmonic Trading measurements arose from great deal of trial and error. My goal was to create a framework that describes the unique market mechanisms that were manifested in price action. However, the simple acknowledgment of this phenomenon has been thoroughly reviewed in my previous efforts, especially as it relates to harmonic ratio measures. Therefore, I will not review any basic Harmonic Trading concepts such as the Fibonacci sequence or other examples in nature. I encourage all Harmonic Traders to investigate the numerous examples of harmonic phenomenon throughout the universe. I share numerous resources on my website including a basic foundation of pattern measures. These resources provide overwhelming substantiation of this phenomenon and reaffirm the importance of basing all measures from a harmonic

Chapter 2
Standardized Harmonic Trading Identification Measurements

What Makes Patterns Harmonic?

In my first book, *The Harmonic Trader*, I outlined a trading checklist and guidelines for a trading plan that validated harmonic patterns as definitive opportunities. I believe that book is an excellent resource, especially for new traders as they learn the importance of specific rules for every step of the trading process. I actually make that available for free as a PDF download on my website www.HarmonicTrader.com so that traders can learn the basic foundation of this approach the correct way. It is an important measurement foundation that I would like to review in this material before addressing more advanced strategies. It serves as the starting point for a more complex integration of other harmonic measures that validates structural signals as significant. When we combine distinct harmonic patterns with overwhelming technical readings, a clearer opportunity can be defined and the anticipated reaction from the pattern completion can be gauged for a larger reversal.

I think it is important to understand the measurements and technical considerations that validate certain trades as highly probable opportunities in advance. Also, I think it is important to emphasize the exact measurements that constitute appropriate price levels associated with the tenets of Harmonic Trading. These measurements are part of the skill set that must be studied and carefully reviewed before being put into real action. As I have mentioned previously, it is important that structural signals contain multiple elements to define the situations as reliable opportunities more than focusing on a single measure or pattern. This comprehension comes with experience and practice. Although the strategies can be integrated quickly, the larger understanding and real trading experience take time to coordinate the various aspects of the entire process. So, I recommend going slow until a thorough recognition of all expectations throughout the trading process is fully understood. Once obtained, the insights and framework of these measures outlines those hidden areas of support and resistance that cannot be ignored.

As the Harmonic Trading techniques have become more popular, I have noticed that others' interpretations have failed to include certain required harmonic elements that validate these situations as unique. In fact, it seems that many people are attempting to simply combine multiple ratio measurements without much regard to other structural considerations. The general notion that any combination of ratio measurements can define a potential opportunity is a dangerous proposition. When random ratios are continually attributed to price action, the only possible result is a skewed performance that possesses undefined risk parameters. There are reasons why the harmonic patterns I presented work. At a minimum, their general acceptance throughout the trading world has substantiated the basic framework to quantify these structures when they possess the proper characteristics.

If these price structures do not possess the proper elements that make these situations Harmonic Traders are comparing apples to oranges. I believe this is a subject that deserves further discussion but I will simply stress that traders follow the prescribed measurements that make patterns harmonic. Although others may argue differently, as creator of the standard rules for the patterns, I understand the reason why particular elements of trading behavior quantify the structures as harmonic. Specifically, the relation of price proportions within the scale of harmonic ratios cannot be altered. We utilize the 1.618 and 0.618 measures due to their relation to the Fibonacci sequence. I have outlined these reasons in previous works and I offer numerous resources on my website for more information. I will not present a Fibonacci review here. However, I will stress the importance of using only those ratios that are derived from this foundation. Otherwise, defined trading opportunities will be based on random measurements which are a recipe for disaster.

Harmonic Trading Identification Strategies

The first step in the Harmonic Trading process is to properly identify structural possibilities and validate them as harmonic patterns. The validation process involves several critical measurements that must exist to define the opportunity. It is important to review the basics of trade identification. My first two books covered the majority of the measurement techniques that define structures as harmonic patterns. In this material, I introduce new measures and effective combinations that quantify structures to differentiate random price movements from valid trading opportunities. I have stated previously that I have not address execution and management situations sufficiently. *Harmonic Trading: Volume 2* expanded on these areas and complemented the system of pattern identification strategies. This material presents new strategies that complement the identification system within the Harmonic Trading approach. Beyond the ratio measurements, there are other general considerations that help quantify and classify structures as harmonic.

Harmonic Pattern Size

Throughout the years, I have been frequently asked about the proper size for a pattern. It is quite common for smaller structures to form and yield reactive moves but the situations often do not possess the sheer size in terms of number of price bars or the entire range to be a profitable opportunity. As I previously stated, harmonic patterns are specific sets of data points that comprise a collective signal. However, the minimum size of the structure must be established to measure patterns of significance and ignore irrelevant formations.

Each individual price bar represents the recorded history of trading within a certain time interval. Although the completion of most patterns includes several price bars, there are definitive data points that define the opportunity. Further in this material, we will examine some precise strategies that capitalize on these individual price bars. For now, the general question of how many price bars any harmonic pattern should possess must be answered with respect to a basic scientific assessment of what constitutes a sufficient sample size. For statistical studies, most require a minimum sample size of 30 data points. Related to harmonic patterns, this means that each pattern should possess 30 price bars regardless of the timeframe. Founded in the principle of the Central Limit Theorem, the 30-sample size is designed to ensure a normal distribution of probable outcomes. That is, we can expect a normal reaction at the completion of harmonic pattern opportunity more so in the structures then those that possess less than the ideal sample size amount.

In *The Harmonic Trader*, I established basic guidelines about pattern sizes. For example, I put forth the notion that the larger the pattern the more significant possible reversal. In another instance, a market opportunity that has multiple calculations converging in a specific area will likely favor the largest measured price leg is the most significant over smaller sized formations. Those are valid. However, I feel it is important to establish a standardize means of determining the proper sample size for harmonic patterns. If we postulate that 30 price bars will satisfy the requirements of normal expectations, it serves us to this those opportunities with at least this amount if not more. The problem arises when multiple time intervals have the same pattern. For example, a pattern that forms on a 60-minute chart will also be visible on a 15-minute chart. Of course, the 15-minute chart will have four times the number of hourly bars. If the hourly chart has 20 bars, the 15-minute chart would be favored having 60 bars and being closer to the 30-statistical minimum. However, when an hourly chart has 30 bars or something close to the minimum, sometimes the 15-minute chart more accurately reflects the possibilities of the situation. Simply stated, it is important to utilize that timeframe which is closest to 30 bars as the primary time interval to analyze parameters of the harmonic pattern.

Central Limit Theorem

I personally feel that the future of all market approaches will be optimized statistical analysis that emerges as the primary source of decision variables. As technological improvements put more power into the hands of the individual trader, a more scientific approach to assess market strategies is now possible. I have presented some research regarding harmonic phenomenon financial markets previously but I have withheld a great deal of statistical discoveries because these findings represent the ultimate realization of decades of work. Although one does not need to be a PhD statistician to incorporate these concepts into your decision framework, it is essential to understand principles of statistical probability as it relates to trading behavior. Ultimately, we are all executing definable market conditions that will someday be quantified and categorized into mathematically proven processes.

Since we have established harmonic patterns as a collection 30 or more individual price bars that possesses prescribed ratio proportions, we can focus on distinct price zones where normal expectations of possible outcomes can be realized. Simply stated, this means that patterns and harmonic measures consider will rarely get "blown out of the water" reducing vulnerable conditions that may arise from more random structures. Therefore, the principles of the Central Limit Theorem provide the basis of establishing some basic expectations of price behavior.

According to Wikipedia, "*...the Central Limit Theorem (CLT) states that, given certain conditions, the arithmetic mean of a sufficiently large number of iterates of independent random variables, each with a well-defined (finite) expected value and finite variance, will be approximately normally distributed, regardless of the underlying distribution. To illustrate what this means, suppose that a sample is obtained containing a large number of observations, each observation being randomly generated in a way that does not depend on the values of the other observations, and that the arithmetic average of the observed values is computed. If this procedure is performed many times, the Central Limit Theorem says that the computed values of the average will be distributed according to the normal distribution (commonly known as a 'bell curve').*"
https://en.wikipedia.org/wiki/Central_limit_theorem

Theory of Normal Distribution Returns

All patterns should possess at least 30 bars on the timeframe that they are identified. In fact, I find myself utilizing the 30 number to approximate a sufficient number of bars can encompass any trading situation. As I stated before, the pattern that is closest to 30 bars on any timeframes should be considered the most suitable for the primary pattern. Since all patterns serve as the basic measuring basis for entry points and stop loss considerations, we can assess the completion of patterns within this 30-bar limit as a minimum time constraint to allow the reversal to take hold. There

are other examples where this approximation does work but the principle is founded in expectation of normal price behavior no matter what.

Albeit quite simple, this 30-bar limit has helped to confirm smaller patterns on shorter timeframe for that effectively optimize entries of larger structures. It is only in the past several years that I have been able to effectively explain the need for a minimum pattern size. However, as I have experimented with its application over the years, I know that this basic rule of 30 price bars has been quite effective as a means in differentiating those structures that are smaller and insignificant. If you are a long-term trader, I believe it is important to be aware of the last 30 days at 30 months no matter what the market. If you are a short-term trader, I would suggest always be aware of the prior day's action – that is, the last 30 hours. Finally, the simple technique is yet another important principle to effectively analyze and monitor pattern progress.

Potential Reversal Zone (PRZ) Review

The Potential Reversal Zone was the most important breakthrough concept that put harmonic measurements on the map in general. The Potential Reversal Zone (PRZ) represents a definitive statement of structural analysis where the measured movements pinpoint an exact price level with clear anticipated behavioral change is expected to occur. Although I have stressed that this is merely a starting point, the precision of the measured levels provides a framework in a unique manner.

This concept was one of the first measured means to define some type of expectations with respect to future price action. In this matter, the collection and convergence of measurements defined levels of support and resistance in a unique framework that provided tremendous insight and consistently accurate possibilities relative to the structural assessments being considered. Furthermore, each pattern possesses combination of measurements that the fine a character for each opportunity. A Crab pattern for example would have different trading expectations as opposed to a Shark pattern. These measures have served to become the foundation of harmonic patterns. Although there are a variety of statistical reports regarding the accuracy of the patterns, I have presented the alignments based upon an exact sequence of ratios as well as an assumed tolerance level for each pattern point. Although discovering this tolerance level momentarily, it is important to note that he structures are founded upon the requirement that they possess specific and limited proportions. Collection of ratios used to certify these movements as harmonic patterns comes from a result of years of research that helped unlock many of the measurement discoveries, particularly in M and W pattern analysis.

The Three Elements of Harmonic Trading Opportunities

The original breakthrough that I realized 20 years ago was the importance of applying proper ratio measurements and structural analysis to define cyclical behavior of any quantifiable frequency over time. I must emphasize that certain minimum

timeframes are preferable to exploit these opportunities as well as understanding basic liquidity requirements of any market. Certain minimum requirements are important to avoid those markets which can be prone to irrational volatility swings. In essence, not every market interval or instrument should be traded. For example, tick charts can form distinct harmonic patterns but they typically do not provide a sufficient price range to capitalize on the opportunity relative to the required stop loss limit. These situations are obvious but if in doubt stay out. For most major markets, the elements of harmonic patterns should exhibit ideal relationships and adhere closely to the prescribed definition of the opportunity. The ability to validate these opportunities depends on the following three conditions – Ratios, Sine Wave structures and "environmental" indicators.

1. Harmonic Ratio Relationships

Related to the numerous examples throughout nature, the importance of which ratios are employed is critical to define the natural cycles in the market. Many people are aware of the importance of the "Golden Ratio" phenomenon throughout nature. The 61.8% and the 161.8% proportions are merely a starting point. My initial work tinkered with variations of these ratios - most notable, my discovery of the 88.6% and 113% measures - and other related reciprocal proportions.

The following is a list of the harmonic ratios employed to define retracements and projections within pattern structures. We will review each of the pattern elements later in this material but the singular measurements do not need to be reviewed. If you would like to review more material on individual ratio measurements of retracements and projections, please visit my website at www.HarmonicTrader.com where you will find a great deal of information on basic subject matter such as this. Furthermore, the derivation of these numbers and the significance of the Fibonacci numeric sequence can be reviewed there. I want to focus more on the complex scenarios that these ratio measures encompass in this book.

The important concept is not to get caught up in the mystique of these numbers. It is true that the relationships and properties they identify are quite interesting. However, these are the measures that best define natural cyclical properties in a variety of other examples outside the market. This is natural phenomenon. As I stated in previous discussions, I am more focused with what works, testing those ideas and refining them for complete optimization. We also know that certain numbers work mostly in certain situations. Therefore, a universal application of the same assumption for every measure is just not realistic. But, some type of predetermined expectation at each does provide an analytical framework to assess price action.

One of the most remarkable historic examples of a singular ratio affecting a major market that I've ever witnessed unfolded over the past few years. Ever since the bear market low that was established in 2009, the recovery of the past decade has been questioned continually. I believe this is typical of any market at any period of time in history but the severity of the prior bear market has certainly left an indelible mark

which remains to this day. Simply stated, people are still skeptical after what happened during that decline. Regardless, harmonic measurements defined that bear market in advance, the eventual low of that move and they have effectively gauged the progress over the past 10 years. Despite these overall negative sentiments, the Standard & Poor's 500 ETF rallied sharply from the bear market low. Although the decline from the 2007 peak was quite severe, it has served as a significant and relevant measurement basis to define long-term targets. A fantastic example of this behavior unfolded on the weekly chart where the 1.618 extension served as a clear target throughout the recovery and an important technical target. I had been monitoring this measurement for nearly 18 months prior to its realization, as I covered it over the course of many of my monthly reports.
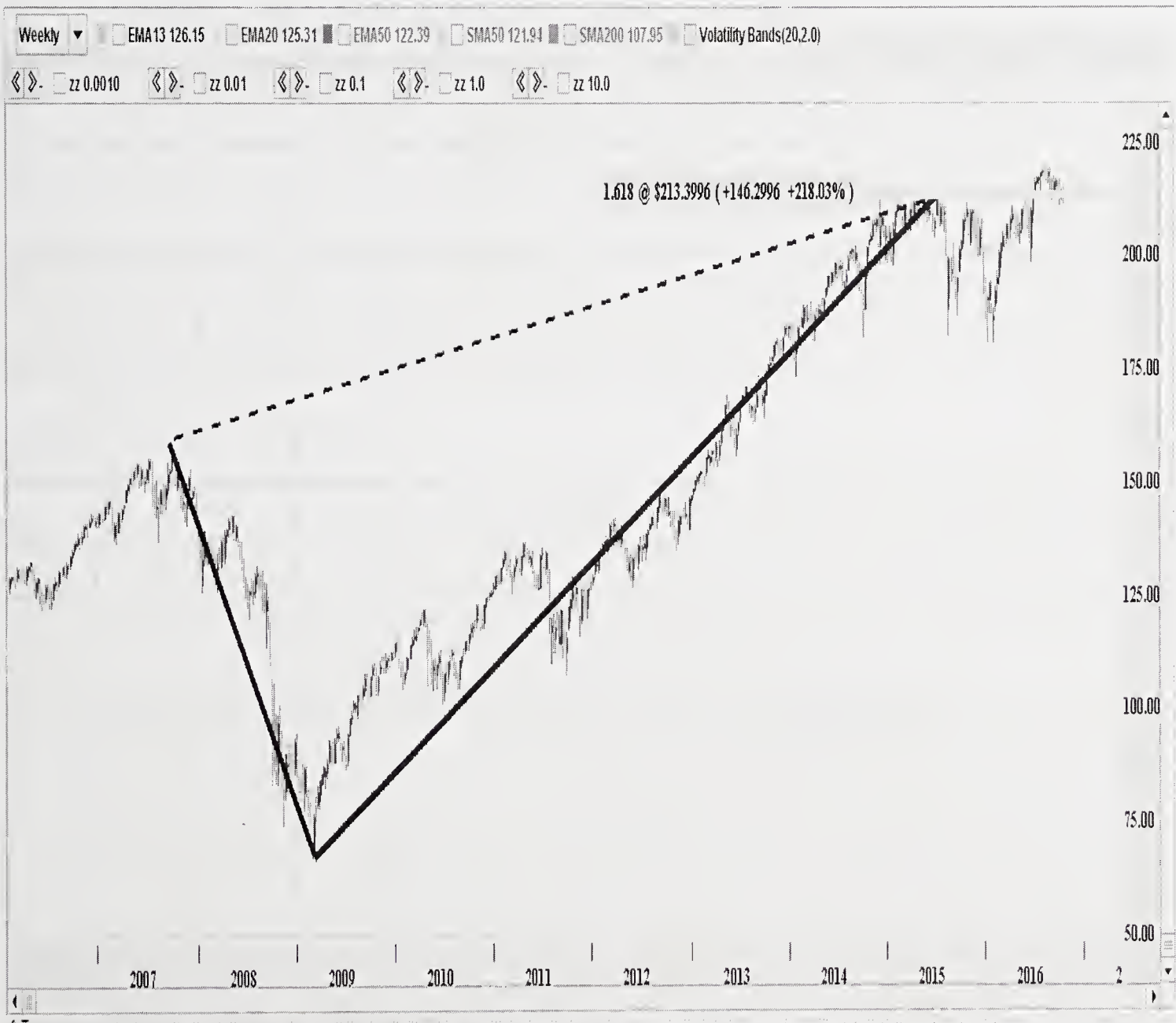
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The ETF possessed a 1.618 extension that completed at 213.40. After nearly 8 years of trading history, the price action tested this level and reversed on the exact day that it reached the 1.618 level. Over the next 15 months, the market slowly declined and eventually lost 15% from the initial completion of that projection. Although the price action has since rebounded, the initial reaction provided a significant opportunity.
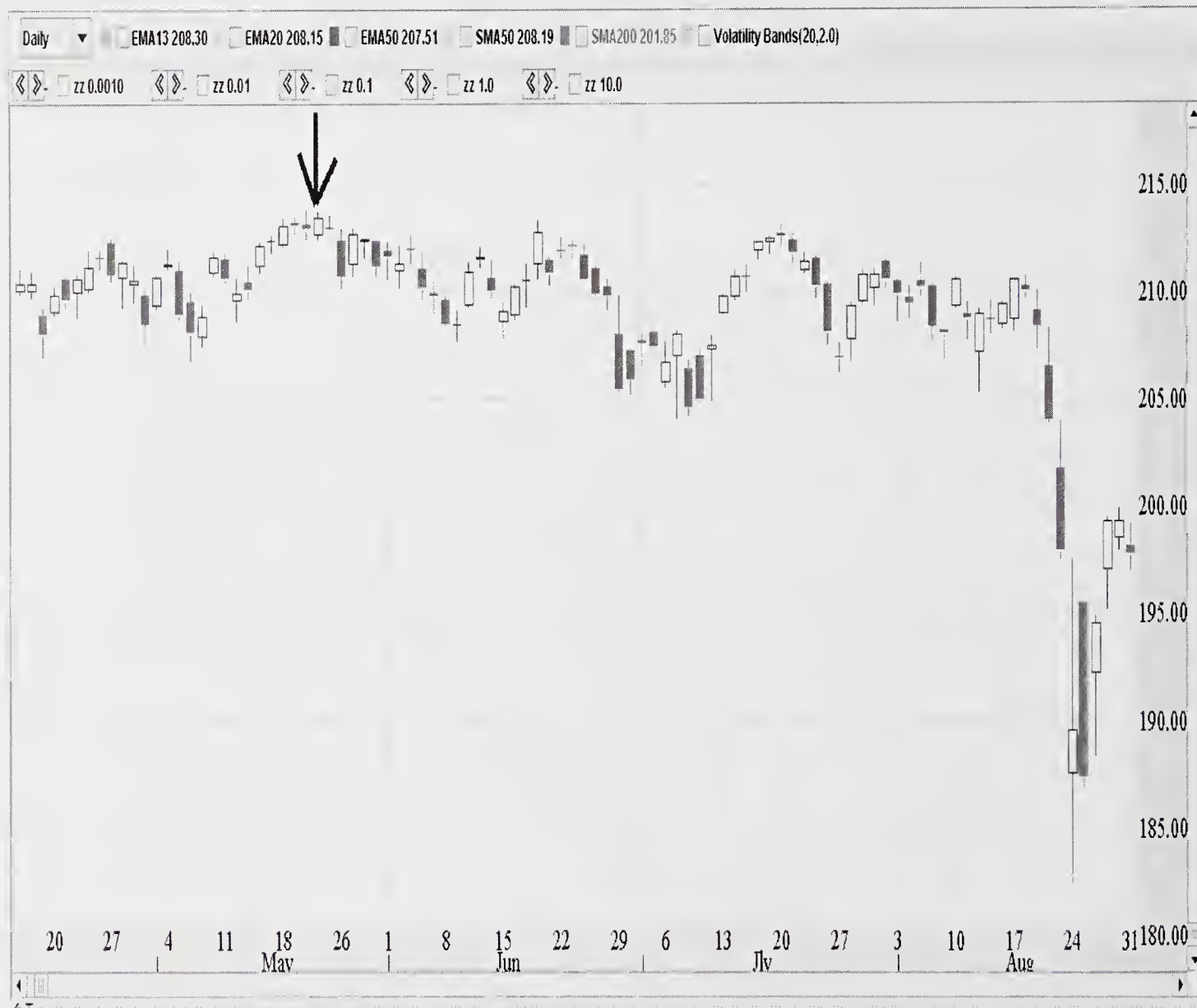
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I must emphasize that this is more than an excellent well-chosen example. I know that the industry is ripe with people showing well-chosen examples that fit the idea they're trying to present. However, phenomenon like this occurs every day on all timeframes but the most fascinating structures and measurements that materialize on long-term weekly and monthly patterns are truly remarkable. The measurement strategies work the same no matter what the timeframe or market. We are analyzing price action in a uniform manner where the framework of measurements provides a consistent basis to analyze trading opportunities.

3. The AB=CD Phenomenon: Sine Waves in the Financial Markets

One of the most misunderstood concepts about harmonic patterns is they are based upon ratio measurements alone. There have been a number of interpretations that attempt to focus on different ratio combinations without respect to the primary structure required to make patterns harmonic. When we realized that the nature of price movements mostly is expressed as a sine wave, it is easier to understand that all price movements have finite possibilities. When we apply the basic assumptions that sine waves possess, we see that the larger mechanisms of buying and selling go through various stages that exhibit these properties. Each price movement – a rally or a decline – possesses particular features that dictate the parameters of their respective move. We don't need to get into a deep mathematical discussion on the physics of sine waves. However, the simple expression of understanding of the force of price movements possesses important expectations and helps to clarify price direction.

Of all the concepts in this book, the understanding that the basic element for all harmonic pattern structures – the AB=CD pattern – is simply a type of sine wave price formation that has limited implications. First and foremost, this structure represents the minimum cycle in the financial markets. There are Zig-Zag type formations that do represent more random trade movements. However, the most liquid markets that possess fluid and normal conditions continually manifest various sine wave structures that pinpoint important price levels of support resistance.

"Market Sine-ature"

The AB = CD element is a simplified term for what I call the phenomenon of in price action that I have termed *Market Sine-ature*. This concept encompasses the study of all AB=CD structures as independent price signals. The ability of the structures to define important levels of harmonic support and resistance serve as the minimum price objective in most scenarios. Furthermore, the additional ratios in harmonic pattern structures serve to complement what these minimum levels establish.

This concept also espouses a certain set of expectations in regards of what this technical entity is all about. If we can identify the structures early and measure their completion points, there is a great deal of clarity that can be attained especially when price action tends to be attracted to completion points of clear patterns like a magnet. I have talked about this "Magnet Effect" of price behavior as it relates to the final leg of a harmonic pattern. In combination with complex patterns, there are defined acceleration situations where the CD leg of the structure highlights a highly probable completion point.

One of the magnet phenomenon that I described in my *Volume 2* was the BAMM strategy that outlined clear harmonic breakouts /breakdowns. BAMM is an acronym that means Bat Action Magnet Move. Simply stated, when a pattern begins to enter the final leg, it accelerates to the Potential Reversal Zone when it exceeds the midpoint at

B. This one phenomenon is the basis for a variety of automatic reactions that occur beyond harmonic limits.

One of the most remarkable examples in recent memory of a singular the AB=CD structure defining critical price levels in impressive fashion was the long-term peak in the weekly chart of the iShares Energy ETF, the XLE. This remarkable sine wave structure defined the area just under $98 as the weekly harmonic resistance. The price action reversed within two weeks of completing the structure.

XLE 28-OCT-16   HarmonicAnalyzer (TM) v6.05 Copyright © 2001-2008 HarmonicTrader.com, LLC. All Rights Reserved

The basic structure possesses this phenomenon as well when the price action in the AB=CD enters the final leg. As the CD leg begins to form and exceeds the B point, the projected minimum of the AB=CD structure acts as the targeted point. These situations become much clearer as you review the specific pivot points within the structure. In essence, the equivalent AB=CD structure represents one completed

harmonic cycle. When the formation is properly identified, it is possible to use this knowledge to your advantage and position trades accordingly.

AB=CD patterns must be analyzed with respect to the situation upon which they are forming. They can materialize as consolidation structures or they can mark important inflection points. In any incarnation, they serve as the minimum limits to define potential inflection points when the basic structure is nearing completion. When we can identify the structures especially with harmonic ratios, we are defining important natural limits that must be considered at a minimum.

The basic AB=CD structure implies an assumption where the market will at least take a breather no matter how strong the trend. Although it is common for the minimum pattern to be exceeded, this recognition helps to clarify those situations when the objectives for a particular move are unclear. These strategies create a means to define basic expectations and minimum price objectives in any market on any timeframe.

3. Environmental Indicator Bias: Relative Strength, Harmonic Strength Index

Although I am known for harmonic patterns, my work - much of what I have not released involves an advanced understanding of measuring market movements to determine oversold and overbought conditions. I spent a great deal of time refining and categorizing Welles Wilder's Relative Strength Index, which I feel is one of the most accurate indicator measures available today. I credit this technical measure for opening my eyes to many relationships and without Mr. Wilder's contribution, I would not have been able to integrate price movements with environmental measures to the degree that I have. Upon this foundation, I have introduced several new perspectives on the indicator itself and I have expanded the premise of the indicator to define new measures that better reflect harmonic price behavior.

Most traders are aware of the standard indicators aside from RSI, most platforms include Stochastics, MACD, Market Profile and many other technical methods. In fact, it is incredible to see the number of proprietary programs that have been developed by individual traders. I believe that technology has been a positive factor on the industry, as greater mathematical substantiation is now as important as reputation. For most of Wall Street's history, asset allocation was more of a matter of zip code than capabilities. In today's world where all transactions are online, the focus has shifted to chart analysis and statistical back testing. It seems that the industry is on the edge of a renaissance in terms of how it will determine asset allocation in the future. Individual advisors are certainly an endangered species in the decades to come.

With that being said, the measurements employed within Harmonic Trading continue to advance the overall understanding of what characteristics define the best opportunities. Most of my research has focused on advancing the understanding of harmonic environments that possess both indicator measures and structural price levels. However, I feel that the gamut of potential patterns that can be measured has been exhausted and sufficiently covered by the structures I have presented in the identification section. Other price measurements that involve management projections and execution triggers beyond identification define the state of the market within the stages of the trade from a harmonic perspective. In this book, there are a number of strategic scenarios that are outlined that incorporate both patterns and indicator analysis. Although the measurement strategies may vary, it is the combination of elements where integration yields the clearest information. We will look at these situations later in this material.

"Market Sine-ature"

One of the problems that I have with people who are attempting to analyze opportunities based strictly on ratio measurements is that they failed to incorporate other critical elements that comprise valid structural signals. It is very easy to measure

from various points and outline those levels where multiple ratios converge. Sometimes, these measurements can dictate support or resistance levels but this is usually short-lived. The more substantial opportunities come from a combination of defined ratio measurements and clear structural elements that comprise more than a simple calculation. In fact, the biggest drawback of the Harmonic Trading approach is the inability of people to be thorough in their measurements and entirely assess all the elements that are required to define valid situations. As a trader, the clearest path to success starts with eliminating the majority of situations that lack potential for any move.

Another sobering fact about harmonic patterns is that it is easy to find the best examples that worked out ideally in prior charts. I know I would benefit personally by saying that Harmonic Trading is the greatest method and that all of the opportunities work out incredibly well. My research reveals that this is simply not the statistical truth. The truth is that most patterns to yield some type of reactive moves following the initial test of the structural completion point but require a means of technical confirmation to yield more than a nominal reaction. This causes problems for people who are able to identify these situations, measure the exact price level but lack the trading skills required to take advantage of this information. It can be difficult to know how to handle the trade if most of the patterns yield only a minor reactive price move and continue in the predominant direction. It is very easy to find yourself in losing positions based on the wrong expectation regarding harmonic patterns.

Sine Wave
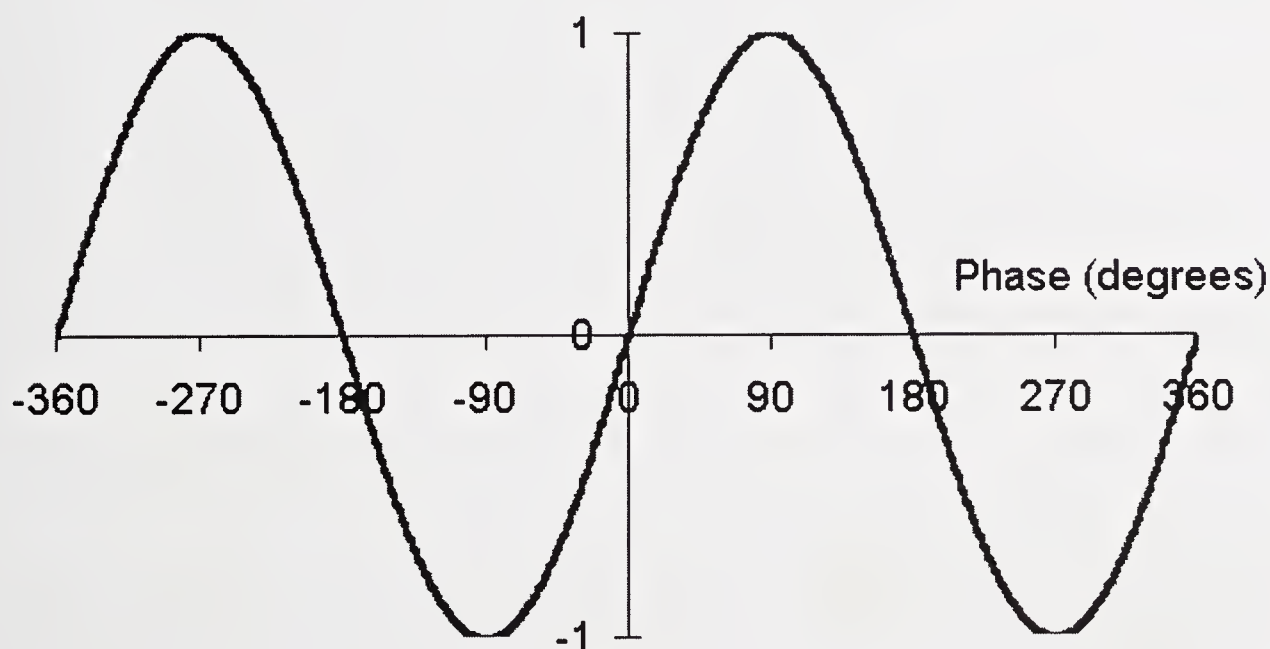
In the same way that we are comparing harmonic ratios to those remarkable cycles in nature, we analyze price action and relate to the behavior and expectations that sine waves provide. Again, it's not my point to get into a long scientific discussion about the mechanics of wave frequencies. I believe that these relationships can be applied in the financial markets because price behavior is just one other expression of an energy wave. If we know that all frequencies (price movements) that possess a measurable variable that can be plotted over time, we can assume that the wave properties that these formations possess will remain relatively constant in a normal environment (think Central Limit Theorem). Since the AB=CD pattern is a type of minimum energy wave in the financial markets where each leg represents a component of one complete vibration, the associated price objectives and completion targets can be accurately measured. These are the basic assumptions that help us define price behavior, especially when conditions seem erratic.

Cosine Wave

This is the "phase-shift" of a sine wave where multiple component waves comprise a complete frequency.

$$z = x + iy = r\,(\cos\varphi + i\sin\varphi)$$
$$x = r\cos\varphi$$
$$y = r\sin\varphi$$
$$\varphi = \omega t$$
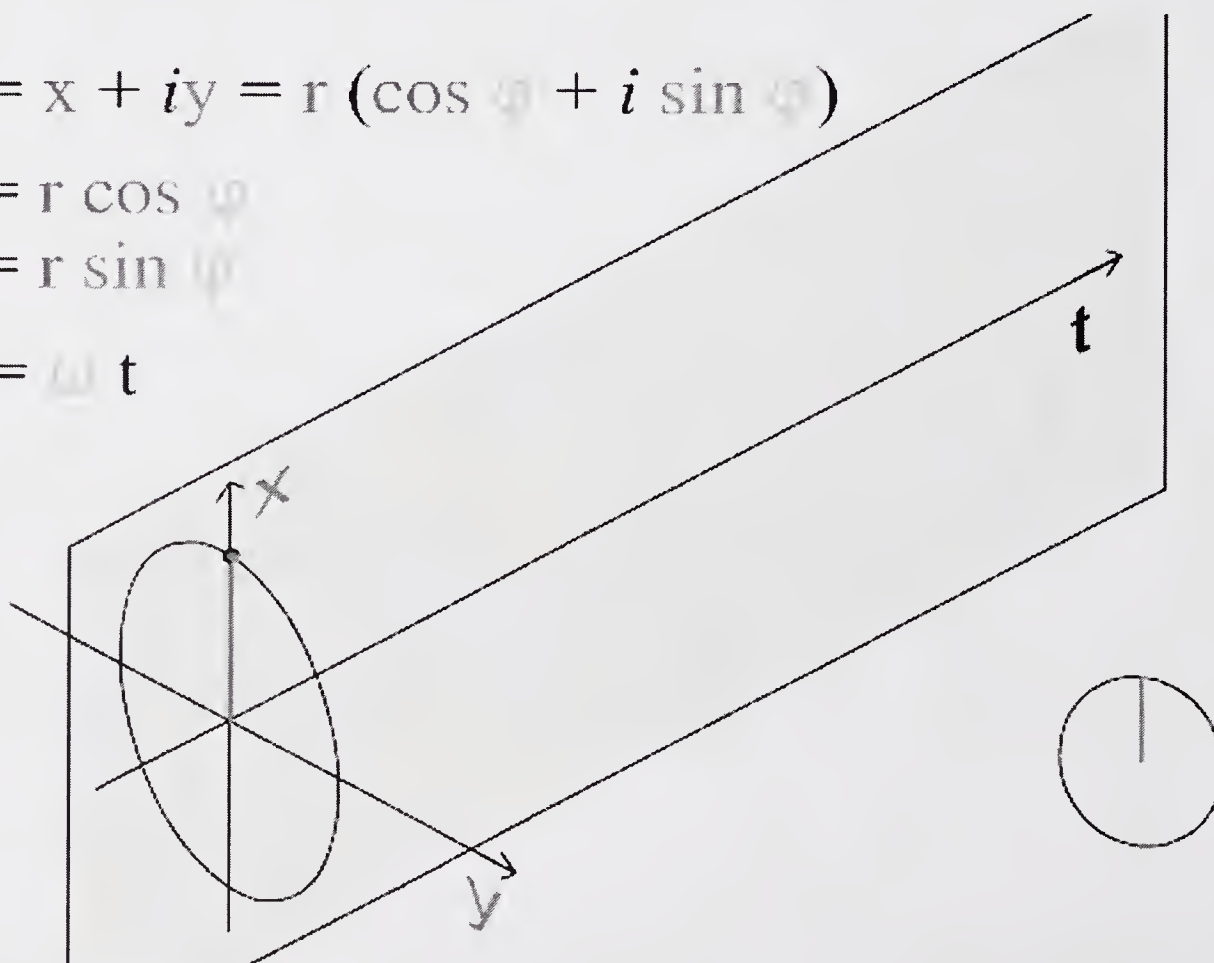
Cosine Waves in the Financial Markets

The combination of buying AND selling in the markets combines to produce a multi-component chartable frequency that possesses clear minimum price objectives. Although the equation mathematically explains the wave structure and the constraints of the move, the key concept is to be aware of the minimum structural parameters for any price segment. Of course, not every movement in the financial markets is going to form this structure. However, it is an effective approximation tool when distinct movements possess the properties to validate its structure.

$$z = x + iy = r(\cos\varphi + i\sin\varphi)$$
$$x = r\cos\varphi$$
$$y = r\sin\varphi$$
$$\varphi = \omega t$$

BASIC COSINE WAVE: AB=CD

Cosine Wave through Time
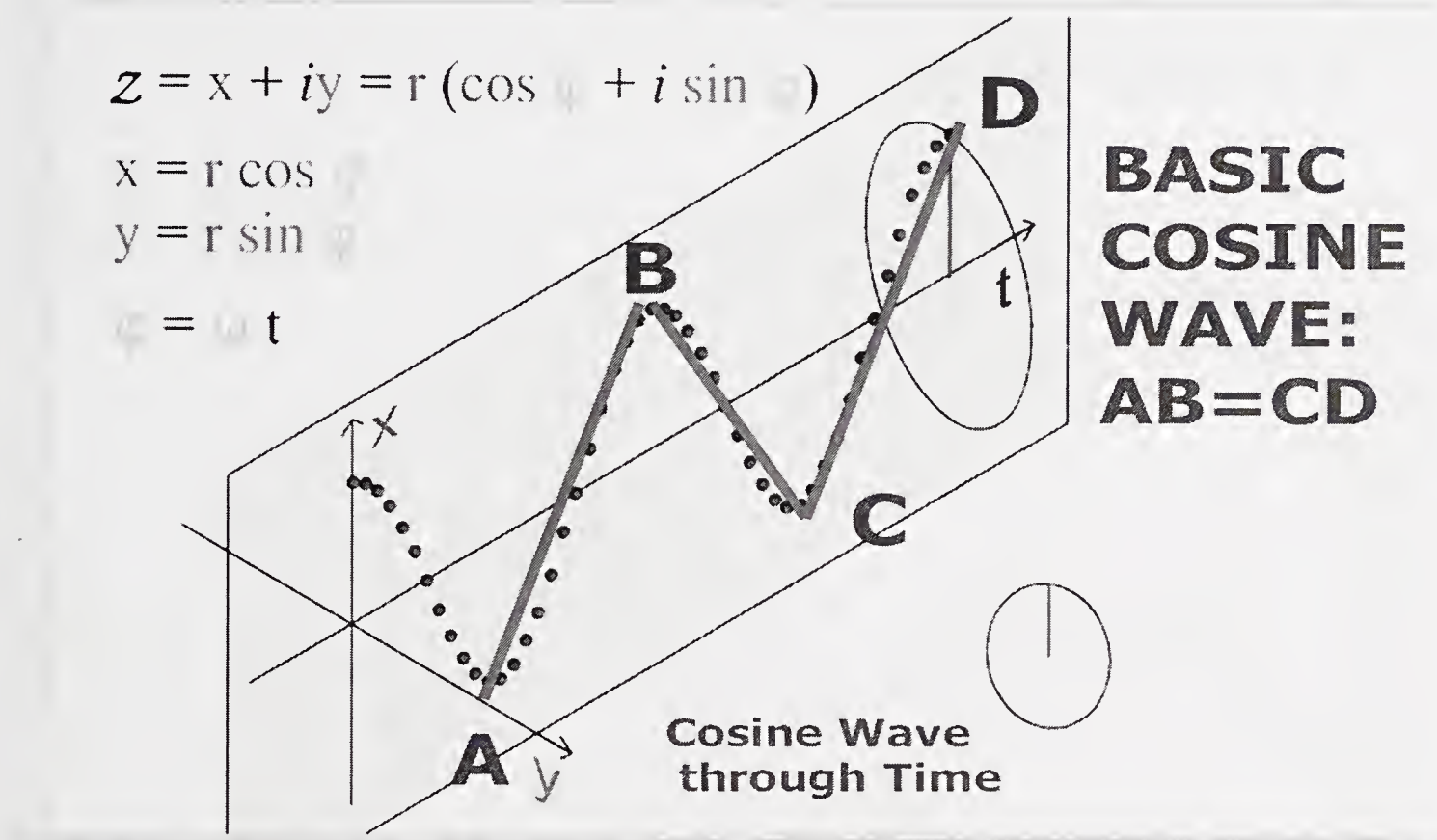
AB=CD Pattern Element

The AB=CD pattern is extremely important because it serves as a cyclical structural signal expressed within a defined trading period. For me, patterns represent various types of cycles. Price action that forms clear structural patterns is signaling a special type of consolidation, where the data set of trades forms a unique mechanical phenomenon. Like leaves that turned their color during the fall to signal the onset of winter, the most distinct patterns consistently signal the correct probable future price

action in this regard well before their fruition. The AB=CD is that cycle to comprise the basic element of the structural phenomenon that has formed. The ratio measurements are extremely important but without the element of the AB=CD structure, they are nearly meaningless.

- The AB=CD pattern is a 4-point price structure that is a minimum requirement for most harmonic pattern setups.
- The AB=CD pattern is a structure comprised of two equidistant price segments that possess harmonic ratios.
- The exact completion point of the AB=CD is the most significant price level, while the BC projection complements the area.
- The C point will be a defining level for the completion of the pattern, establishing the Reciprocal Ratio.

Bullish AB=CD Pattern
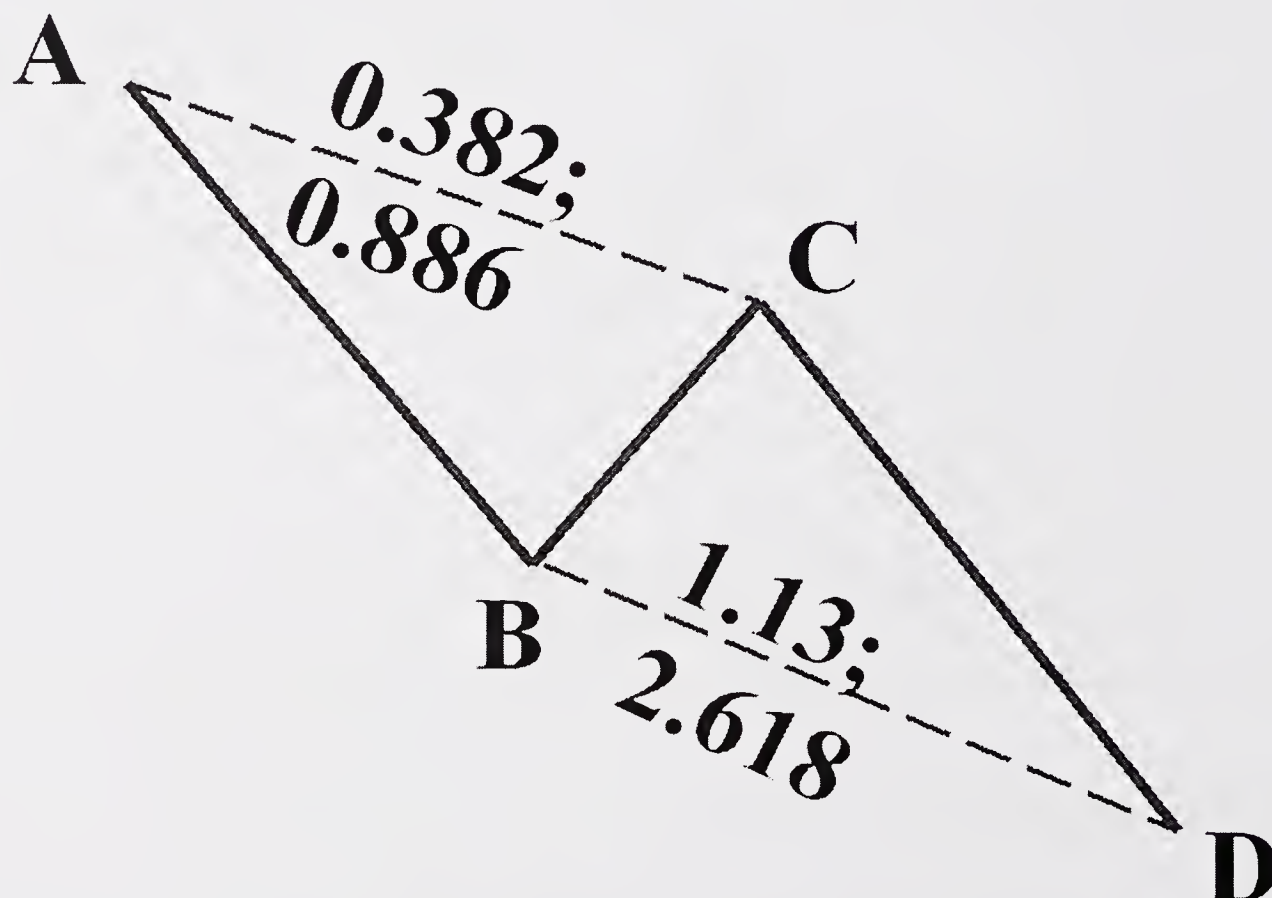
The Bullish AB=CD structure is a minimum element in all patterns. The ratios that comprise the structure are critical in complementing the completion point. Although the AB=CD completion point is the most important minimum for any pattern consideration, the BC projection measurement is critical in confirming the completion for the opportunity.

Bullish AB=CD Pattern

This 60-minute chart in the Euro/Dollar exemplifies what an intraday AB=CD pattern looks like. The structure possesses two distinct legs that were each approximately 125 pips in length. On the exact hour that the price action tested this zone, the market reversed. The most important point of this chart is to notice the distinct structure. These are the type of formations that must be considered. There are many nominal Zig-Zag type formations that do materialize but if you find yourself forcing the search then the price action you're looking at is probably not a valid structure.

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Bearish AB=CD Pattern

     The following bearish illustration serves as an important minimum target in all M and W formations. The structure is quite distinct and possesses a limited range of BC ratio projections to complement the exact completion.
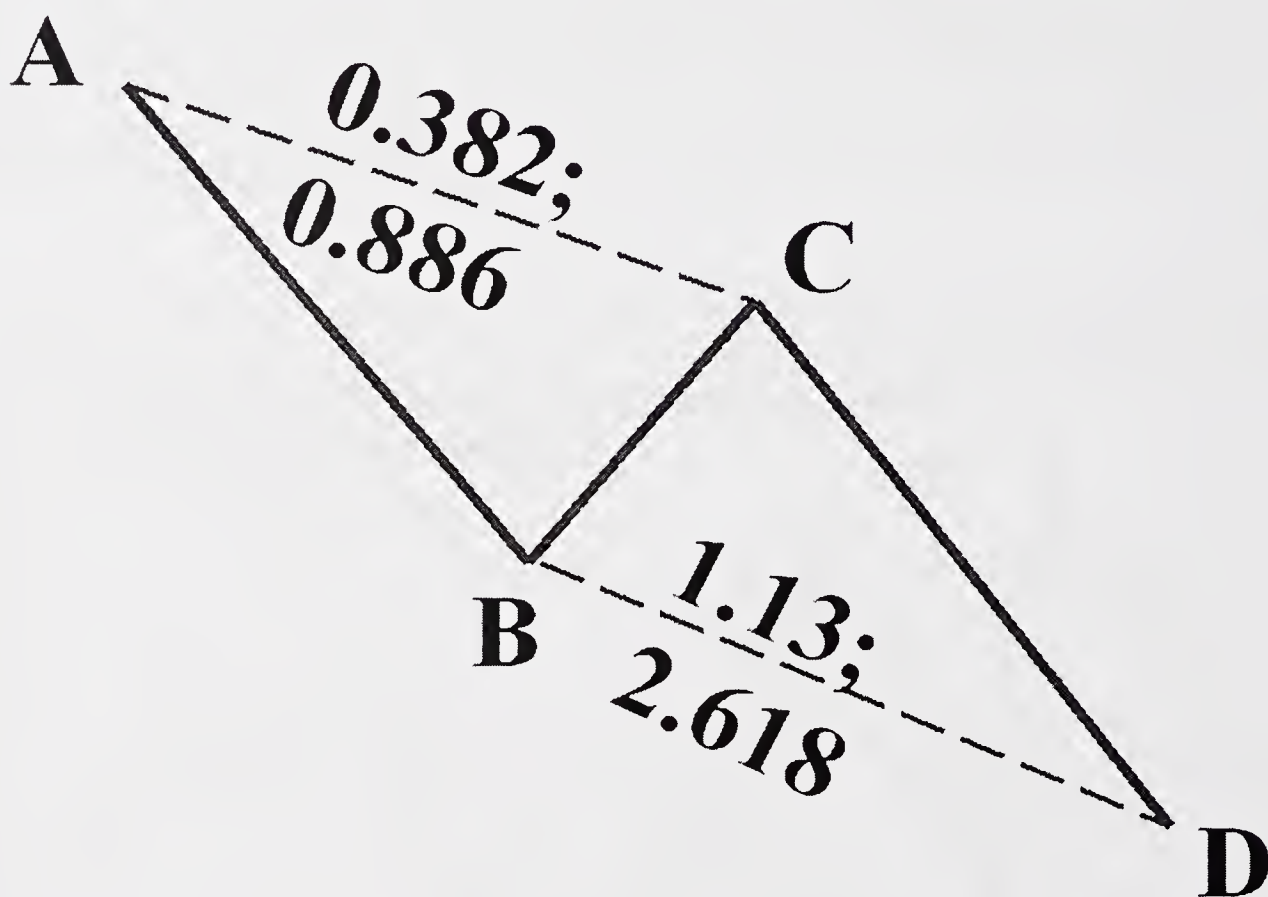
Bearish AB=CD Pattern

The following 15-minute Euro/Dollar chart exemplifies what an ideal structure should look like. The symmetry of the pattern was quite distinct and the exact AB=CD completion point capped the strong intraday rally. The structure was projected to complete at 1.4933 and the reversal topped out at 1.4940. Also, the price action stalled immediately after testing all the numbers in the Potential Reversal Zone. After a few sideways individual price bars, the reversal accelerated.
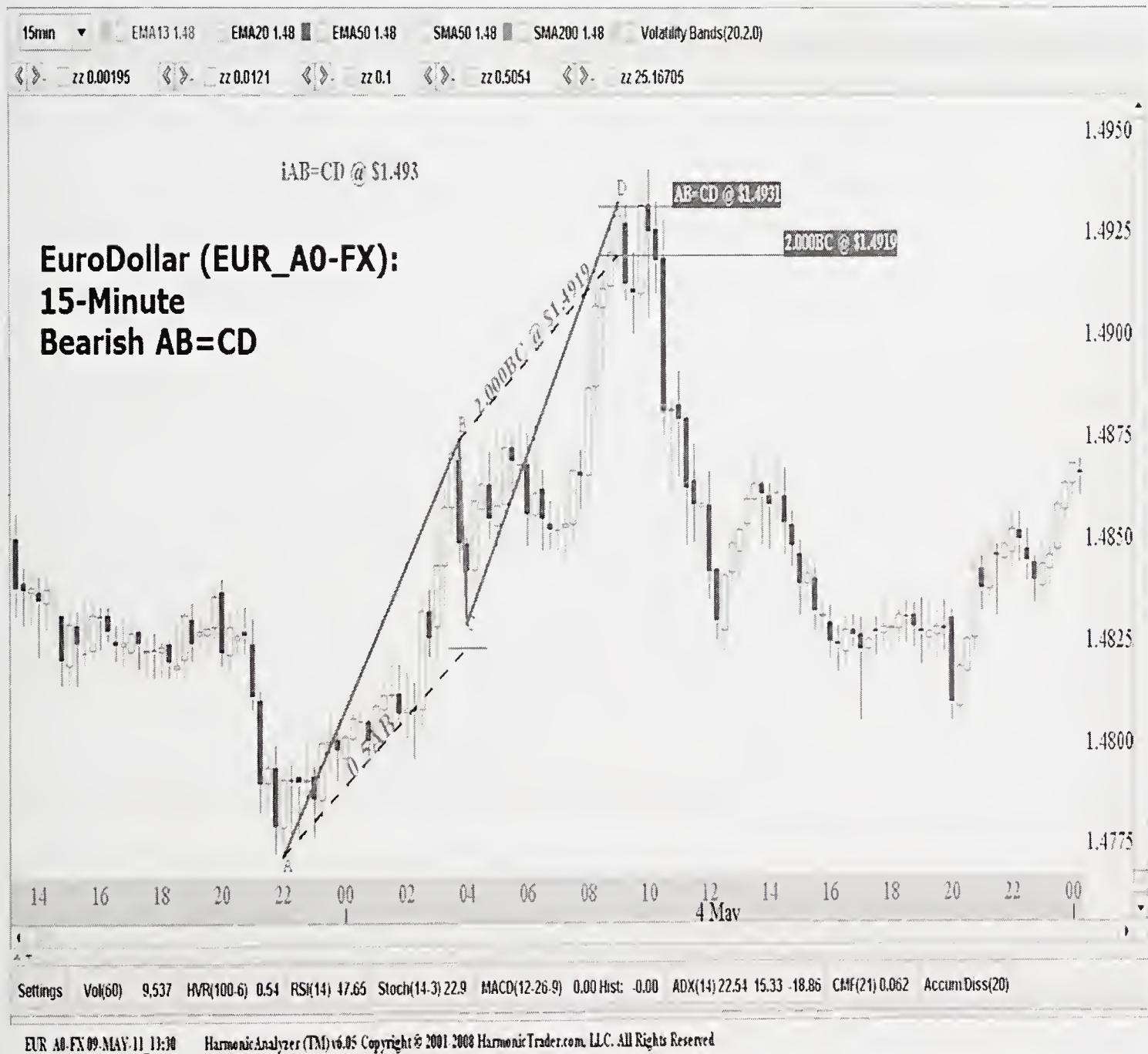
Harmonic Ratios -> Reciprocal Ratios

Reciprocal Ratios are based upon the inverse relationships of retracements versus extensions. These are generally employed to measure and complement pattern completion points. In terms of the AB= CD structure, the retracement ratio can identify the expected extension measurement. We will look at these relationships in detail when we review the 5-0 pattern but for these purposes, we will review their significance.

Retracement		Extension
0.382	>	2.24, 2.618, 3.14, 3.618
0.50	>	2.0
0.618	>	1.618
0.707	>	1.414
0.786	>	1.272
0.886	>	1.13
1.0	>	2.0

Perfect AB= CD

The most symmetrical and harmonic of all structures is the perfect AB=CD pattern. Although other ratio combinations to signal valid starting points, this particular structure was initially identified in my book *Harmonic Trading Volume 1*. I presented a number of perfect pattern alignments but the most important of all of these is the basic AB=CD structure with the 61.8% and 161.8% harmonic ratios. The perfect pattern alignments do present the most ideal structures as they relate to the harmonic ratios. Clearly, the AB=CD element is critical to all structures but without the harmonic proportions of the 0.618 and 1.618 measures for example, we would simply be assessing random structures. We know that these elements are essential to define structures as harmonic. Again, without the standards and constant torsional requirements, all assumed relationships are random assumptions.

The premise of capitalizing on the natural cyclical phenomenon requires that we respect the measurements and execute their prescribed levels. The perfect structures give us the ideal symmetrical model that is closest to what the natural model is exhibited. From general standpoint, these measurement structures can be overlaid with real-time scenarios with a tolerance for some deviation from the ideal. But, it is an effective means of guiding decisions and providing accurate information regarding the predominant trend to optimize executions, reduce risk and maximize profit. So, these perfect structures give us unique situations that possess greater potential than other patterns. However, there will be typically less opportunities.

BC Layering Technique

One of the secondary measurement considerations that is useful is to assess the larger possibilities utilizes a secondary BC measurement in each pattern. This might be slightly different with each ratio combination but there are other complementary measures that help create more defined execution zones when two BC measures are employed.

When we are talking about primary BC measurements, in most cases it will be focused upon the completion of a basic AB=CD structure. These are helpful in the clearest of cases and best integrated with the clearest ratio combinations. For example, an AB=CD structure that possesses a 1.13 extension will be rather tight. However, the 1.27 level effectively complements these pattern types. Although the AB=CD point is frequently exceeded in most pattern cases, the layering measurement defines the permissible level of tolerance for price action to exceed this area.   Although the technique can be applied to all harmonic ratios that define patterns, specific measures are more effective than others. I will show some basic relationships and try to keep it simple. I could go through dozens of combinations but I feel that the basic concept can be best represented in the perfect harmonic ratio situations.

Bullish AB=CD Pattern with BC Layering Technique
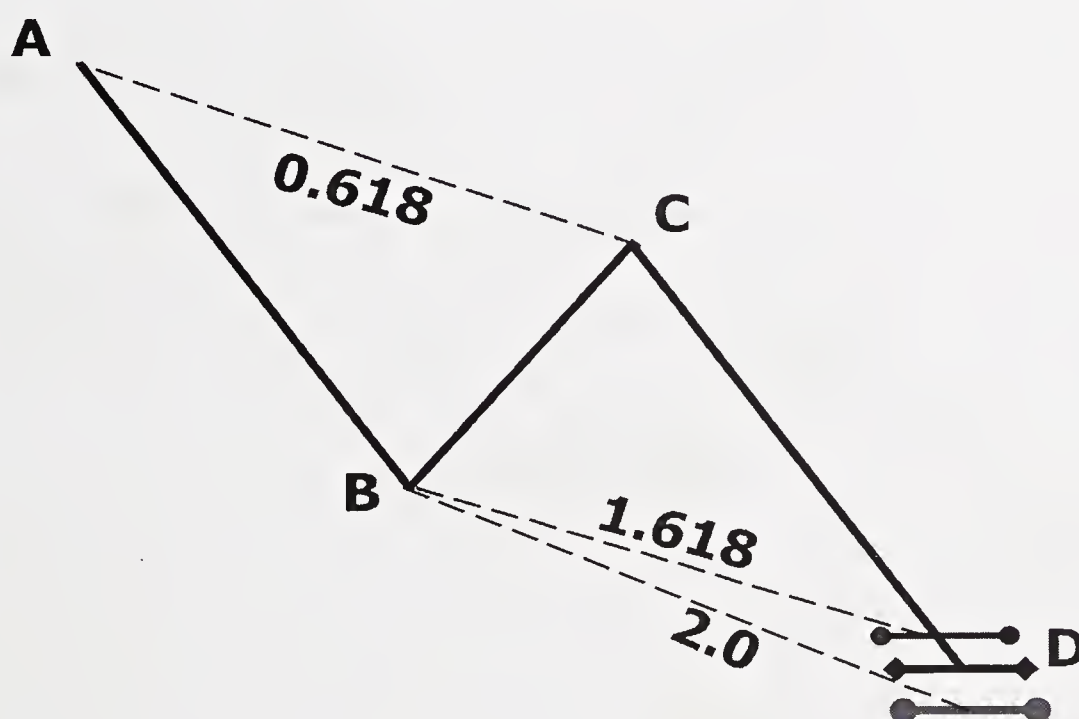
Employing the most common BC layer situation that utilizes a 1.618 and a 2.0 BC extension with the AB=CD pattern, we can create an effective tolerance to facilitate decisions at support/resistance. In the bullish harmonic support zone, the 1.618BC

extension will precede the exact completion point pattern. In these situations, the AB=CD is the most important point within the range but the real-world trading action can exceed this area. This is when 2.0 BC measurement serves to gauge how far the opportunity can tolerate this trading action beyond the ideal measured level. In other situations, the BC layering technique can help to optimize stop loss measures as well.

Bullish AB=CD Pattern Potential Reversal Zone (PRZ) with BC Layering Technique

Since the AB=CD is a mandatory minimum, it is common for price action to exceed this area on the initial test and indicate that the Potential Reversal Zone will not be valid support. We will look at confirmation strategies later in this material. However, the additional BC layer at the pattern's completion point adds a degree of precision to these situations.

1.618BC

AB=CD

2.0BC
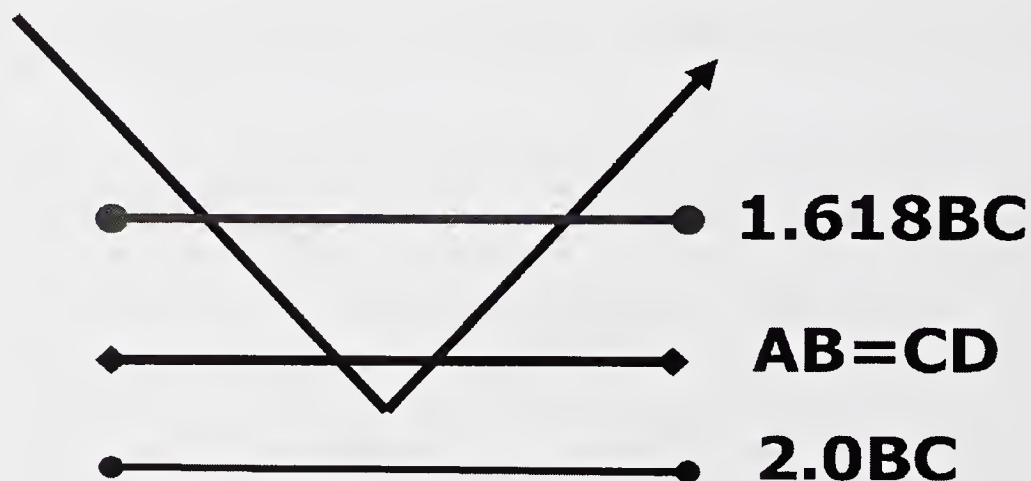
The following chart of the British Pound/US Dollar exemplifies how real world trading action can exceed ideal patterns. This situation exemplifies how price action can be somewhat skewed and reverse in irregular fashion. Clearly, the AB=CD structure defined support at the 1.4430 level yet the price action stabilized below this area before reversing significantly. The AB=CD structure possessed a 2.0BC extension and the next harmonic level of the 2.24 serve to gauge the excessive action beyond the ideal support.

British Pound/U.S. Dollar (GBP_A0-FX):
15-Minute
Bullish AB=CD Pattern
BC Layer

Bearish AB=CD Pattern with BC Layering Technique

In the bearish harmonic support zone, the 1.618BC extension will precede the exact pattern completion point. In these situations, the AB=CD is always the most important point within the range. This is when 2.0 BC measurement serves to gauge how far the opportunity can tolerate this trading action beyond the ideal measured level.
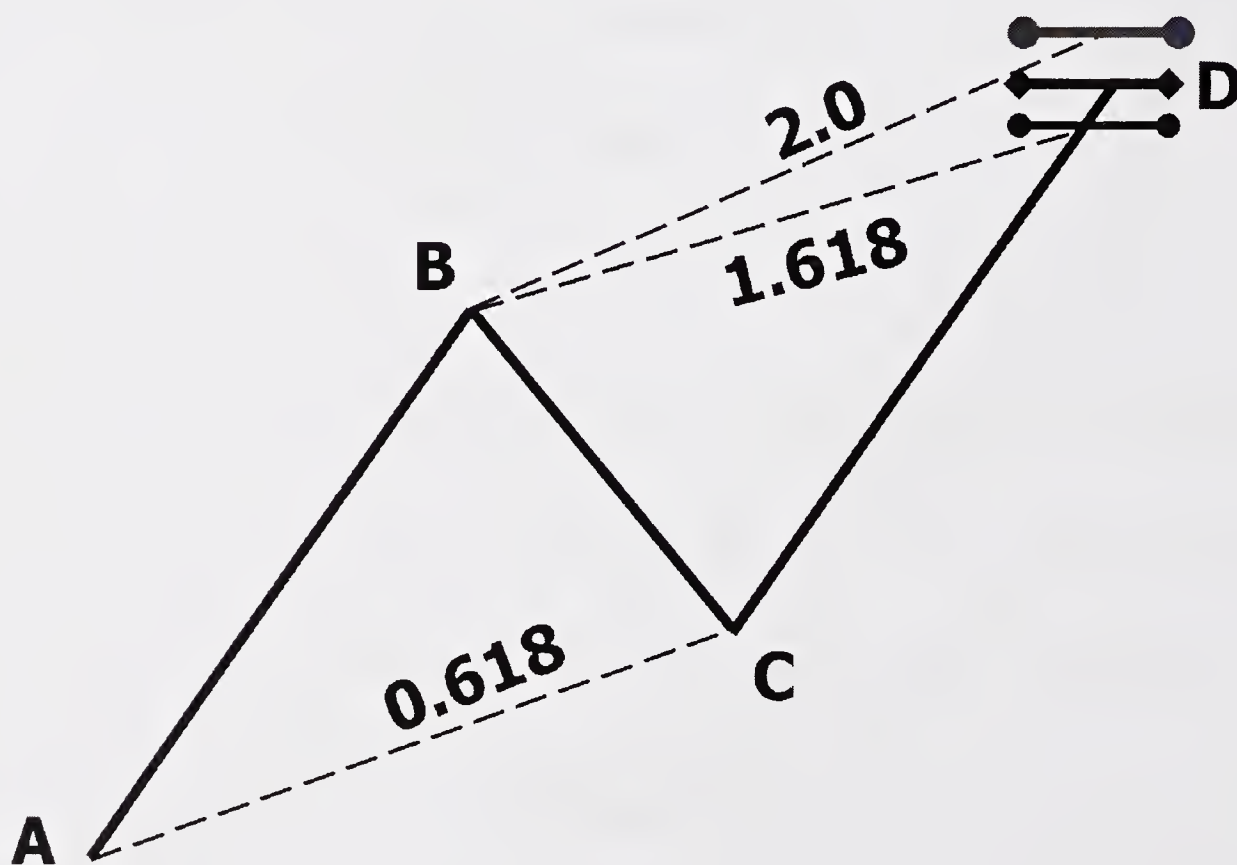
Bearish AB=CD Pattern with BC Layering Technique
Potential Reversal Zone (PRZ)

The AB=CD is a mandatory minimum but it is typically exceeded. The initial test will validate the Potential Reversal Zone as important resistance. The additional BC layer creates an additional tolerance to gauge the price action at the completion of the pattern.
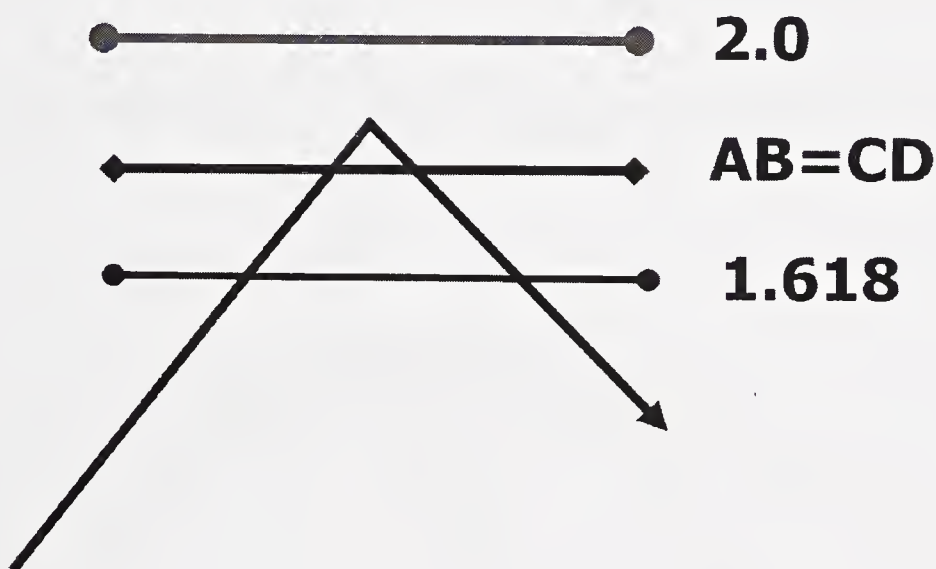
The following example of a Bearish AB=CD in the NASDAQ 100 index possesses a 1.618 and 2.0 BC extension with the AB=CD completion point in the middle. Although this is a perfect AB=CD structure, the 2.0 BC layer provides a critical gauge of tolerance beyond the ideal measure. Both the completion point of the pattern and the 1.618 BC extension defined the area just above 4700 as critical harmonic resistance while the 2.0 measurement serve to define the limit of the structural possibility.
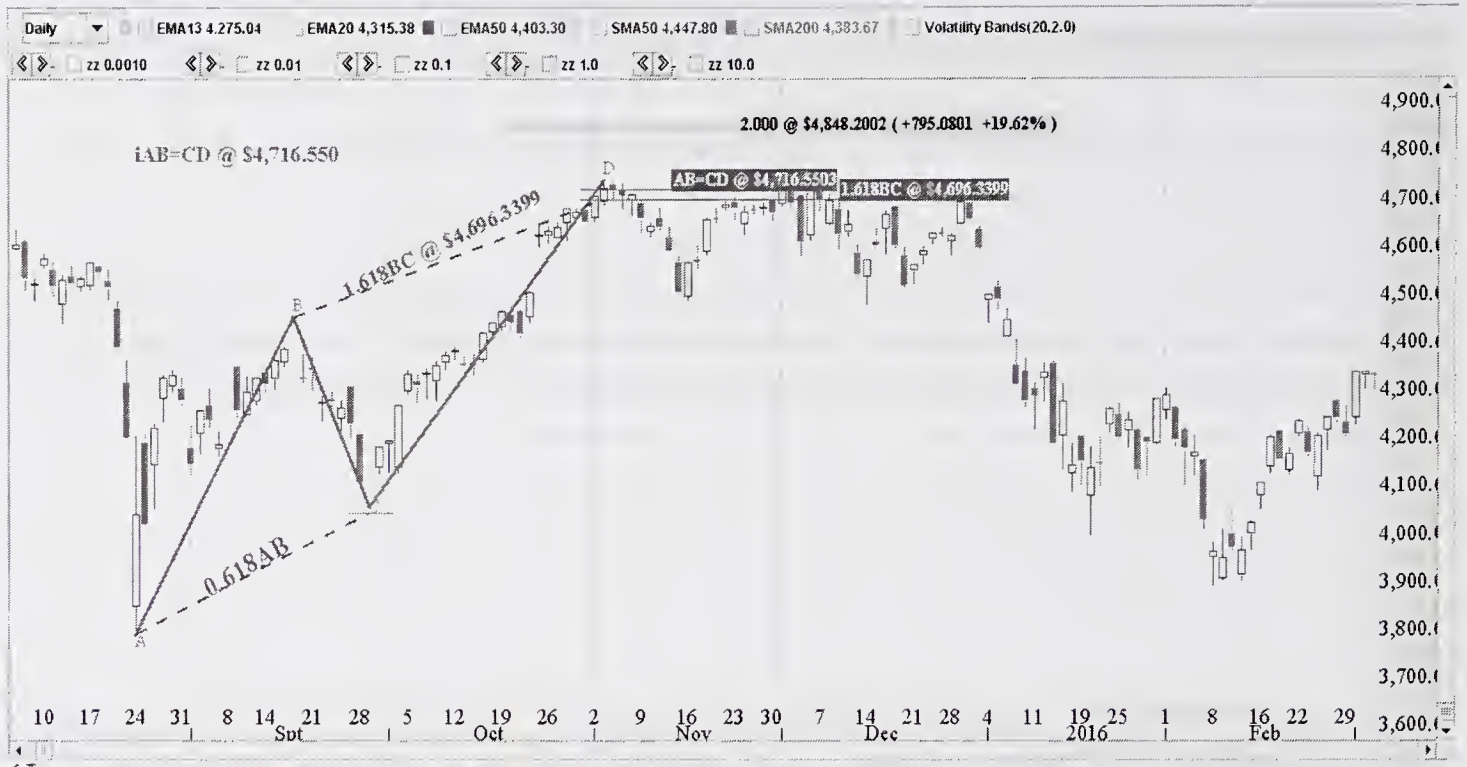
Alternate AB=CD Pattern

Originally outlined in my first book *The Harmonic Trader*, I believe is to review Alternate AB=CD variations that work well in specific situations, especially when the formation does not come together. When we consider these alternate variations as a different form of a sine wave in price action expression, there are different expectations that must be aligned with the structural types. Although sometimes more complementary than others, they are as effective specific pattern situations.

Bullish Alternate AB=CD Pattern

The Bullish Alternate AB=CD pattern was derived from my research of structural differentiation. In patterns such as the Alternate Bat and Crab, this extended formation was a reliable measure among many possibilities.

A

C

B

AB=CD

1.27AB=CD

1618AB=CD

D
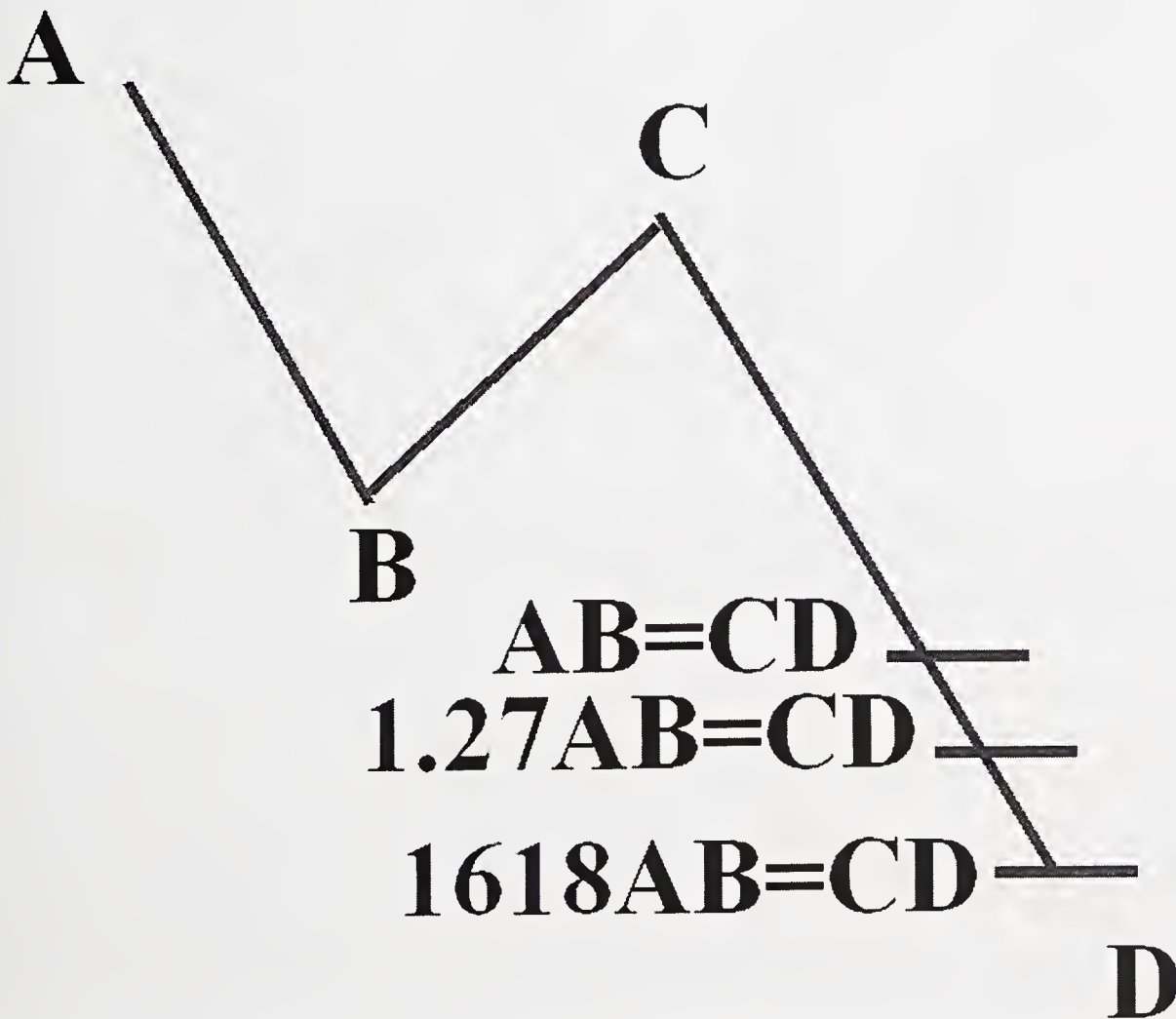
Bullish Alternate AB=CD Pattern

In all of my software, I have programmed various combinations of alternate structures. These can include 1.13, 1.27, 1.41, 2.0, etc. These are more complementary measures in specific situations however I must stress that the 1.618 AB=CD is a unique creature unto itself. The following 15-minute chart of the Australian Dollar versus the Japanese Yen shows an ideal extended AB=CD formation.
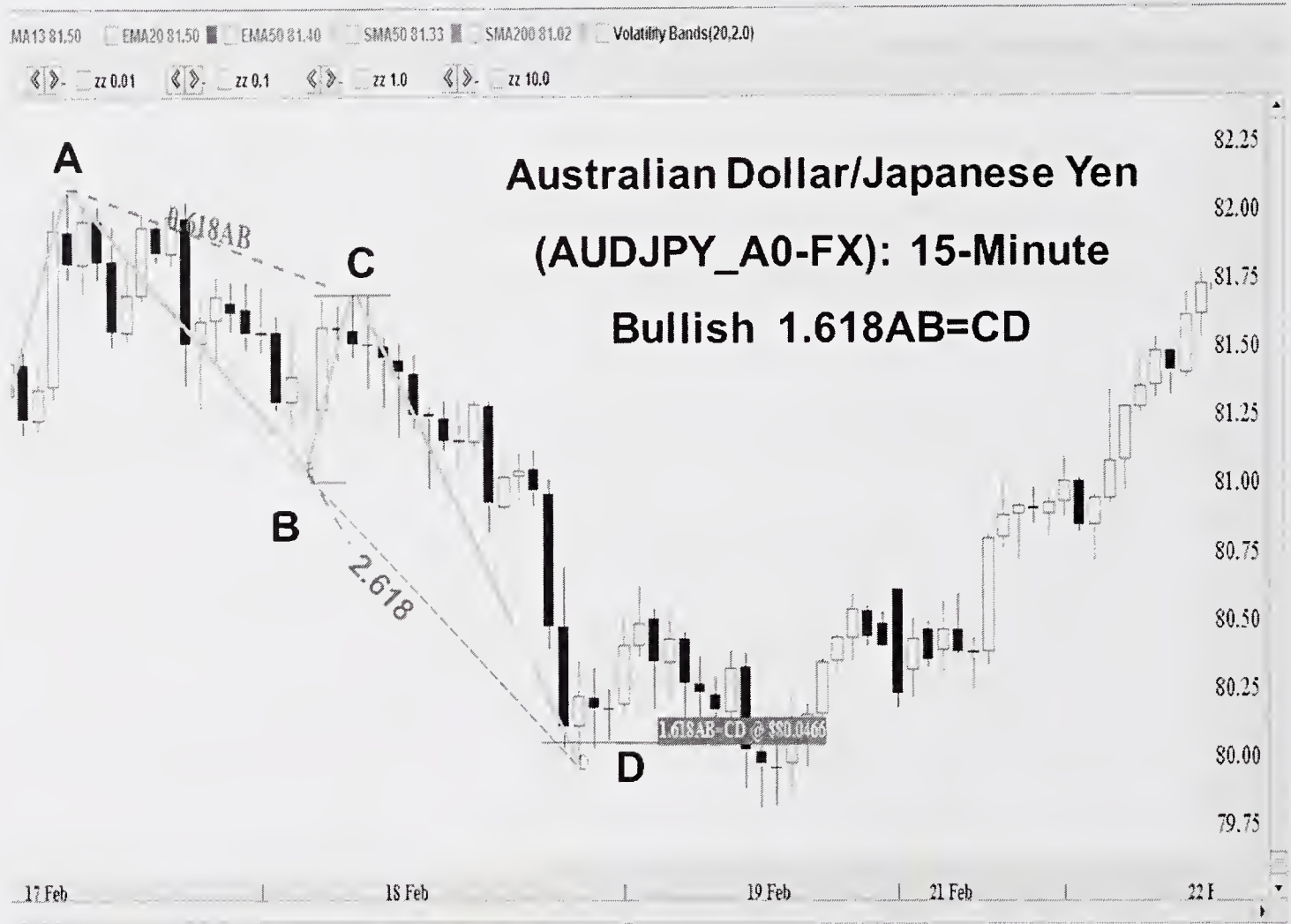
This pattern completed at 80.05. The interesting aspect of this decline was the price action as it tested the equivalent completion point for the AB=CD which was projected approximately at 80.75. When the price action tested the equivalent level, it declined sharply and accelerated to the alternate 1.618 calculated level. This is an oversimplification of utilizing the alternate measure but exemplifies how the market will manifest failed signals of demonstrative price action when the particular possibility is not valid. In this instance, the acceleration beyond the exact equivalent AB=CD was the immediate warning sign.

Bearish Alternate AB=CD Pattern

As we outlined the different rules for pattern structures, these alternate types will become readily apparent as to their most effective application. The simple awareness as an alternate possibility above and beyond the equivalent formation also provides price objectives when price action exceeds the minimum completion point.

$$1.618AB=CD \underline{\qquad D}$$
$$1.27AB=CD \underline{\qquad}$$
$$AB=CD \underline{\qquad}$$

B

A

C
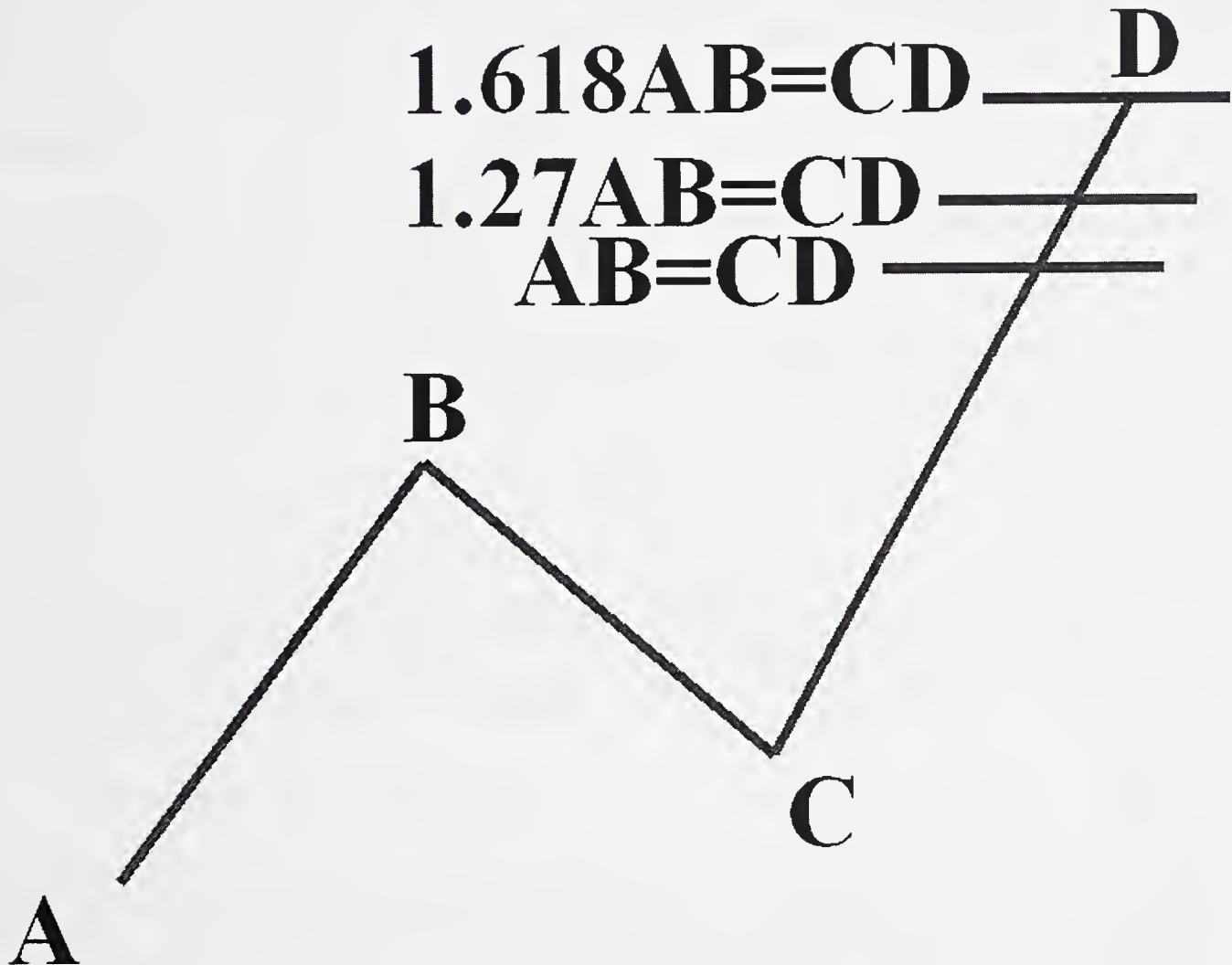
Bearish Alternate AB=CD Pattern

The following chart of the British Pound/Japanese Yen exemplifies the extended structure that these alternates possess. Despite the lack of symmetry, the initial AB leg does possess relevant measures that can be projected. In this case, the 1.618 AB=CD structure at the 157.35 level served as short-term resistance on the intraday chart.

GBPJPY_A0-FX 22-APR-16_10:40   Harmonic Analyzer (TM) v6.05 Copyright © 2001-2008 HarmonicTrader.com, LLC. All Rights Reserved
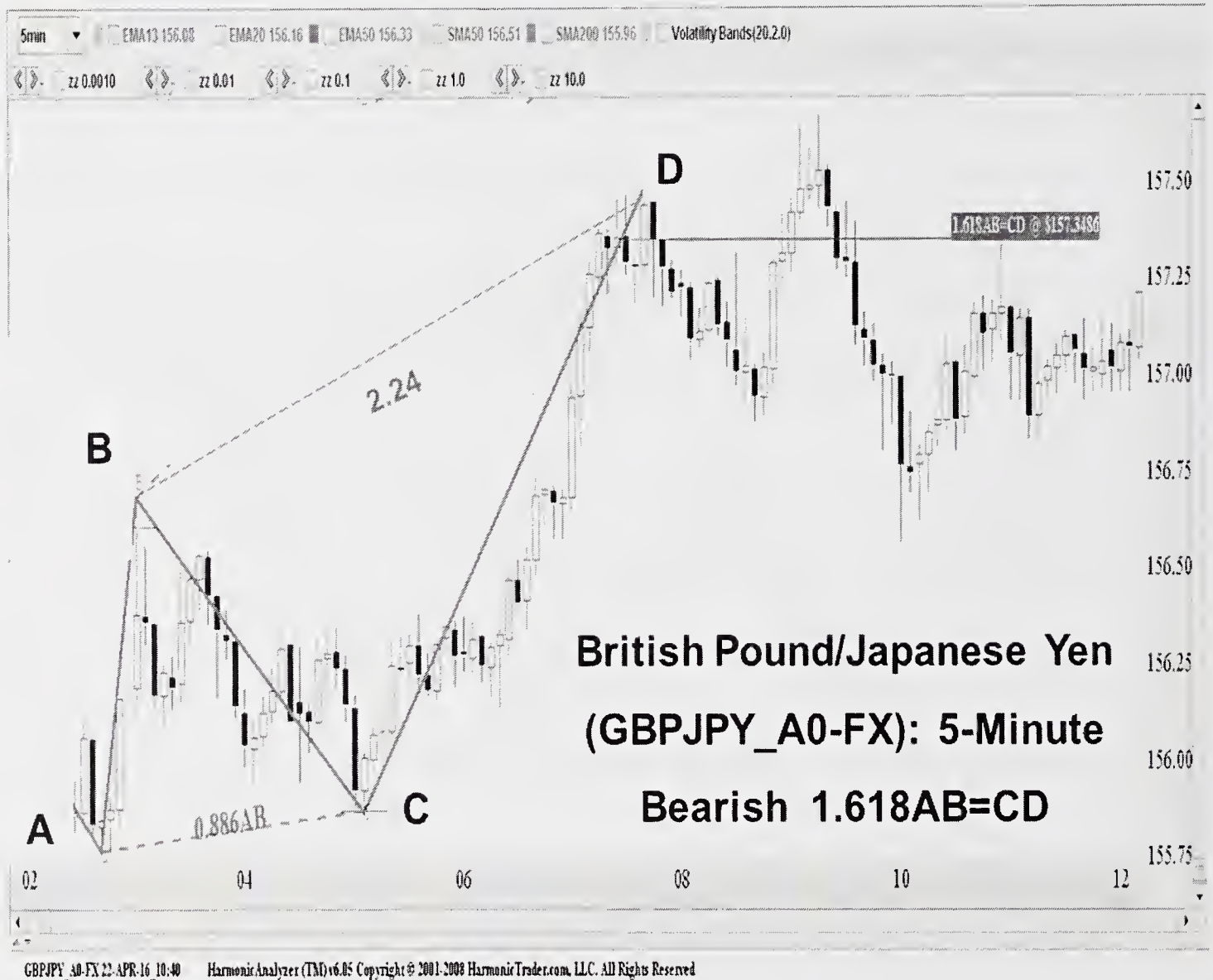
B Point Tolerance Classification

One of the earliest breakthroughs that I made in my classification of M and W formation types was the specification of their alignment. The AB=CD structural variation was an important price differentiation to distinguish similar possibilities. However, it was not until the release of my first harmonic scanner software, the Harmonic Analyzer that I was able to finally research and distinguish each structural pattern

point. Released in 2001, this is the first harmonic pattern program ever created. The rules for pattern algorithms were programmed from my first book *The Harmonic Trader* and design to find valid opportunities automatically. If you like to access this program, please go to the website and download the free version at www.HarmonicAnalyzer.com. The program has enabled me to test pattern alignments with unprecedented precision and refine the structures immensely. One of the most profound breakthroughs was our specification of the prescribed ratio alignments at the B point. Although this was one of my primary tenets to differentiate similar price structures, I was not able to exactly define acceptable tolerance limits until we had the power of the Harmonic Analyzer software to reveal the optimal results. Although there are a number of possibilities, I have been able to categorize precise patterns with B point tolerance limits that possess to the following constraints.

- **+/- ≤3%:** One of the first structural types that I differentiated was the Gartley versus the Bat pattern. Essentially, my initial research showed that the Gartley only worked when it's B point was within a close proximity to the 61.8% limit. We will look at the specifications later in this chapter but the results were profound. My research proved that those Gartley structures that had a B point that was +/-3% of the ideal 61.8% level yielded opportunities with the greatest potential. This means that any M or W structure with a B point between 58.8 – 64.8% was the valid tolerance for variation beyond the ideal measure. In all other cases, it would typically default to a Bat pattern if it was less than the 3% tolerance or become invalid above the upper limit. I must emphasize that this strict definition also applies to Butterfly patterns. These small distinctions have been instrumental in eliminating those structures that appear similar but are flawed from the start.

- **+/- ≤5%:** The 5% tolerance is applied to B points of most other structures. Although the Gartley and the Butterfly are two strict examples, the 5% tolerance at the B point is effective when analyzing Bat patterns in particular. Again, the purpose is to generally categorize what type of structure we are dealing with but the tolerance limit goes a long way to creating finite of defining valid opportunities.

Gartley Pattern

Elements:
B Point Ratio: 0.618 (+/-3% Tolerance)
AB=CD-1.27AB=CD
BC: 1.13-1.618
XA = 0.786
Stop Loss >1.0 (Depends upon AB=CD)

Bullish Gartley
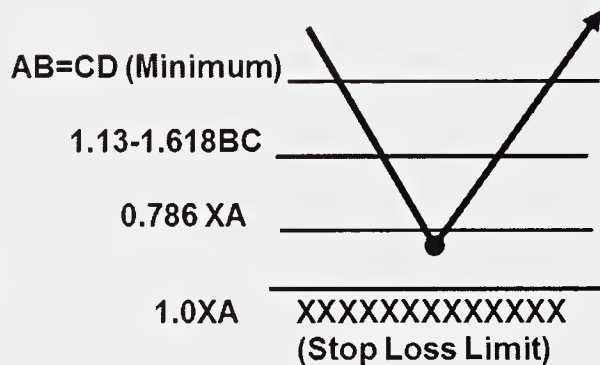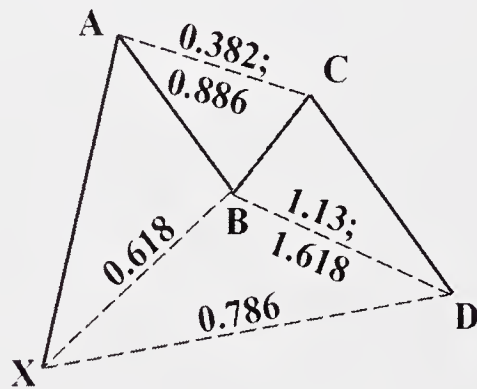
Bearish Gartley
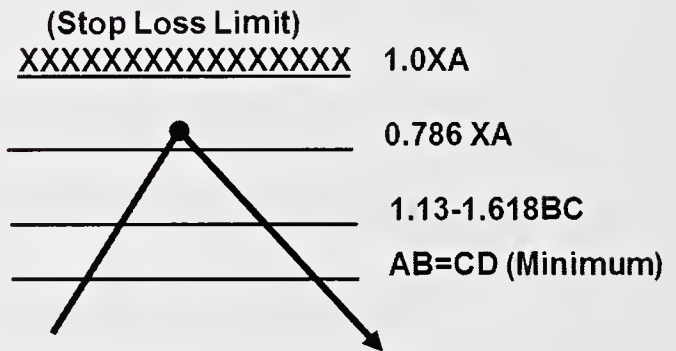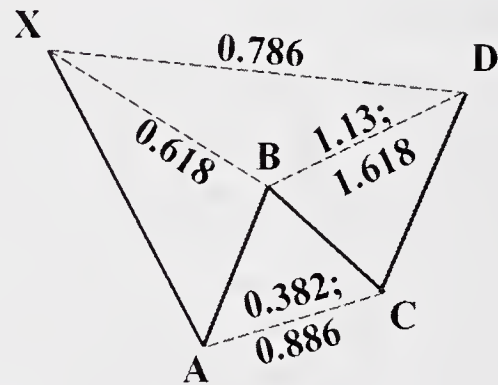
Notes:

- Wait for entire PRZ test – especially the 0.786 XA Retracement and the AB=CD – to be tested before executing the trade.
- Initial test of pattern completion SHOULD NOT extend BEYOND PRZ = Valid Gartley patterns exhibit decisive reversal behavior.
- Utilize area beyond 1.0 XA as make-or-break stop loss limit measure and include the 88.6% level, especially when AB=CD completes beyond the 78.6% area.
- Price action MUST REVERSE immediately after testing the entire PRZ.
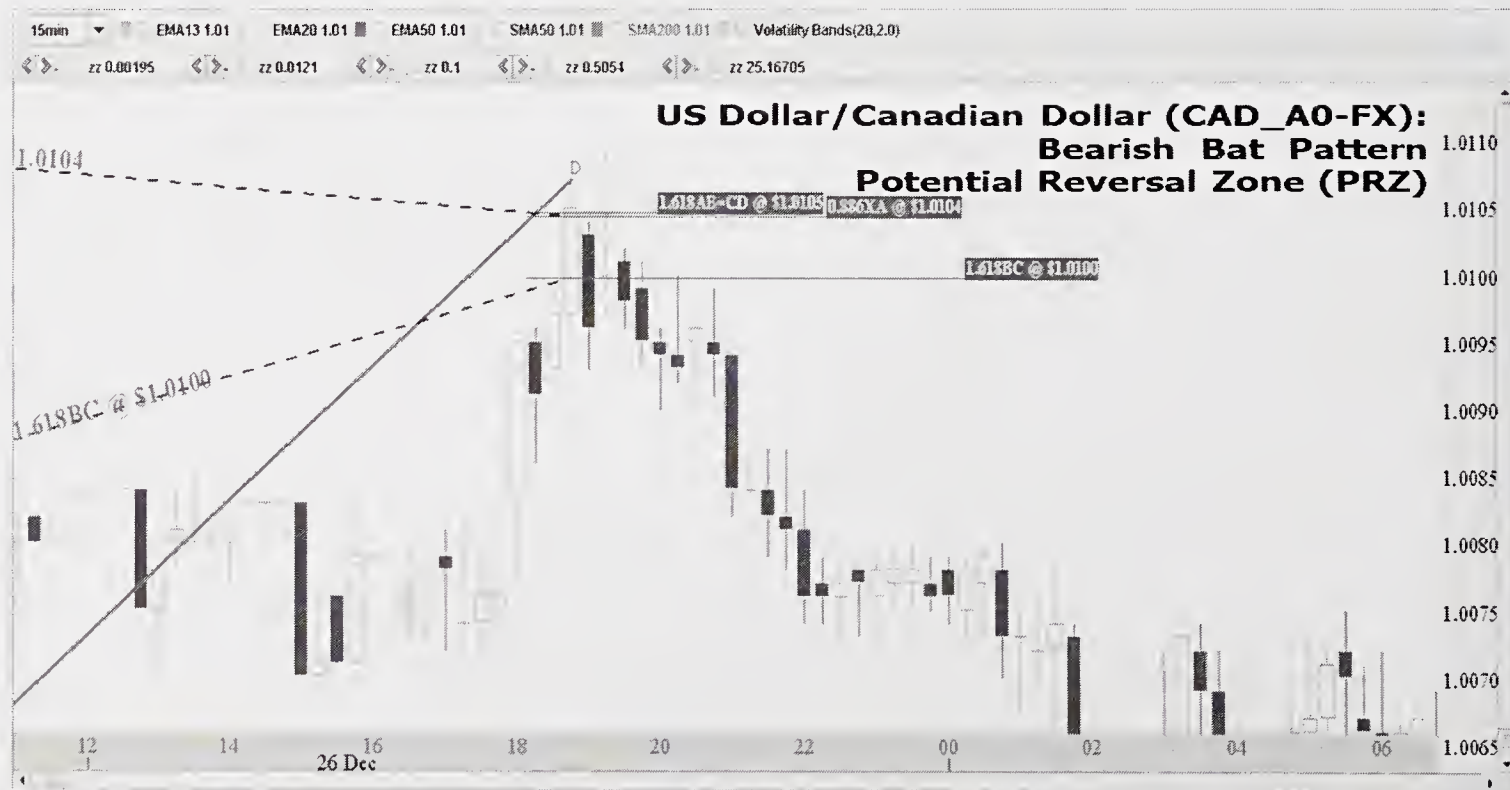- B Point Alignment @ 61.8%XA +/- 3 max.

Bullish Gartley Pattern

Bearish Gartley Pattern

AUDJPY_A8-FX 17-OCT-13_05:30   Harmonic Analyzer (TM) v6.05 Copyright © 2001-2008 HarmonicTrader.com, LLC. All Rights Reserved

C

AUDJPY_A8-FX 17-OCT-13_05:30   Harmonic Analyzer (TM) v6.05 Copyright © 2001-2008 HarmonicTrader.com, LLC. All Rights Reserved
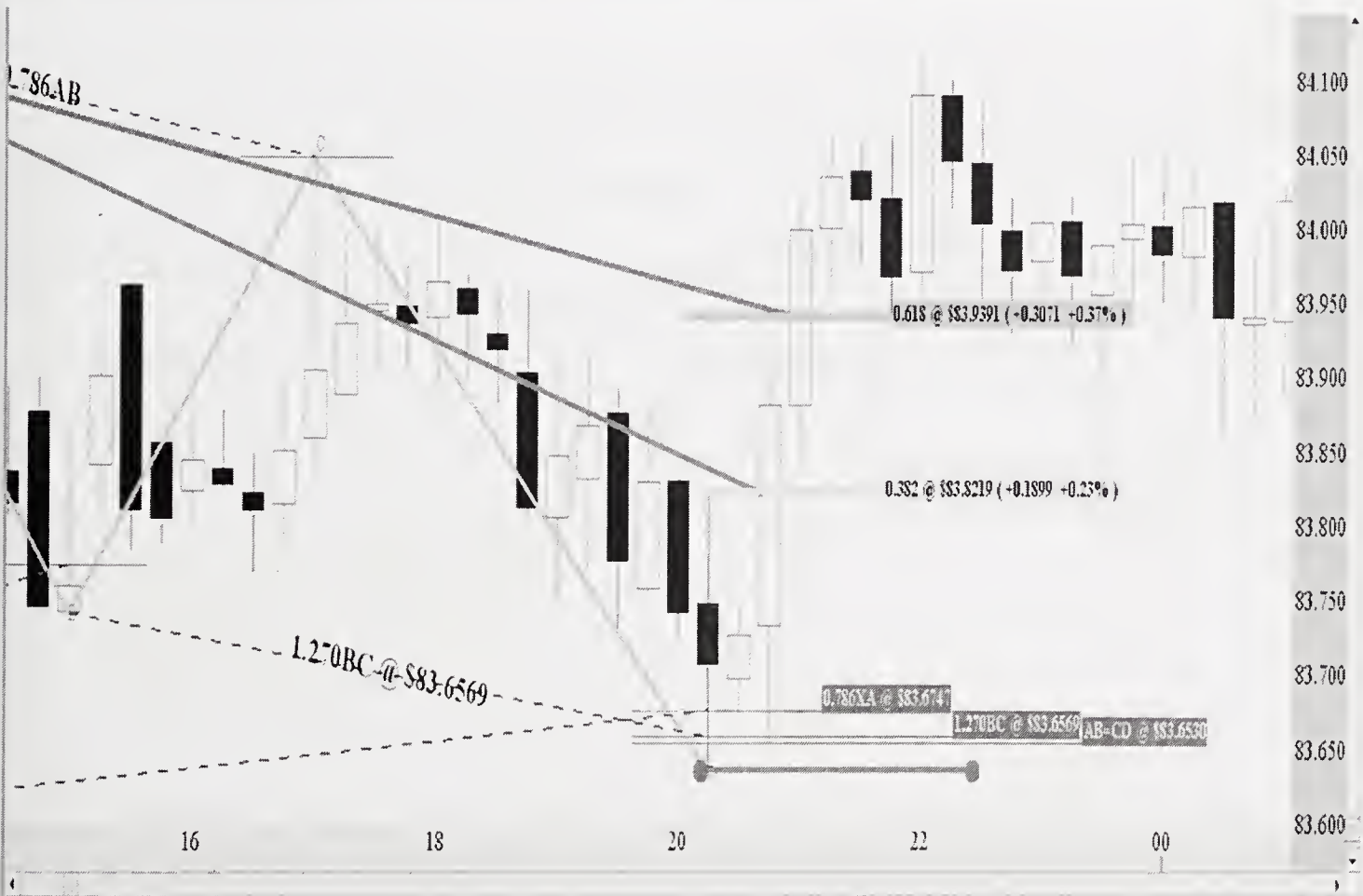
SPECIAL SITUATION: Gartley Pattern @ 88.6% XA Retracement

When AB=CD pattern completion extends past 78.6% retracement, other measures and a larger tolerance must be employed to gauge the real-time action relative to the parameters of the Gartley. In these cases, the 88.6% XA retracement must be considered with as a defining price level for the execution of the trade.

Elements:
B Point Ratio= 0.618 (+/-3% Tolerance)
AB=CD
BC: 1.618-2.618
XA: 0.786-0.886
Stop Loss > 1.0-1.13X (Depends upon AB=CD)

Bullish   ## Bearish

Bullish diagram labels: 0.786 XA; 1.618-2.618BC; AB=CD (Minimum); 0.886 XA; 1.0XA XXXXXXXXXXXXXXXXX (Stop Loss Limit)

Bearish diagram labels: (Stop Loss Limit); XXXXXXXXXXXXXXXX 1.0XA; 0.886 XA; AB=CD (Minimum); 1.618-2.618BC; 0.786 XA
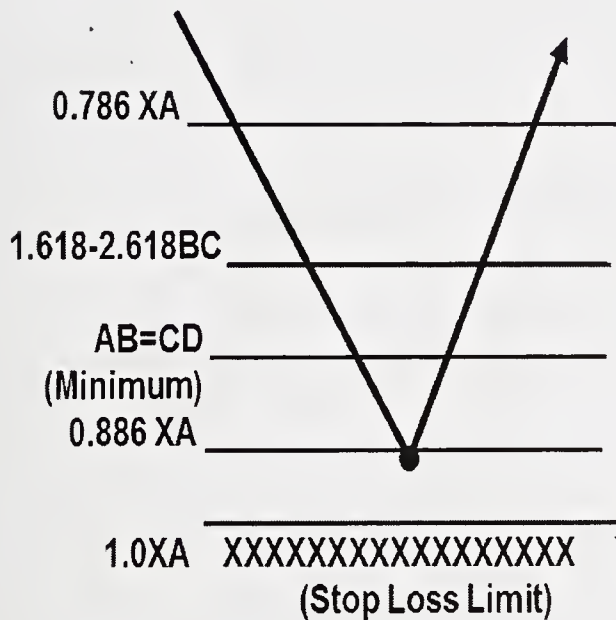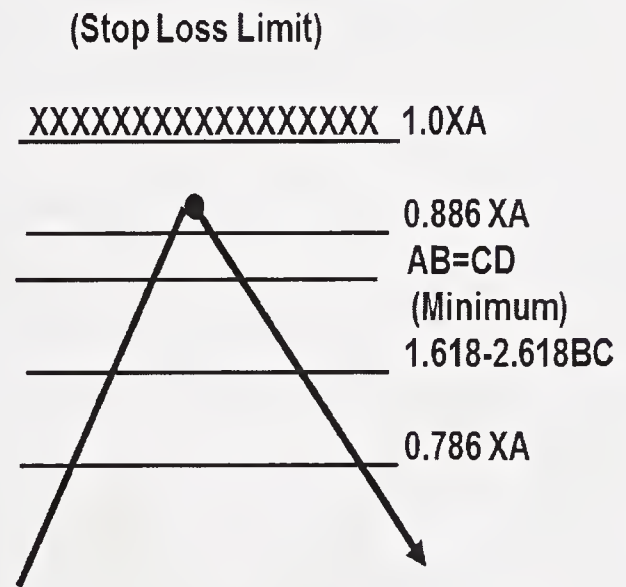
Bullish Gartley Pattern with 88.6% Retracement

Bearish Gartley Pattern with 88.6% Retracement

Euro Dollar/New Zealand Dollar
(EURNZD_A0-FX):
15-Minute
Bearish Gartley Pattern
With 88.6% Retracement
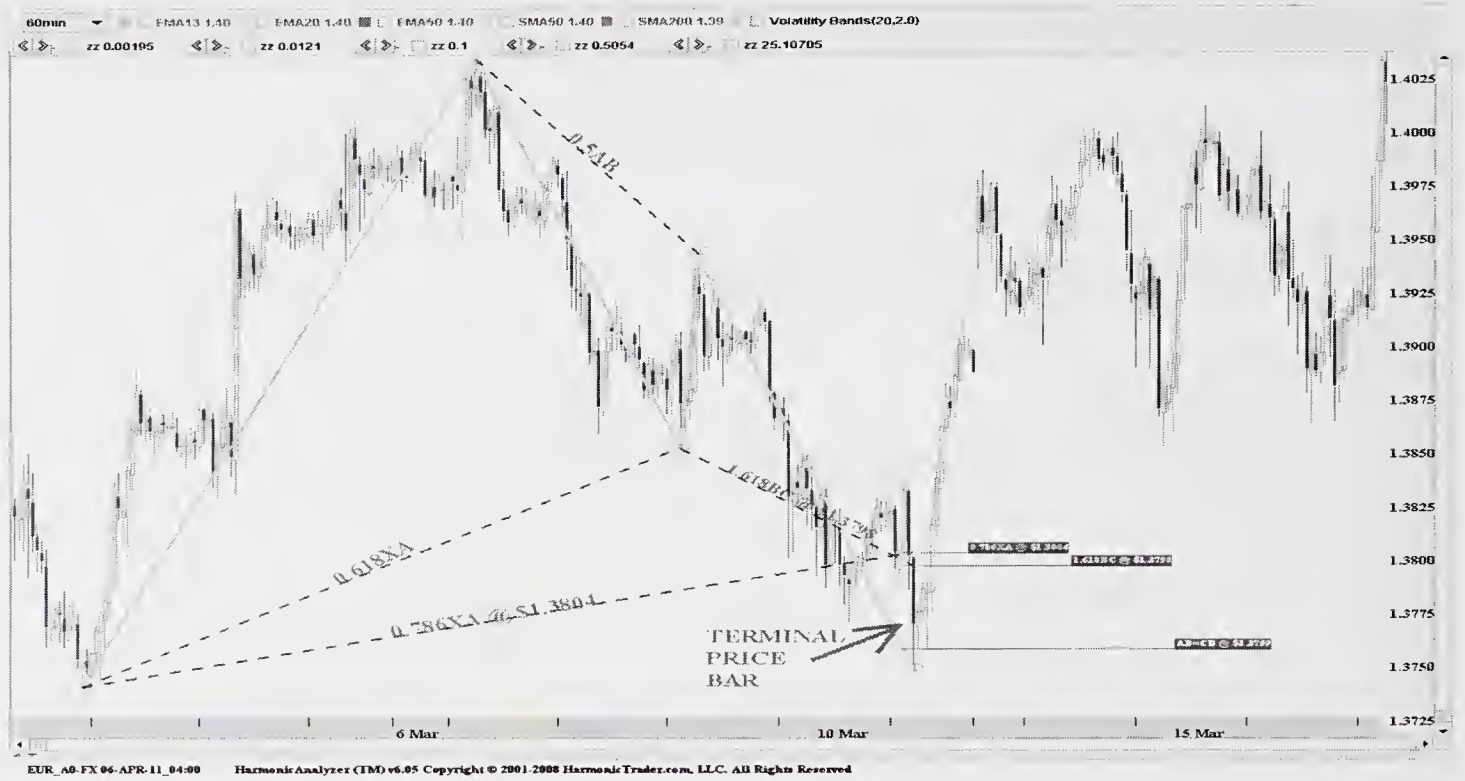
Euro Dollar/New Zealand Dollar (EURNZD_A0-FX): 15-Minute
Bearish Gartley Pattern
@88.6% Retracement
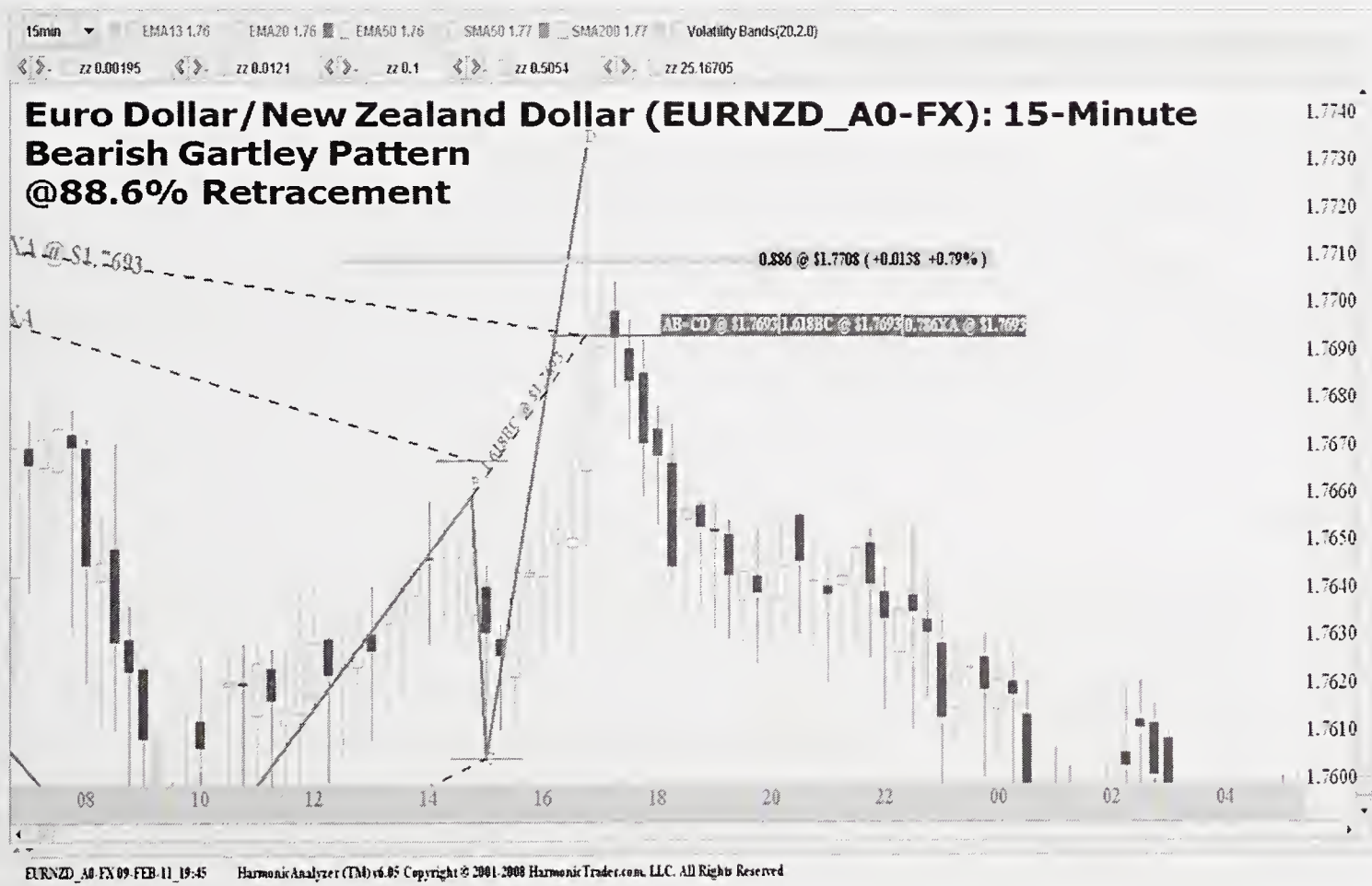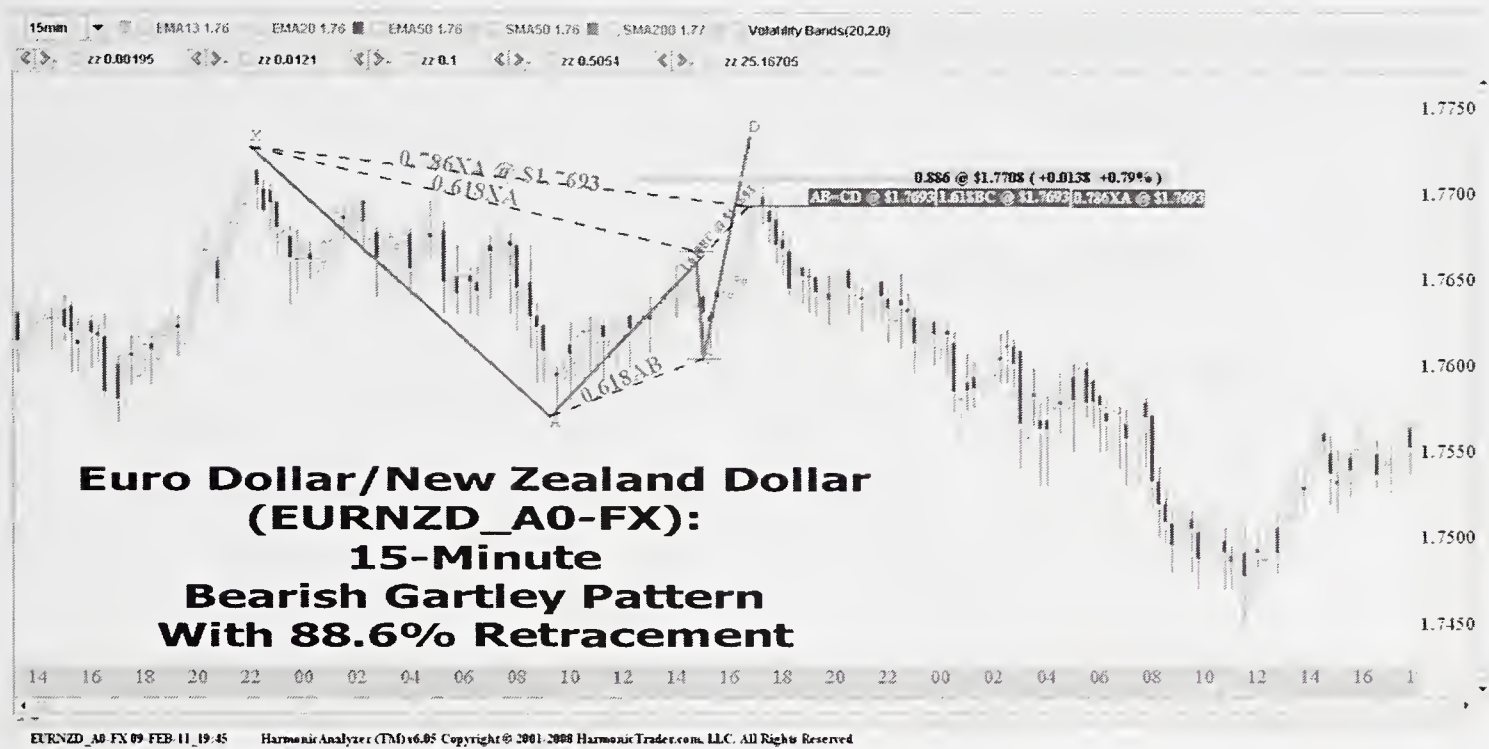
Bat Pattern

Elements:
B Point Ratio: 0.382-0.50
AB=CD-1.618AB=CD
BC: 1.618-2.618
XA: 0.886
Stop Loss > 1.13X (Depends upon AB=CD)

Bullish Bat

A 0.382;
0.886
C

0.382; 0.50
B
1.618; 2.618

0.886

X
D

AB=CD (Minimum) _____
1.618-2.618 BC _____
0.886 XA _____
1.13XA XXXXXXXXXXXXXXXX   `
(Stop Loss Limit)

Bearish Bat

X
0.886
D

0.382; 0.50
B
1.618; 2.618

0.382;
0.886
C

A

(Stop Loss Limit)
XXXXXXXXXXXXXXX   1.13 XA
_____ 0.886 XA
1.13-1.618BC
AB=CD (Minimum)
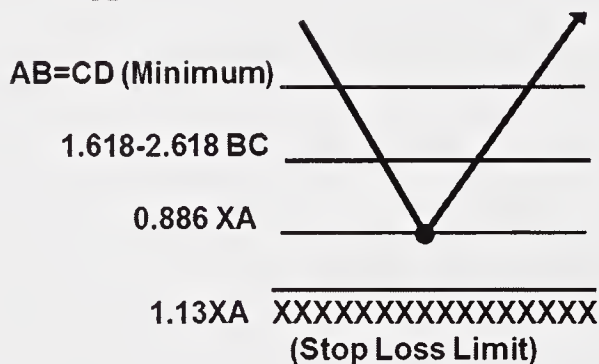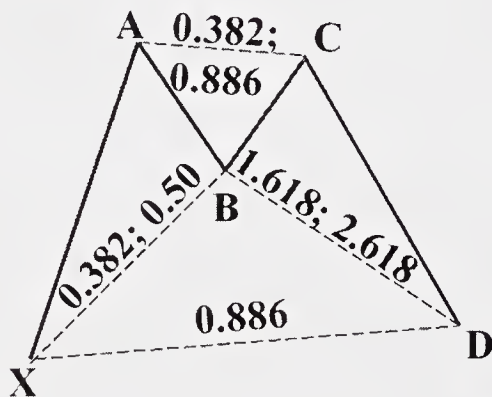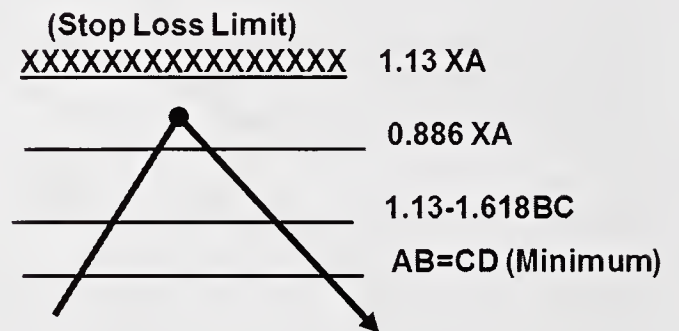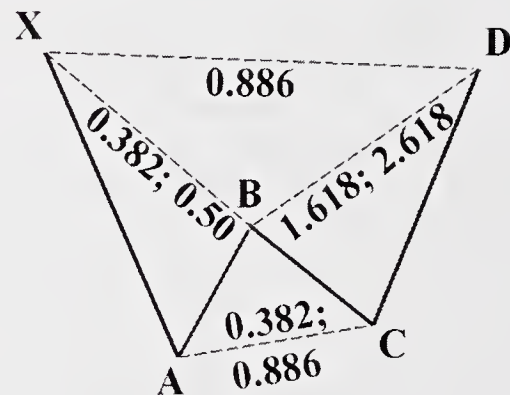
Notes:

- Expect PRZ test of 0.886 XA Retracement with minimum AB=CD (Typically 1.27AB=CD).
- Initial test of pattern completion can test close to 1.0XA.
- Utilize 1.13 XA as make-or-break stop loss limit measure.
- Price action MUST REVERSE immediately after testing the 0.886 XA Retracement.
- B Point Alignment @ 50%XA +/-5% Max

Bullish Bat Pattern
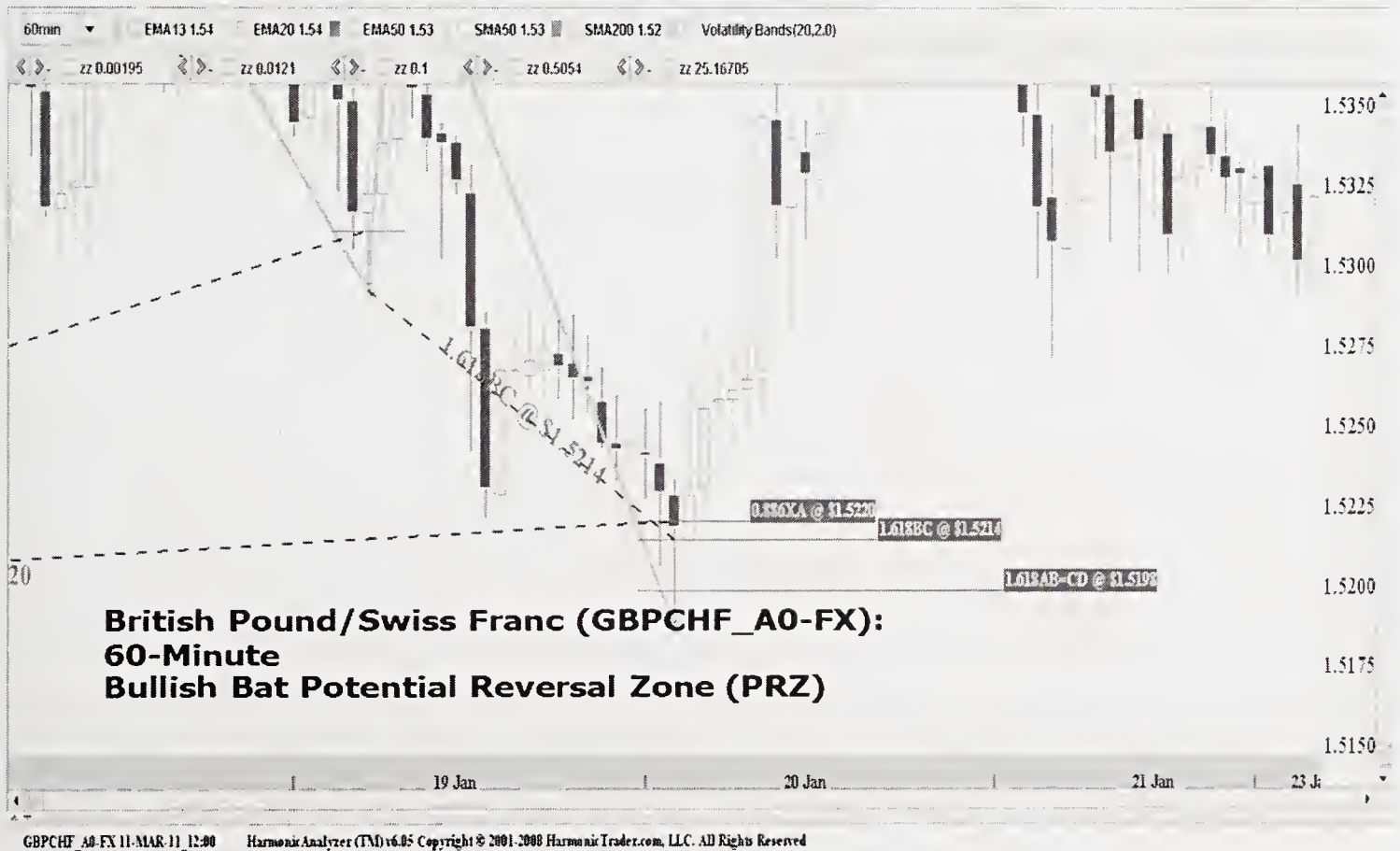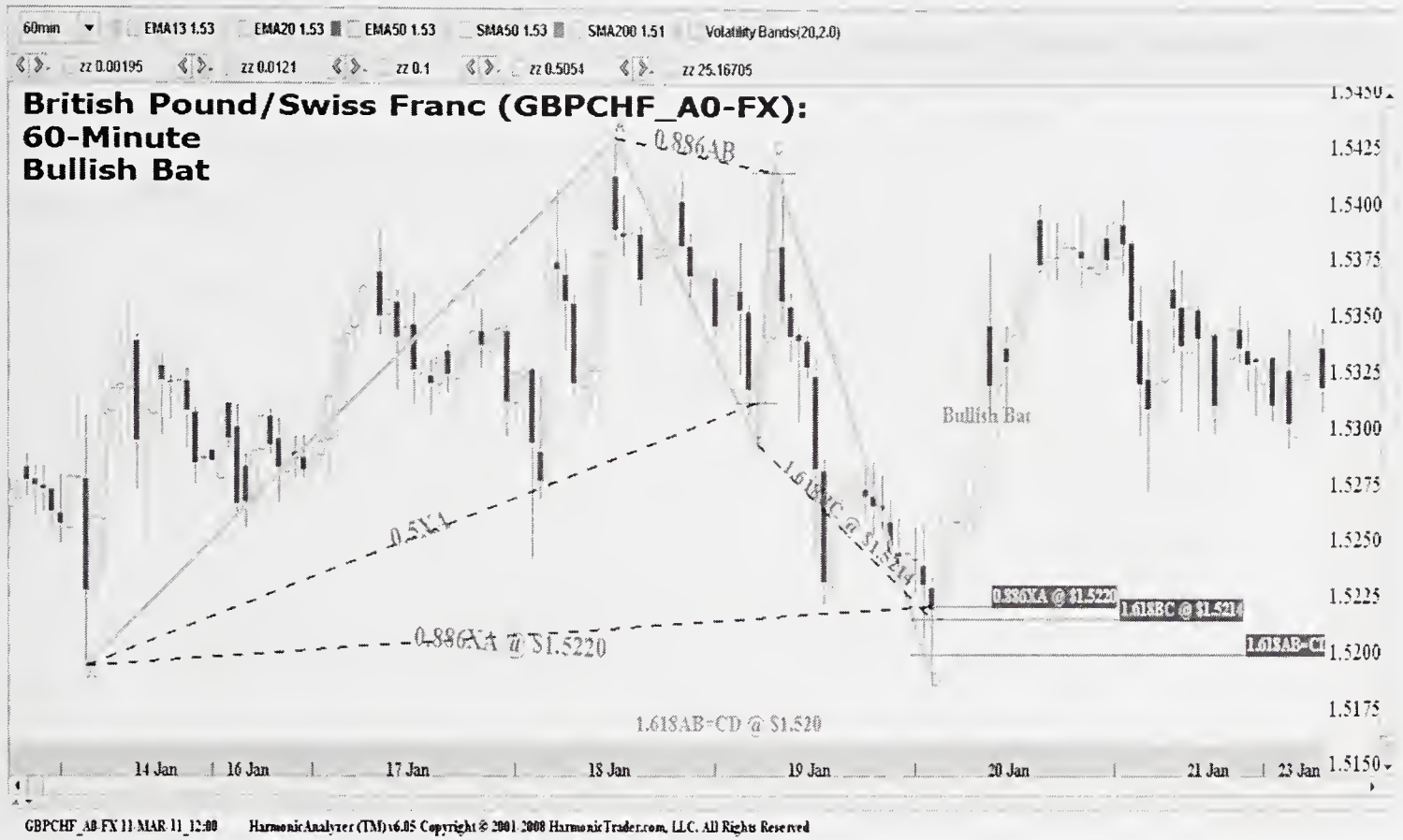
British Pound/Swiss Franc (GBPCHF_A0-FX):
60-Minute
Bullish Bat
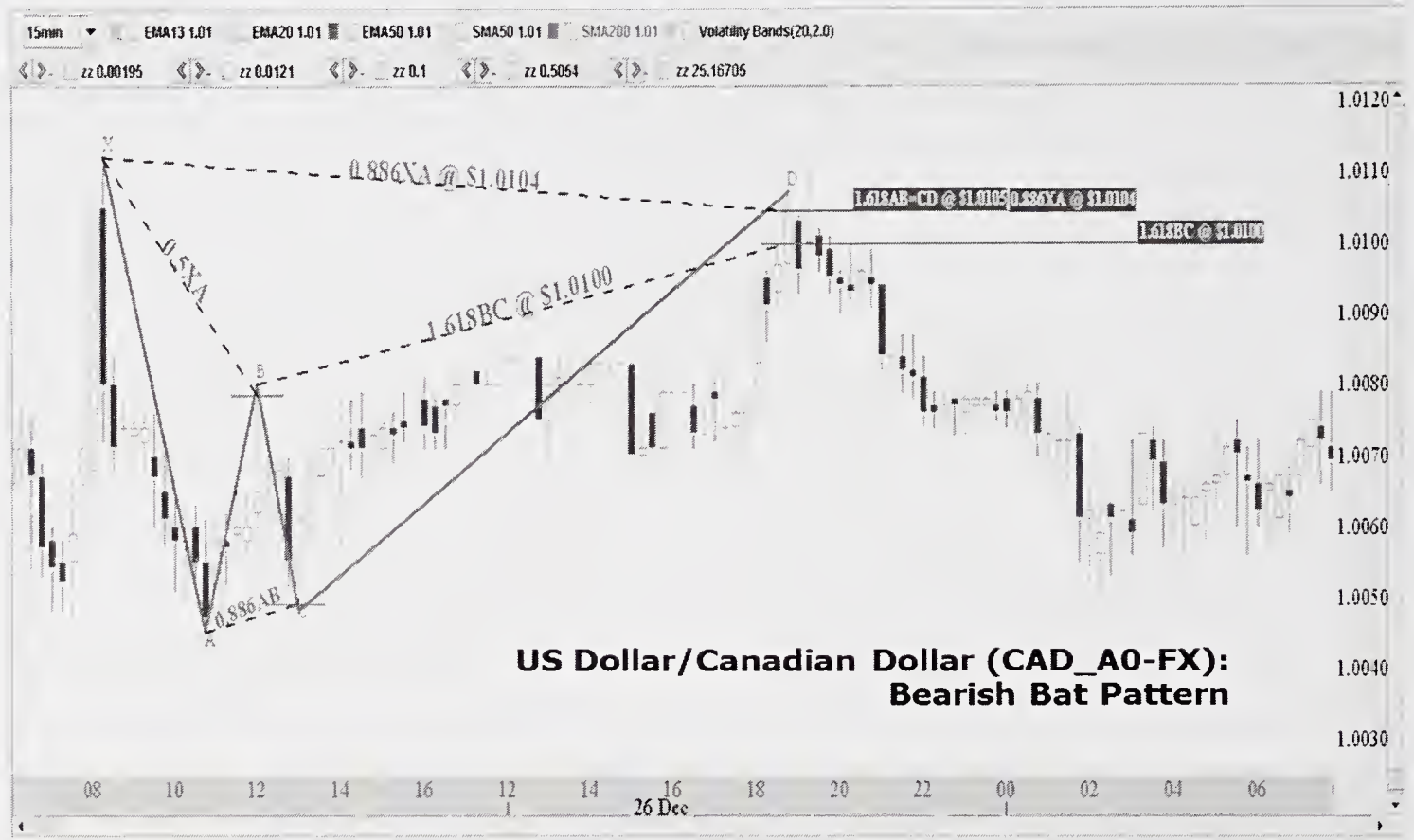
British Pound/Swiss Franc (GBPCHF_A0-FX):
60-Minute
Bullish Bat Potential Reversal Zone (PRZ)

Bearish Bat Pattern

US Dollar/Canadian Dollar (CAD_A0-FX):
Bearish Bat Pattern

US Dollar/Canadian Dollar (CAD_A0-FX):
Bearish Bat Pattern
Potential Reversal Zone (PRZ)

Alternate Bat Pattern

Elements:
B Point Ratio: 0.382 Max (-3% Tolerance)
AB=CD-1.618AB=CD
BC: 2.0-3.618
XA: 0.886-1.13
Stop Loss > 1.27X (Depends upon XA Measurement)

Bullish Alternate Bat
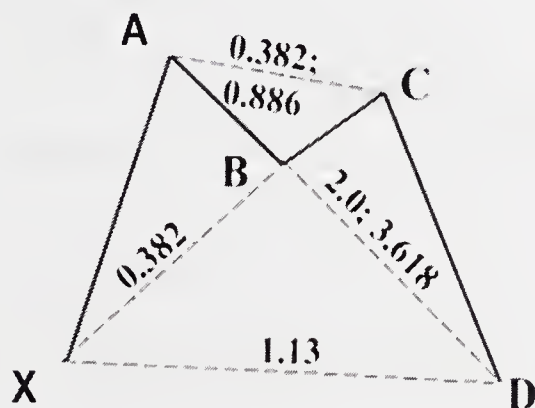
Bearish Alternate Bat
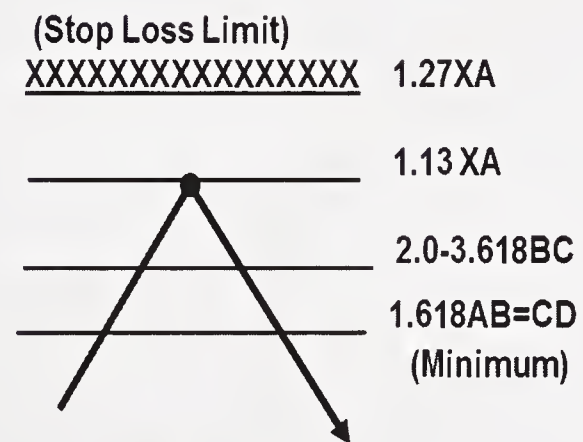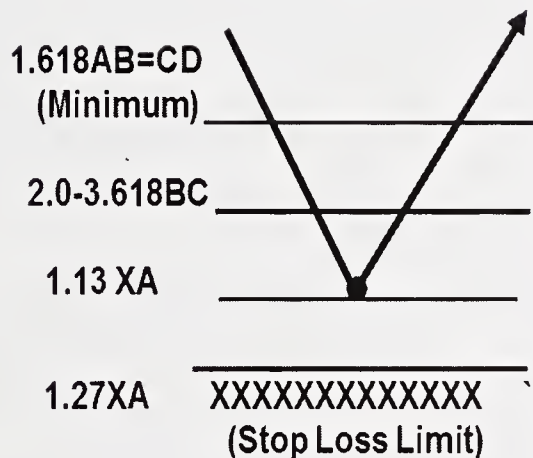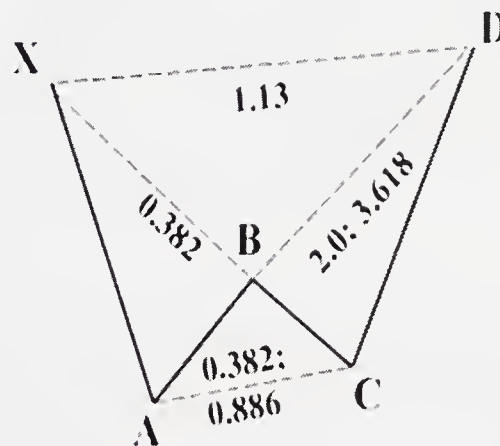
Notes:
- Expect PRZ test of 0.886 XA Retracement as minimum but these situations must incude the 1.0XA.
- Utilize 1.27 XA as make-or-break stop loss limit measure espeecially when the 1.13XA level is relevant.
- Price action MUST REVERSE immediately after exceeding 1.0 XA general retracement area.
- B Point Alignment @ 38.2%XA or LESS with 3% tolerannce max.

Bullish Alternate Bat Pattern

Bearish Alternate Bat Pattern

Swiss Franc (CHF_A0-FX): 15-Minute
Alternate Bearish Bat Pattern

0.886XA @ $0.8864

0.382XA

2.240BC @ $0.8861

0.886AB

Swiss Franc (CHF_A0-FX): 15-Minute

Alternate Bearish Bat Pattern
Potential Reversal Zone (PRZ)

.8864

0.886XA @ $0.8864

2.240BC @ $0.8861

1.618AB=CD @ $0.8844

2.240BC @ $0.8861
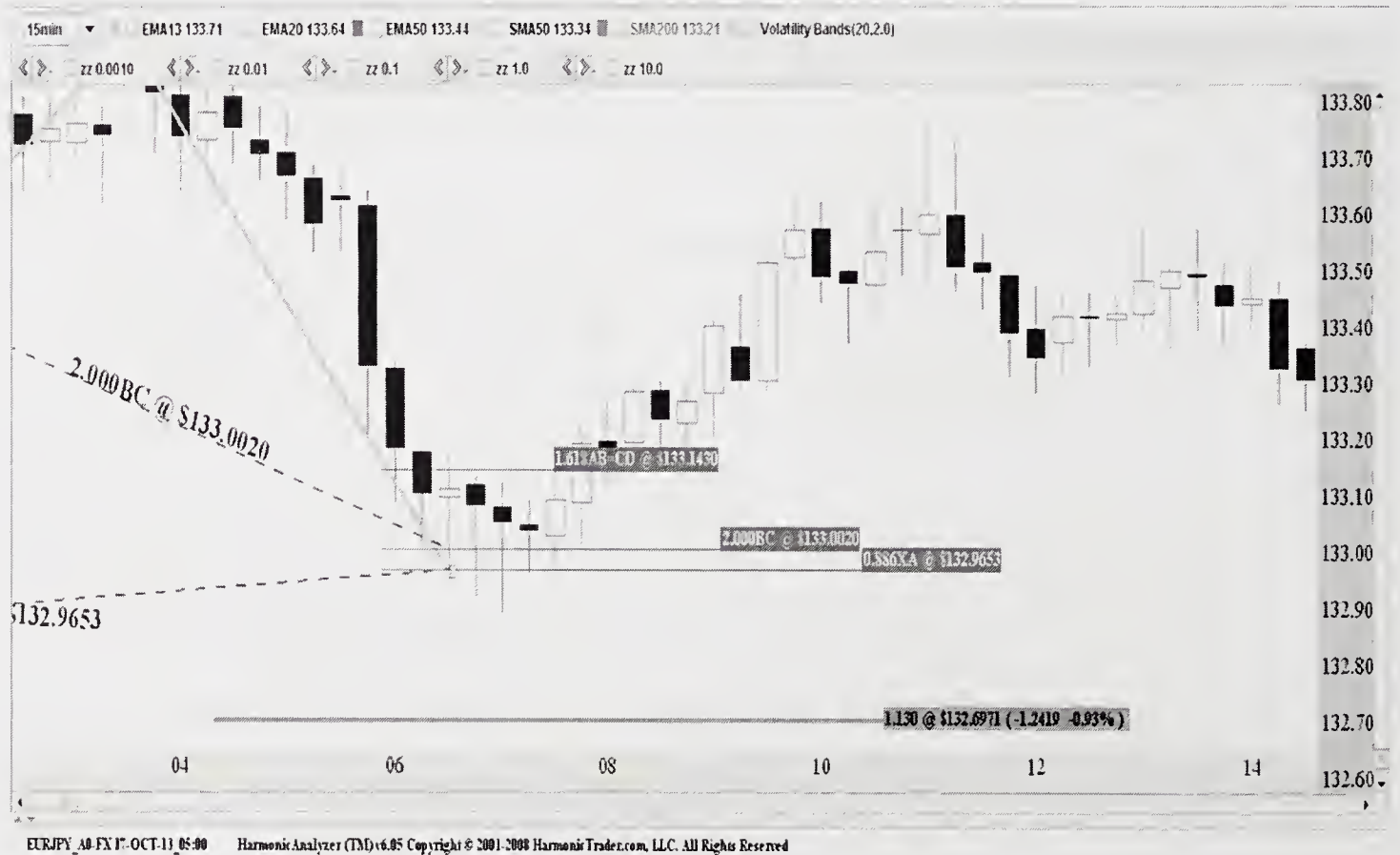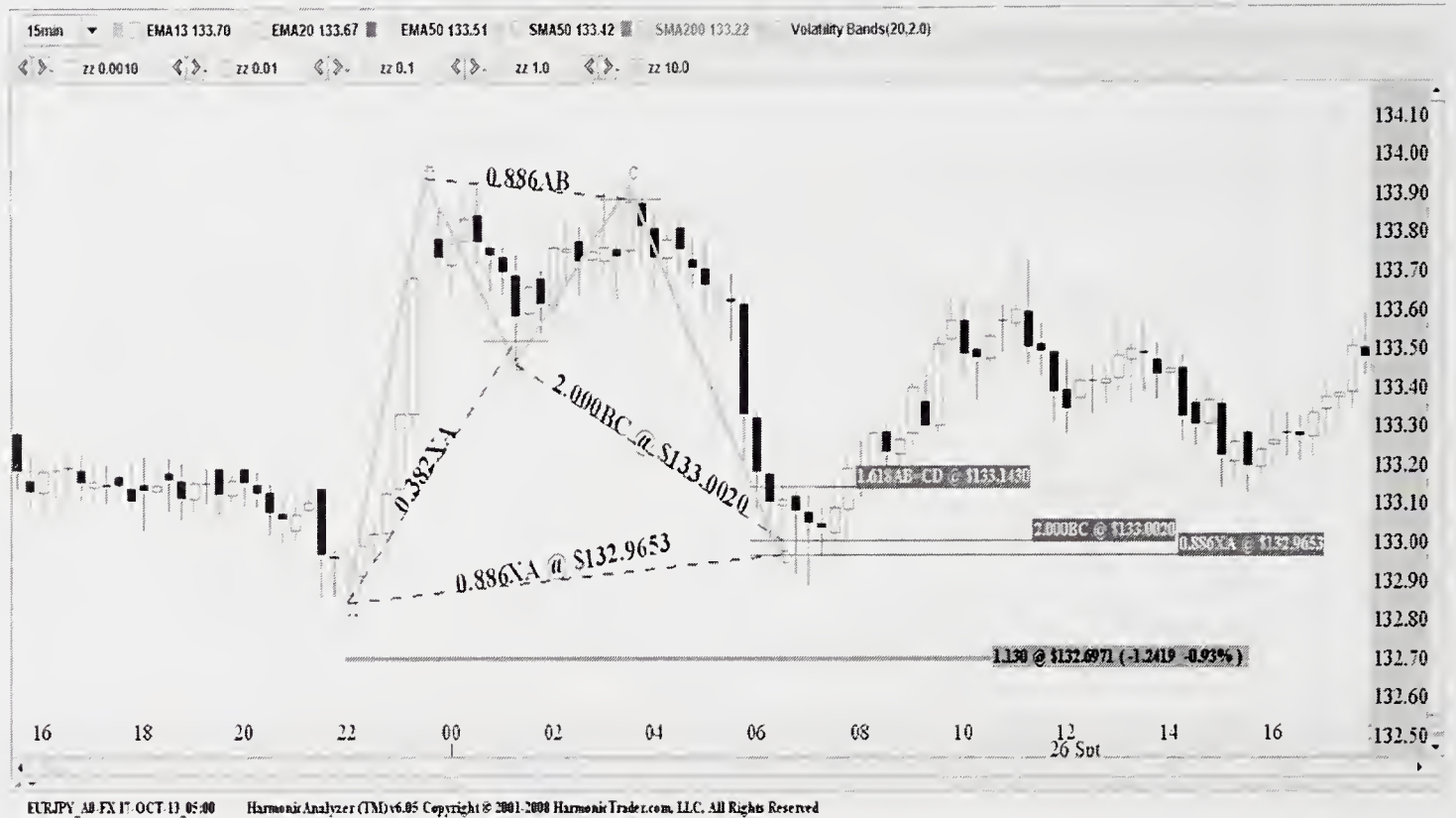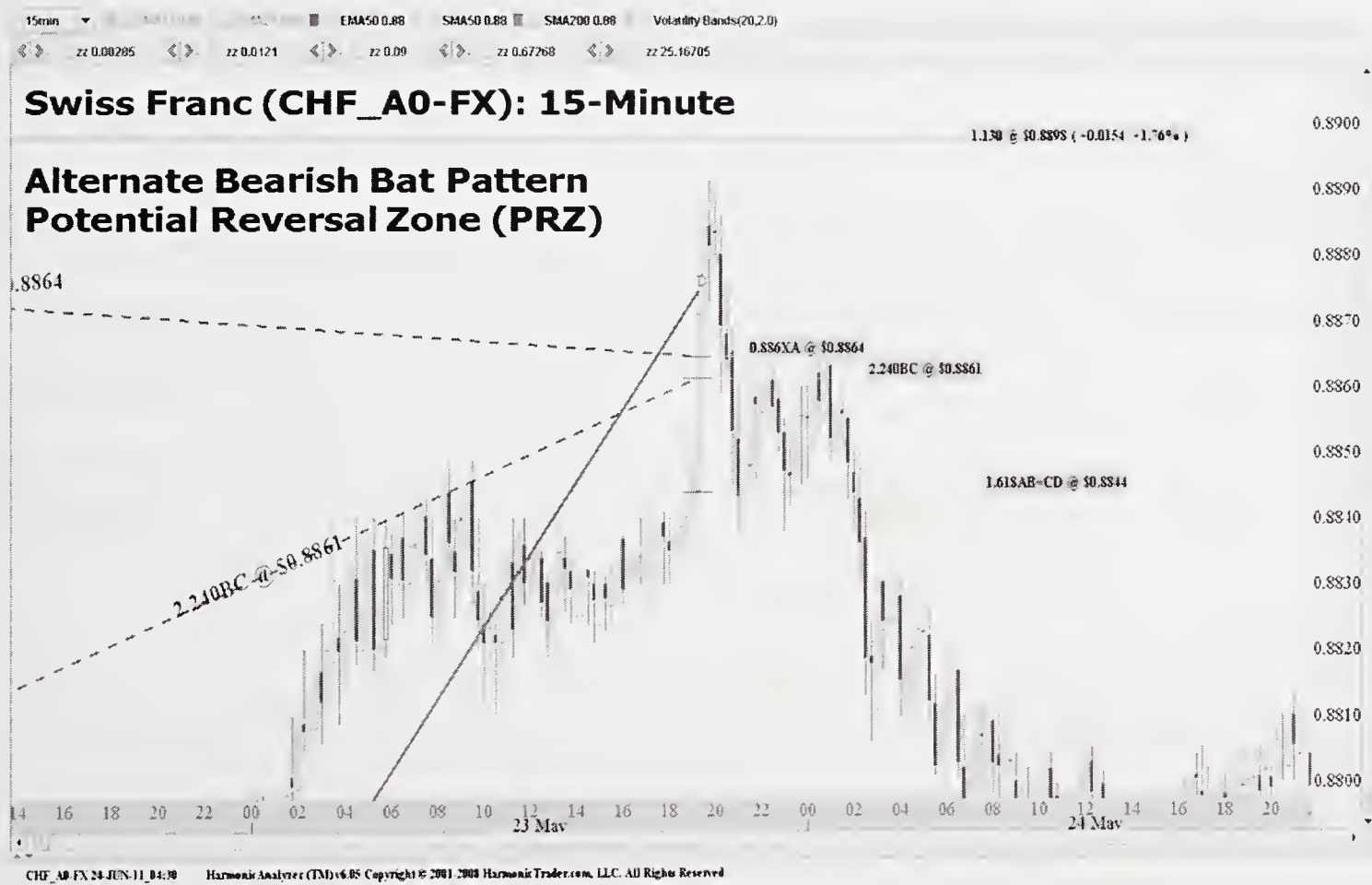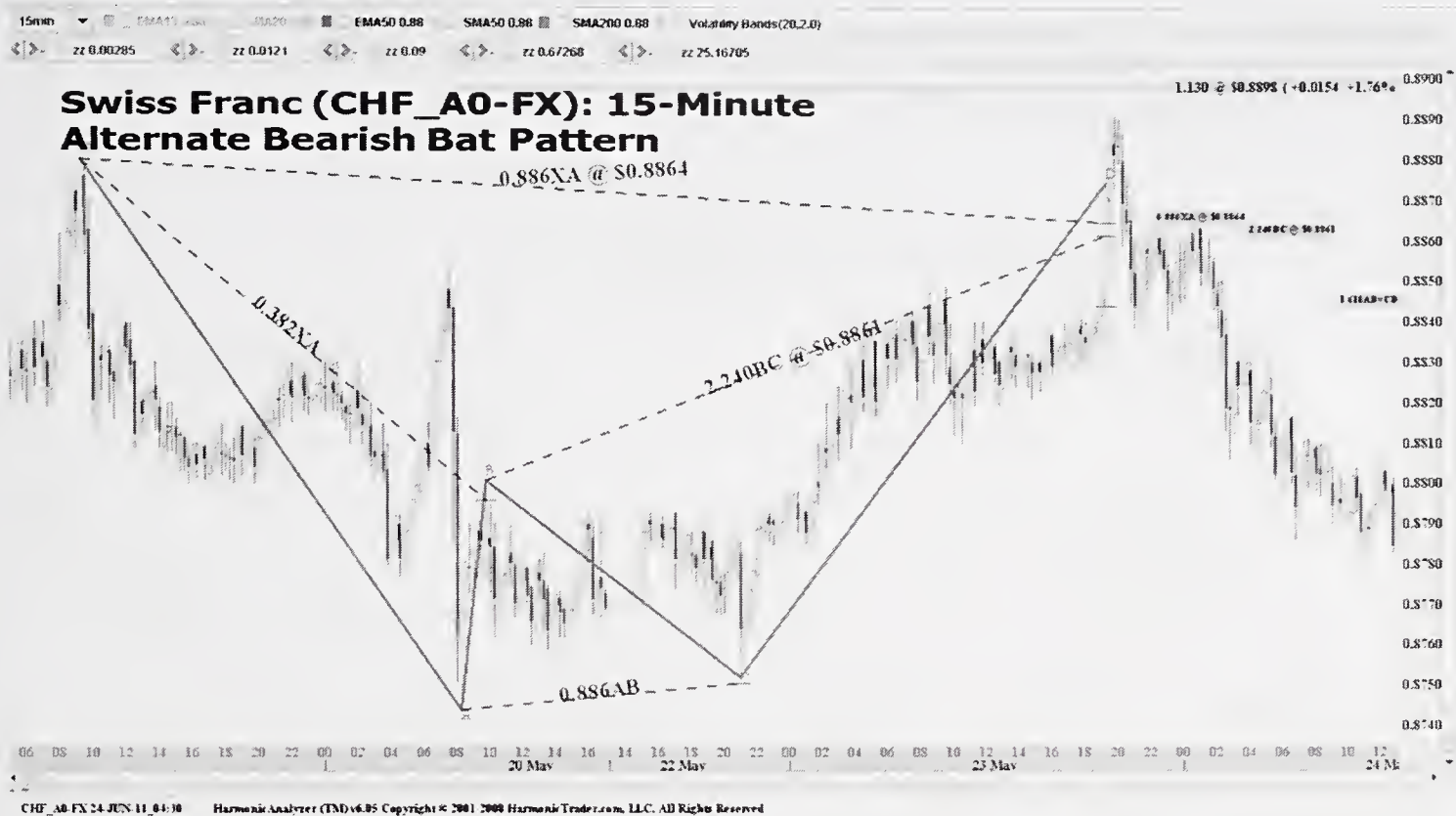
Crab Pattern

Elements:
B Point Ratio: 0.382-0.618
AB=CD-1.618AB=CD
BC: 2.618-3.618
XA: 1.618
Stop Loss > 2.0XA (Depends upon AB=CD)

Bullish Crab

Bearish Crab

A 0.382; C

0.886

0.382;

0.618

X

B 2.618; 3.618

1.618

D

1.618

X 0.382;

0.618 B 2.618; 3.618

D

0.382;

0.886

C

A

1.618AB=CD
(Minimum)

2.618-3.618BC

1.618 XA

2.0XA   XXXXXXXXXXXXXX   `
(Stop Loss Limit)

(Stop Loss Limit)
XXXXXXXXXXXXXXX 2.0 XA

1.618 XA

2.618-3.618BC

1.618AB=CD
(Minimum)
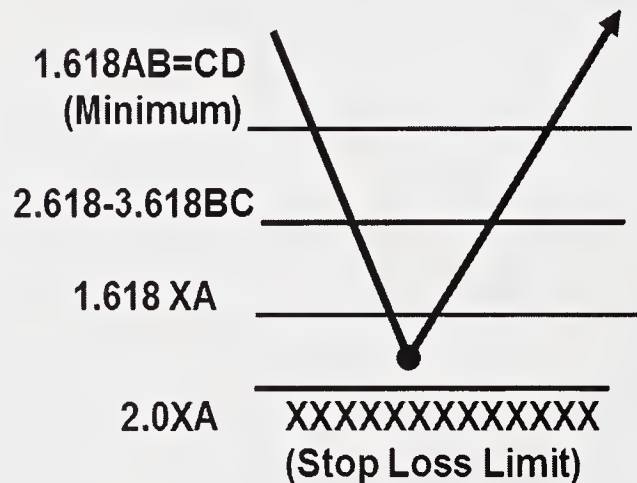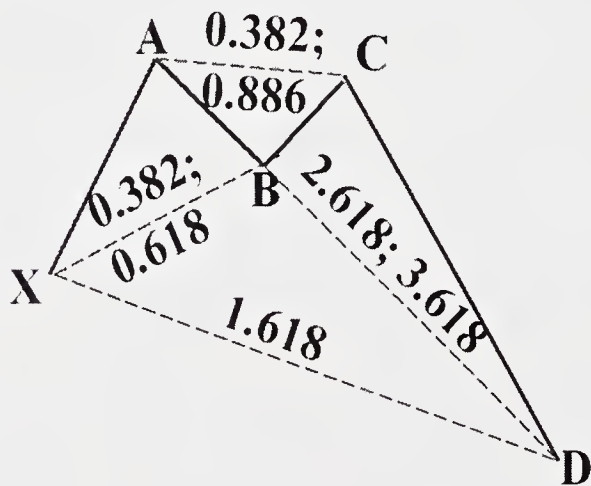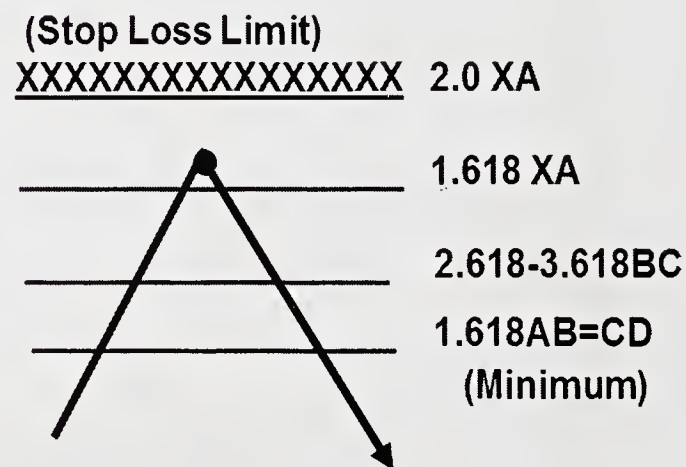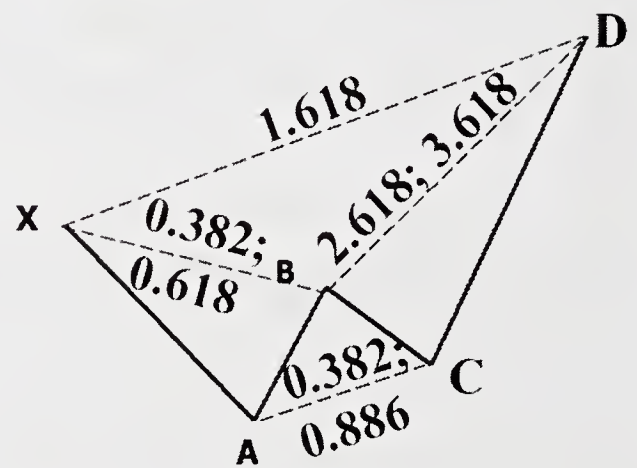
Notes:
- Expect PRZ test to exceed 1.618XA with volatile price action.
- Utilize the area beyond the 2.0 XA as make-or-break stop loss limit measure especially when the reversal at completion point is extreme. In these cases, price action MUST REVERSE immediately after exceeding 1.618 XA general retracement area.
- B Point Alignment not less than 38.2% but can be up to 61.8% B point.

Bullish Crab Pattern
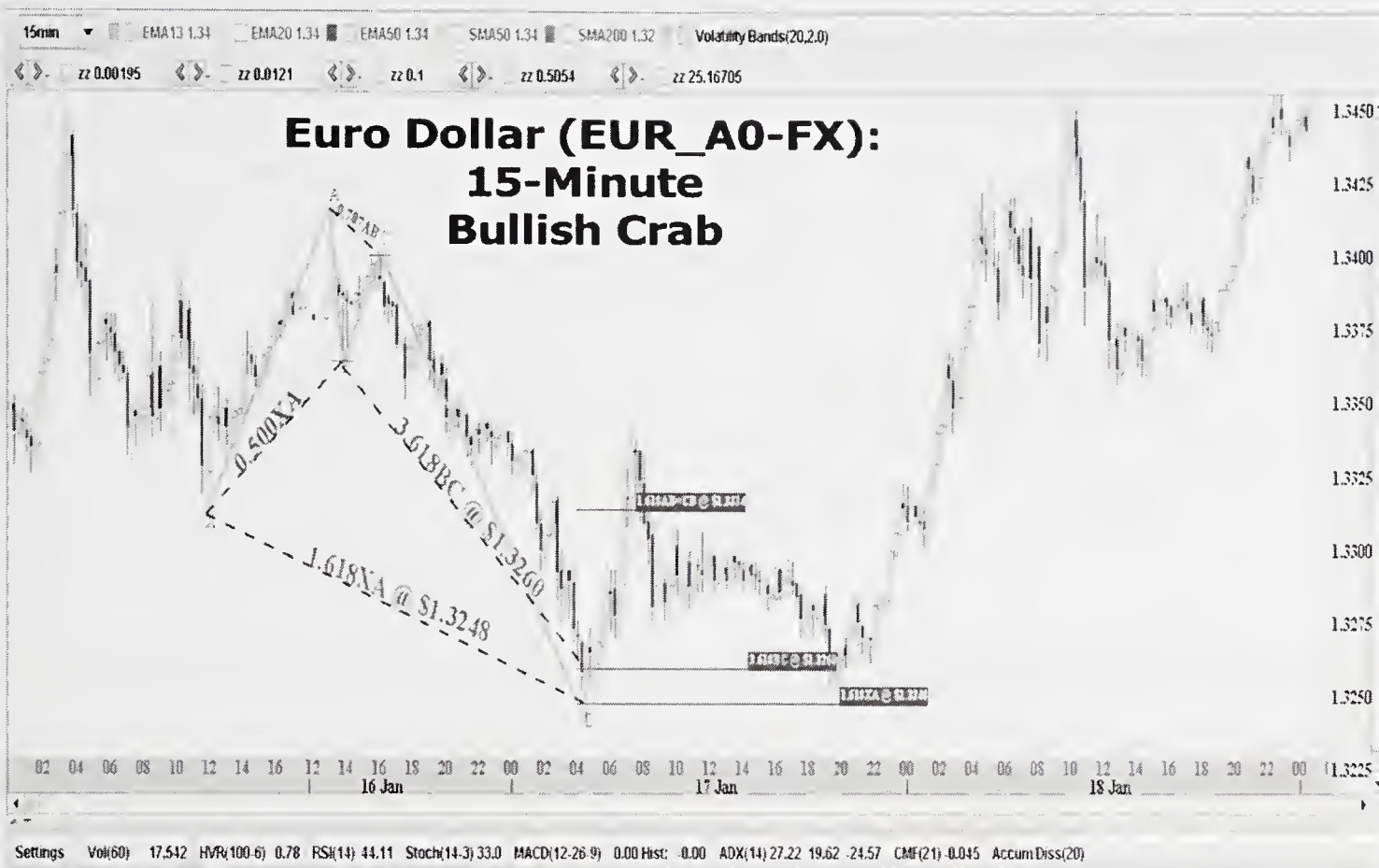
Euro Dollar (EUR_A0-FX):
15-Minute
Bullish Crab

Euro Dollar (EUR_A0-FX): 15-Minute
Bullish Crab Potential Reversal Zone
(PRZ)

Bearish Crab Pattern

Google (GOOG):
5-Minute
Bearish Crab

Google (GOOG): 5-Minute
Bearish Crab Potential Reversal Zone (PRZ)
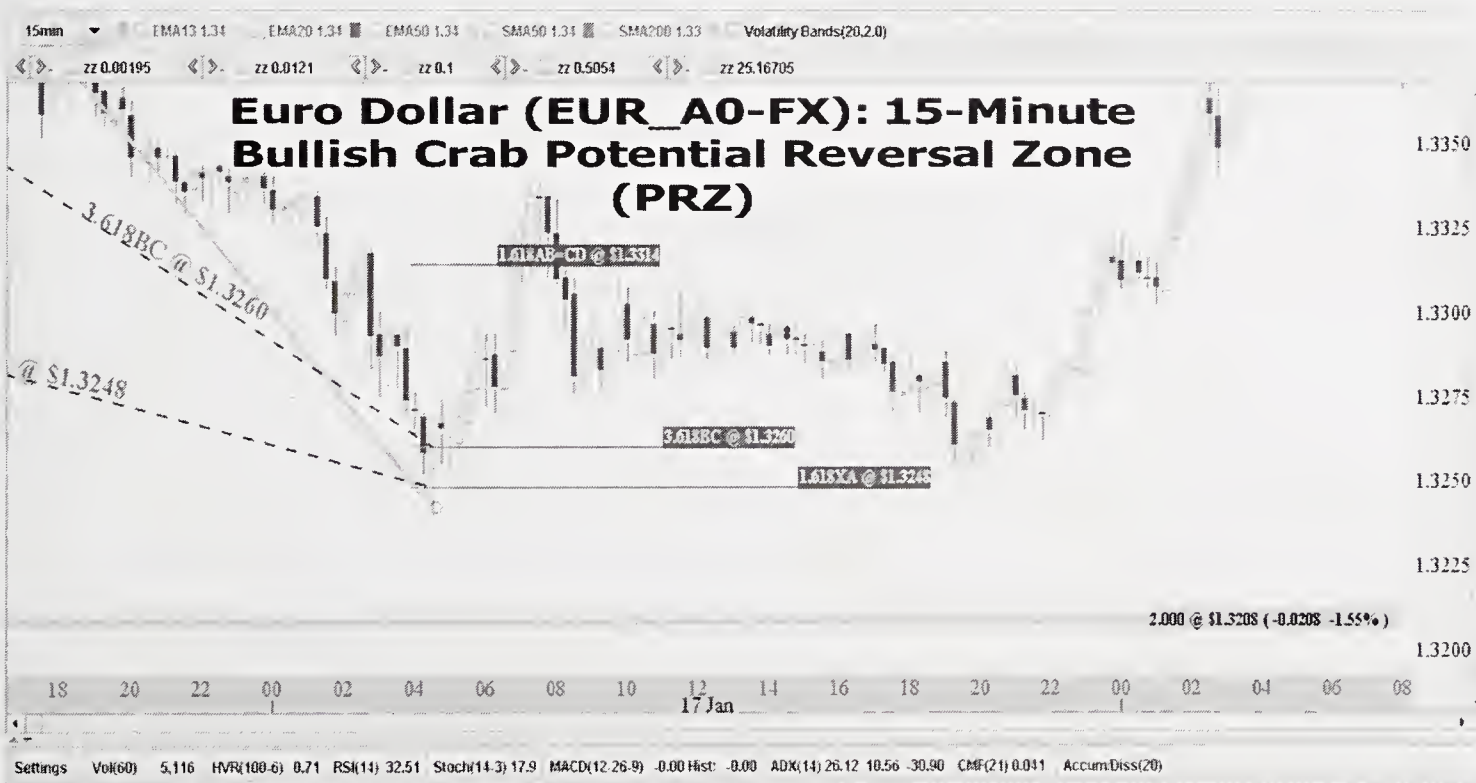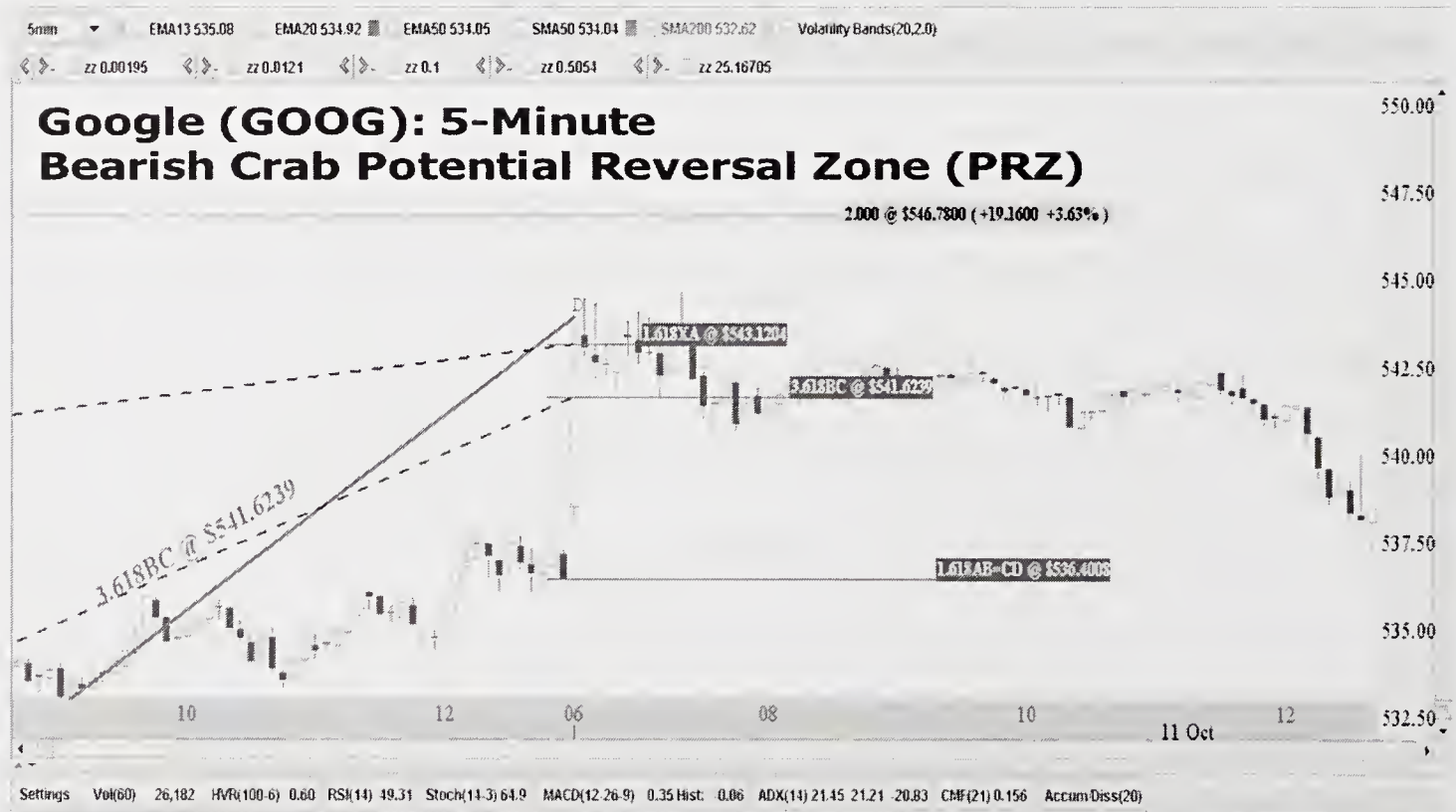
Deep Crab Pattern

Elements:
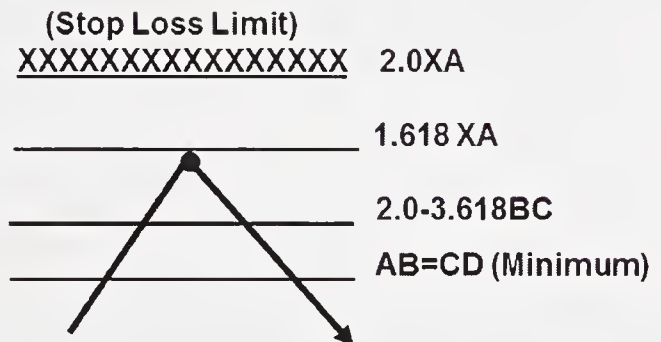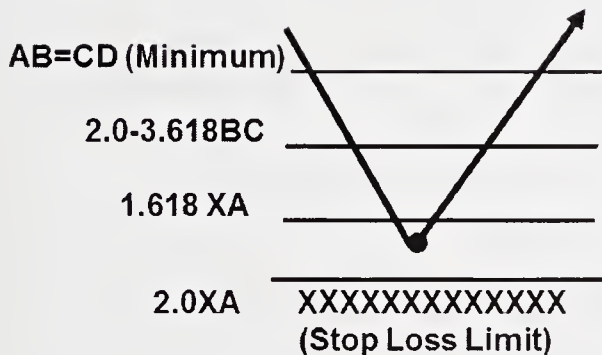**B Point Ratio: 0.886 (+5% Tolerance)**
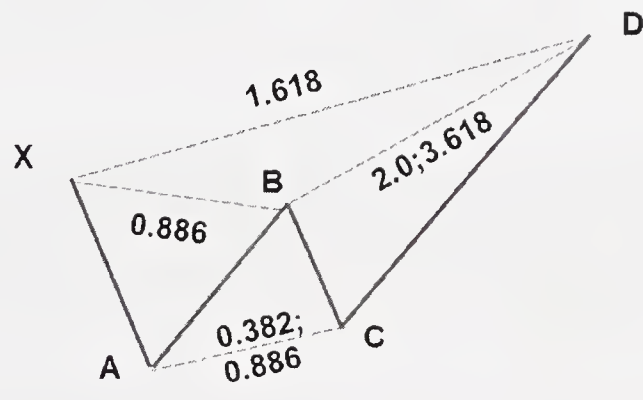**AB=CD-1.618AB=CD**
BC: 2.0-3.618
XA: 1.618
Stop Loss > 2.0X (Depends upon AB=CD)
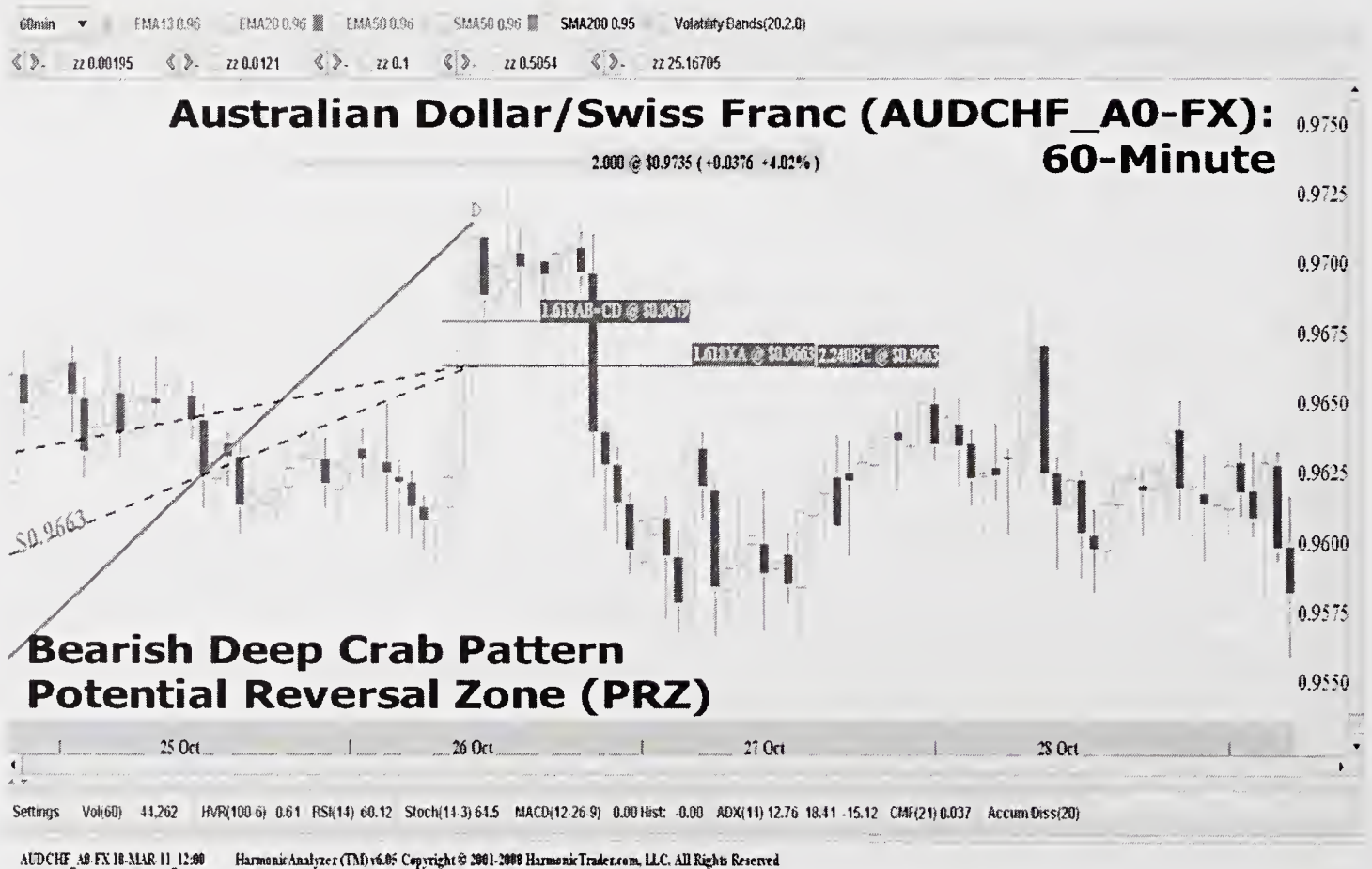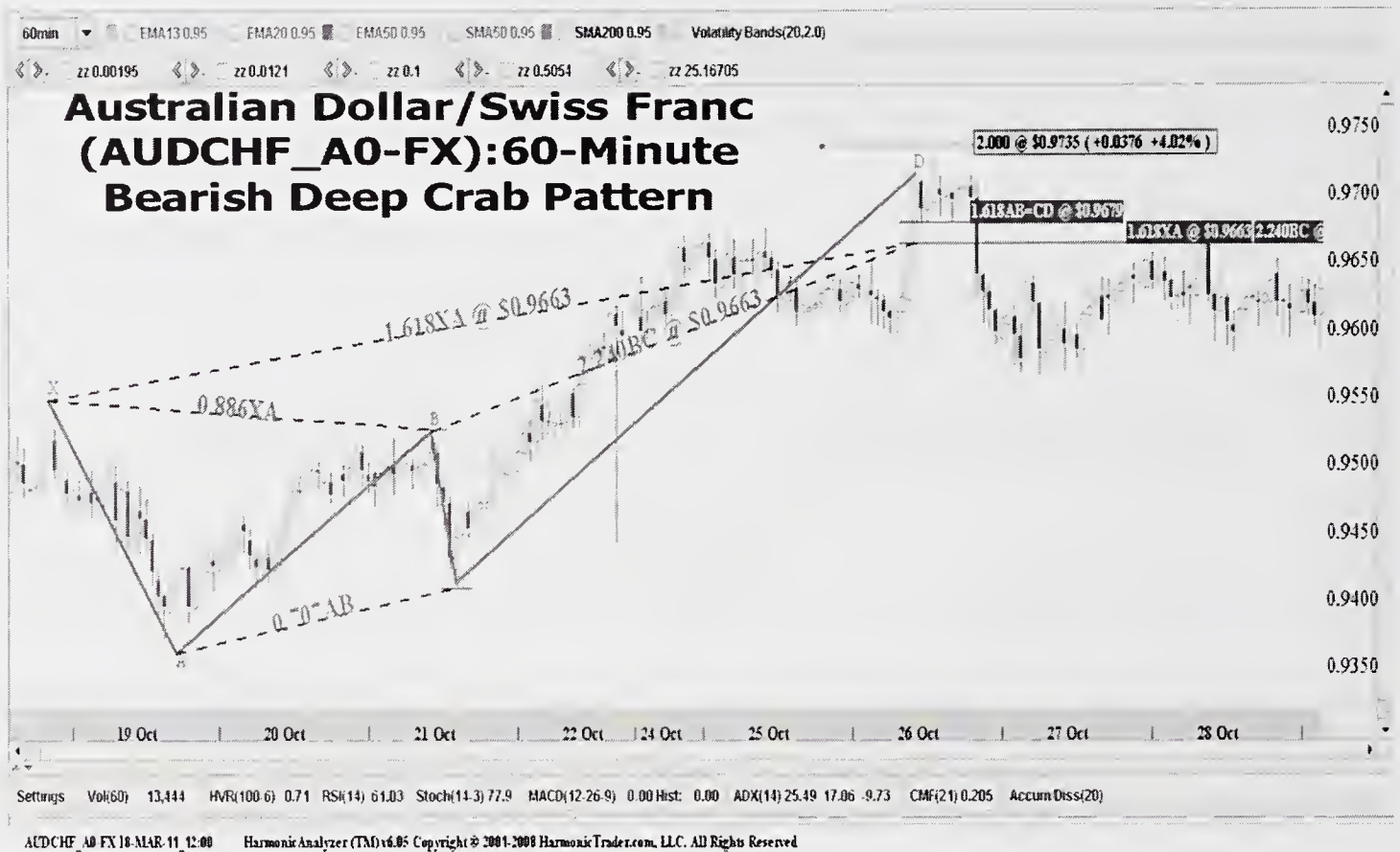
Bullish Deep Crab
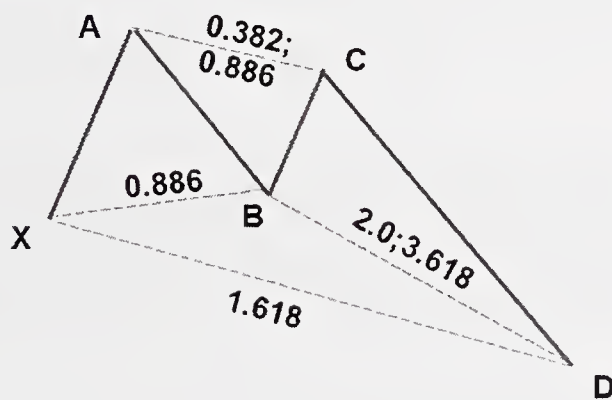
Bearish Deep Crab

Notes:

- B point @ 0.886 XA Retracement is a minimum that must be t estedd to trigger the structure and possesses +5% tolerance.
- Utilize 2.0 XA as make-or-break stop loss limit measure.
- Price action MUST REVERSE immediately after exceeding general 1.618 XA area.
- B Point Alignment @ 38.2%XA or LESS up to 5% max above 61.8% level.

Bearish Deep Crab Pattern

Australian Dollar/Swiss Franc (AUDCHF_A0-FX):60-Minute Bearish Deep Crab Pattern

Australian Dollar/Swiss Franc (AUDCHF_A0-FX): 60-Minute

Bearish Deep Crab Pattern
Potential Reversal Zone (PRZ)

SPECIAL SITUATION: Crab/Deep Crab@1.902XA

The 1.902 is an additionnal measurement that I encountered in Bryce Gilmore's *Geometry of Markets* (Traders Press 1989). I found it worked extremely well in extension patterns like the Crab that experienced strong price action at completion point. It is a complementary tolerance measure effective in specific situations.

Elements:
**AB=CD-1.618AB=CD**
BC: 2.0-3.618
XA: 1.618-1.902
Stop Loss:> 2.0 (Depends upon 1.618-1.902XA)

Bullish Crab@1.902XA

Due to the extremity of this structure type, it is common to observe extreme price action as the pattern completes. The key is to observe the price behavior as all the numbers at the harmonic support are tested and include the 1.902 measure as an additional tolerance limit beyond the 1.618.
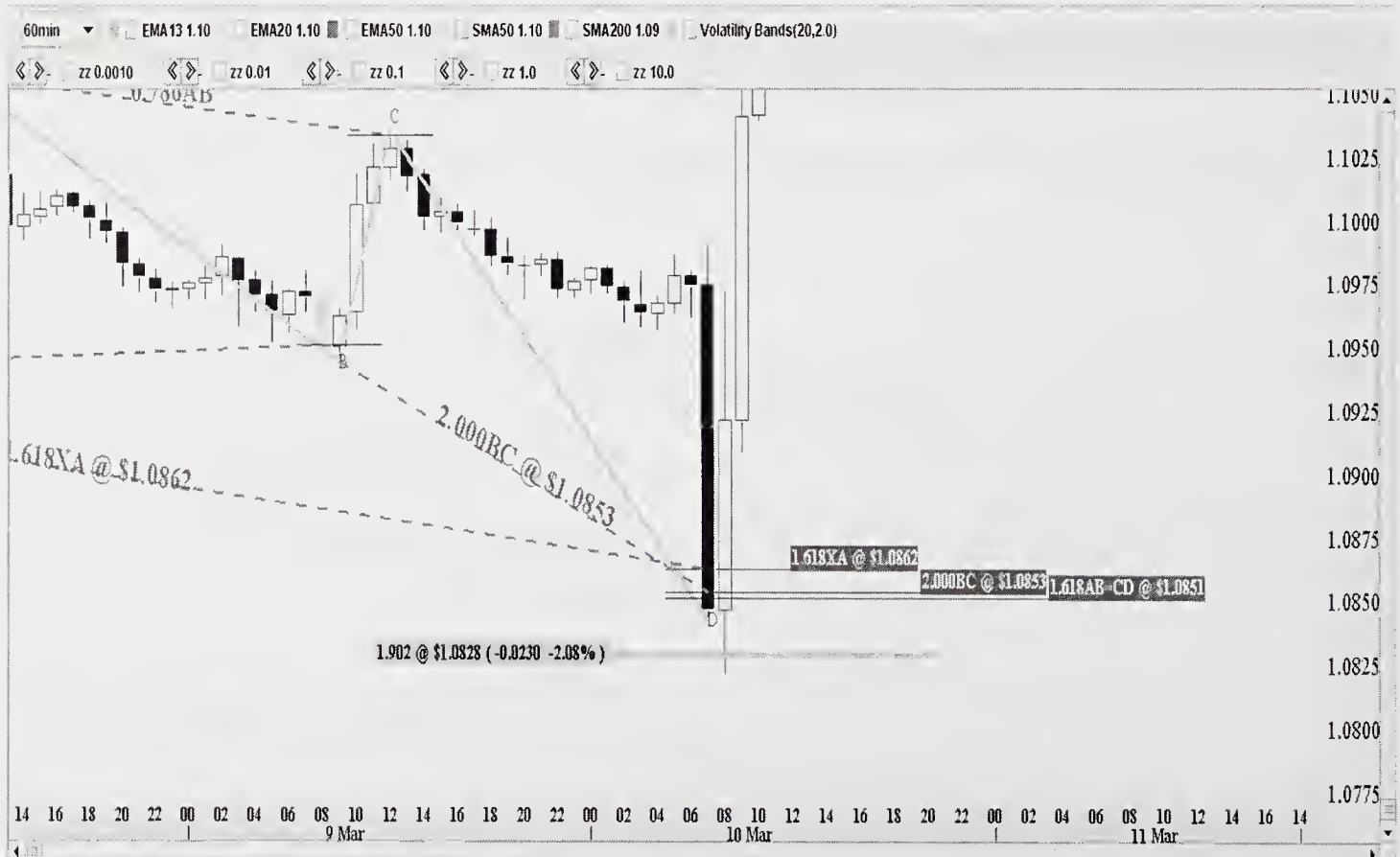
Bullish Crab Pattern
Potential Reversal Zone (PRZ)@1.902XA
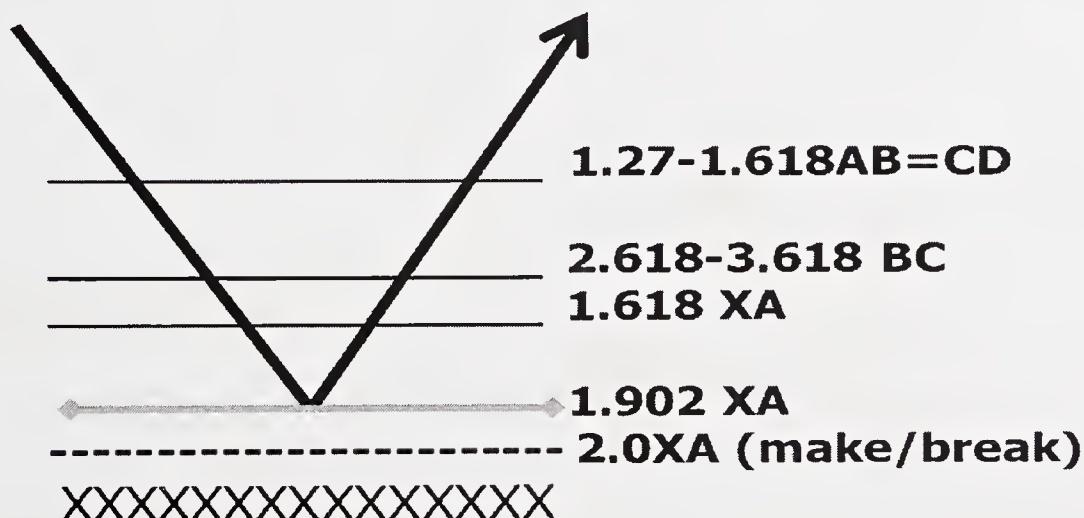
1.27-1.618AB=CD

2.618-3.618 BC
1.618 XA

1.902 XA
2.0XA (make/break)

XXXXXXXXXXXXXXX

Bearish Crab@1.902XA

The 1.902 measure increases the acceptable tolerance of extreme price action, especially when reversals test the 2.0 stop loss limit. It is important to remember that stop losses are placed beyond these levels. Therefore, it is essential to assess price action as the pattern completes to gauge the validity of this additional tolerance beyond the ideal completion point.

Bearish Crab Pattern
Potential Reversal Zone (PRZ) @1.902

XXXXXXXXXXXXXXXXXXXXX

----------------------------- 2.0XA (Stop Loss Limit)
1.902 XA

1.618 XA
2.618-3.618 BC

1.27-1.618AB=CD(Minimum)

Bearish Crab@1.902XA

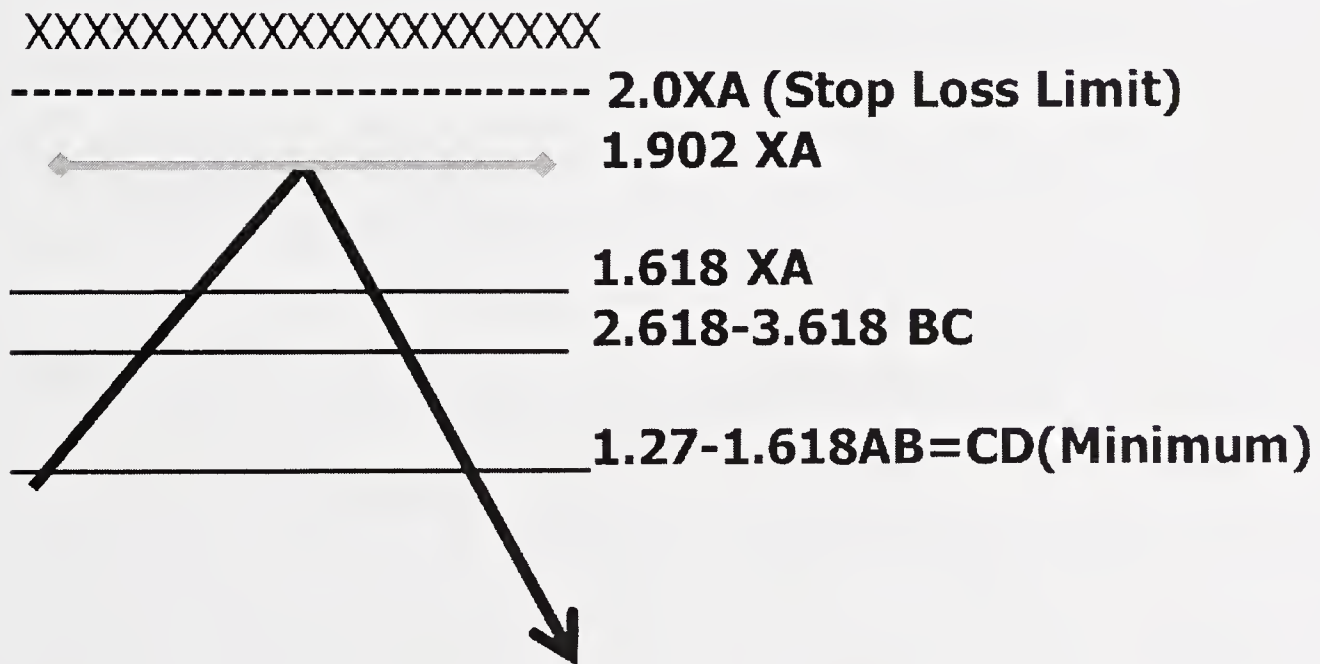AUDJPY_A0-FX 22-SEP-16_16:00   HarmonicAnalyzer (TM) v6.05 Copyright © 2001-2008 HarmonicTrader.com, LLC. All Rights Reserved

AUDJPY_A0-FX 22-SEP-16_16:00   HarmonicAnalyzer (TM) v6.05 Copyright © 2001-2008 HarmonicTrader.com, LLC. All Rights Reserved

Butterfly Pattern

Elements:
B Point Ratio: 0.786 (+/-3% Tolerance)
AB=CD-1.27AB=CD
BC: 1.618-2.24
XA: 1.27
Stop Loss > 1.414XA (Depends upon AB=CD)

Bullish Butterfly
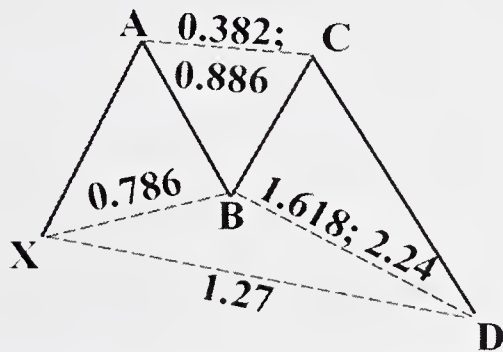
Bearish Butterfly
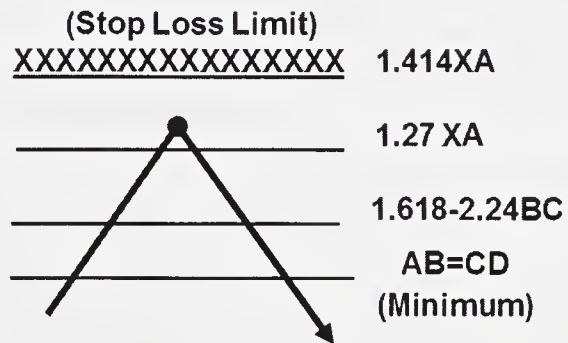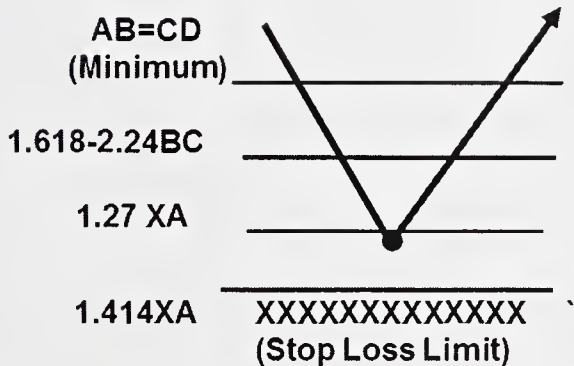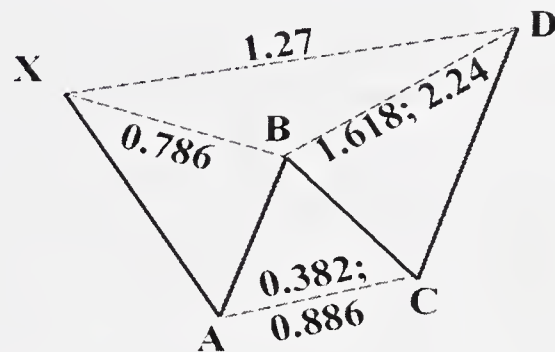
Notes:

- B point must be a precise 0.786 XA Retracement and requires a 3% tolerance to distinguish these structures.
- Utilize 1.414 XA as make-or-break stop loss limit measure.
- Favor the 1.414 level especially when the AB=CD exceeds 1.27 XA level.
- Due to the nature of the pattern price action MUST REVERSE immediately after exceeding 1.27 XA general area.
- B Point Alignment must be within the 3% parameters of the 78.6% retracement otherwise these structures will typically form a Crab at the 1.618.

Bullish Butterfly Pattern

British Pound (GBP_A0-FX): 15-Minute Bullish Butterfly

British Pound (GBP_A0-FX): 15-Minute Bullish Butterfly

Potential Reversal Zone (PRZ)

Bearish Butterfly Pattern

Standard and Poor's 500 March 2011 Mini-Contract (ES_H1) Bearish Butterfly: 15-Minute

Standard and Poor's 500 March 2011 Mini-Contract (ES_H1) Bearish Butterfly Potential Reversal Zone (PRZ) 15-Minute
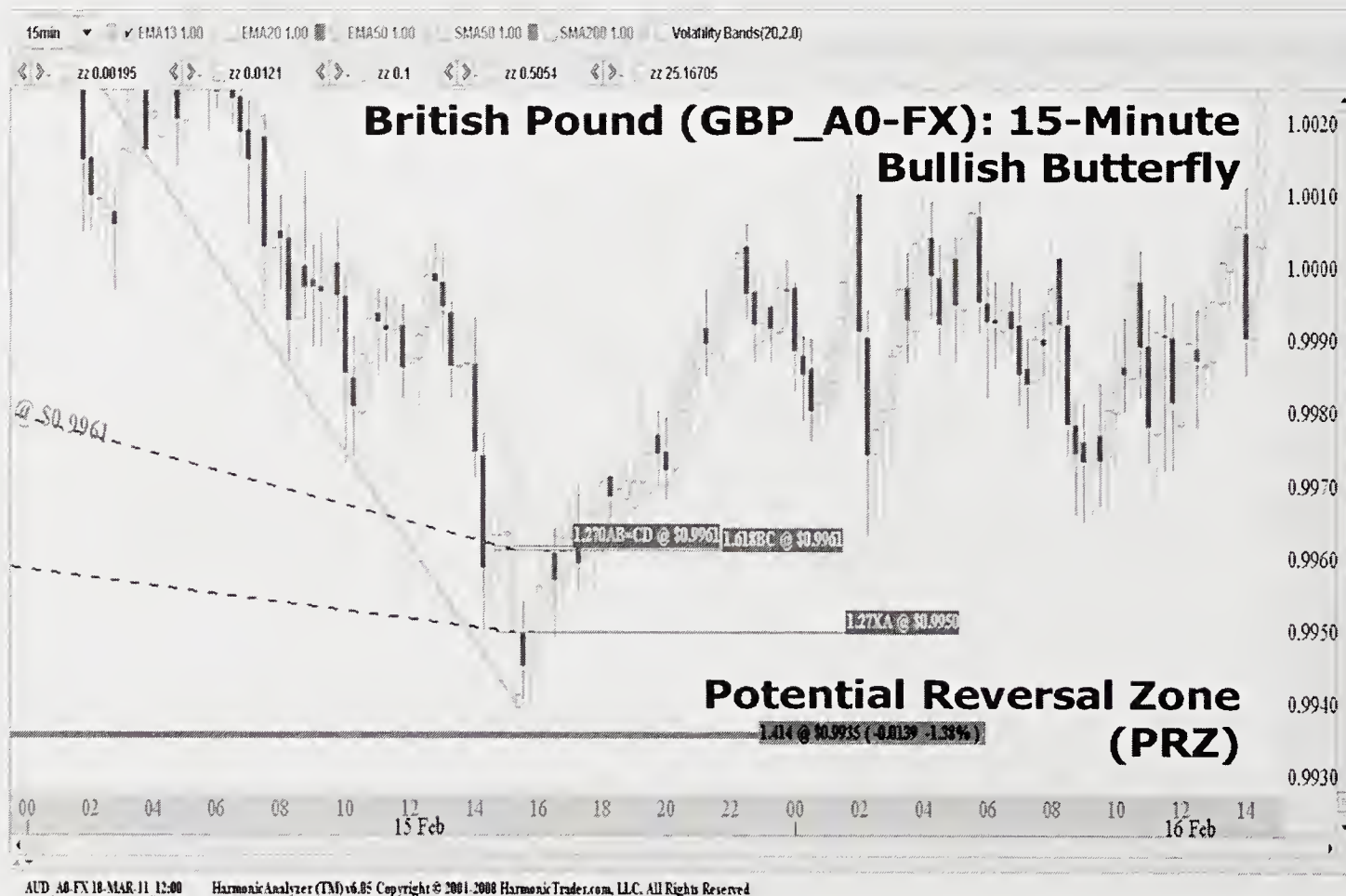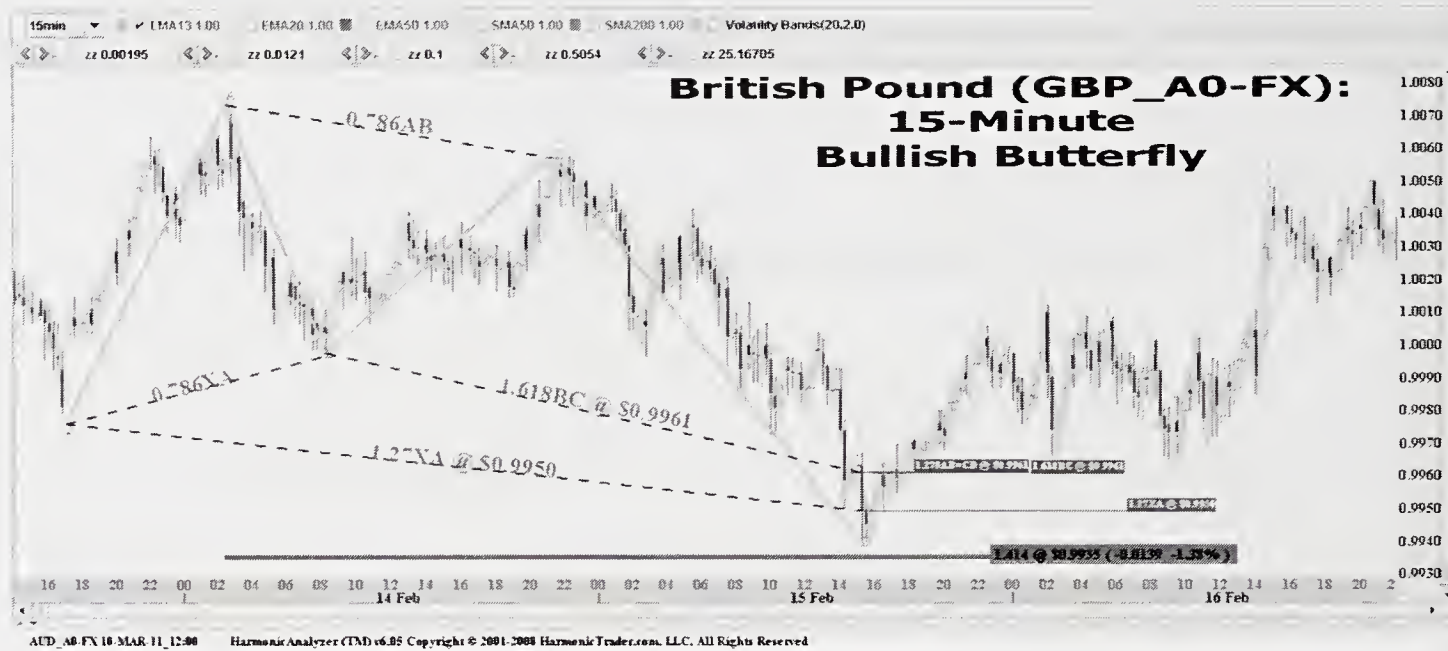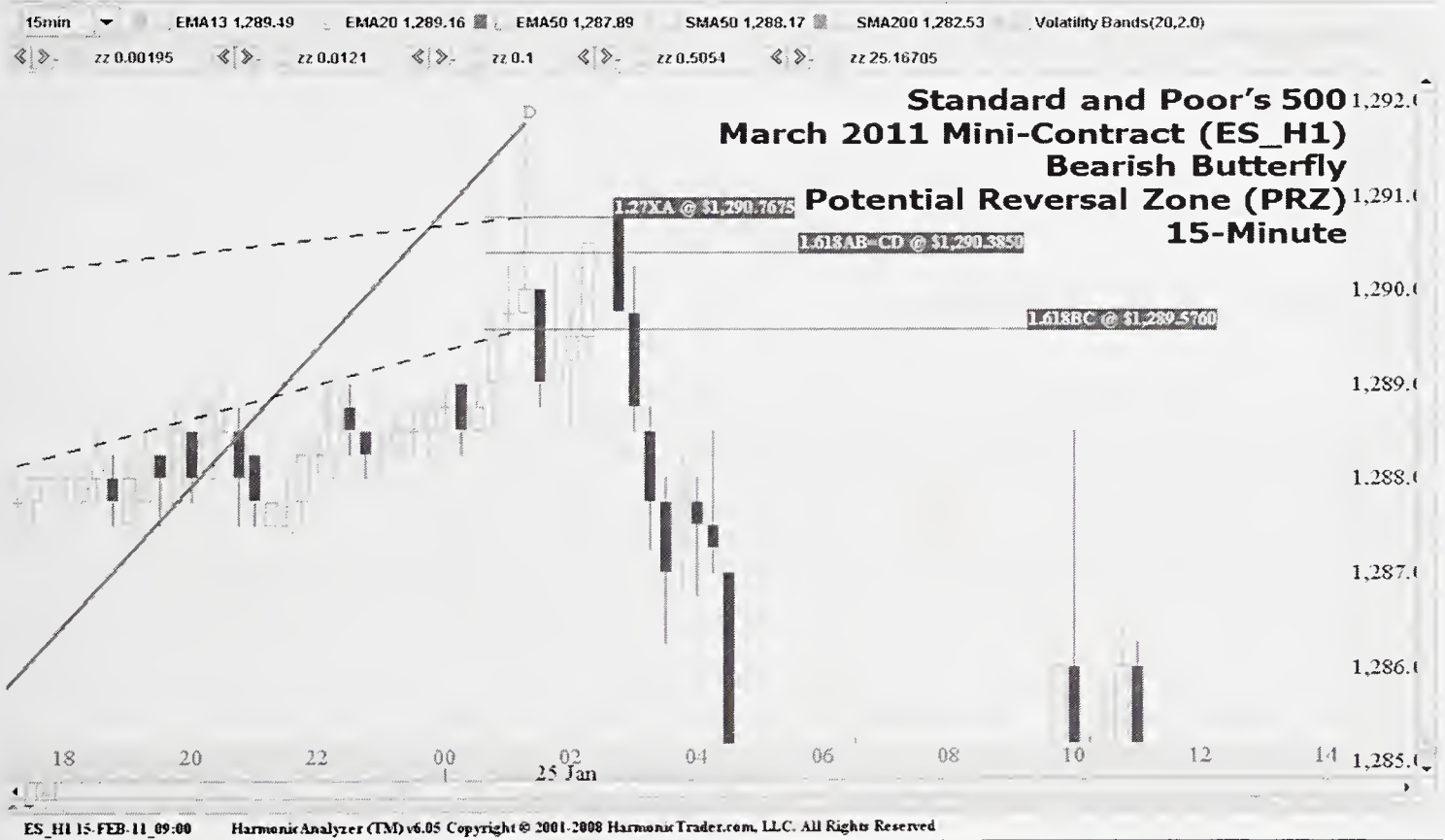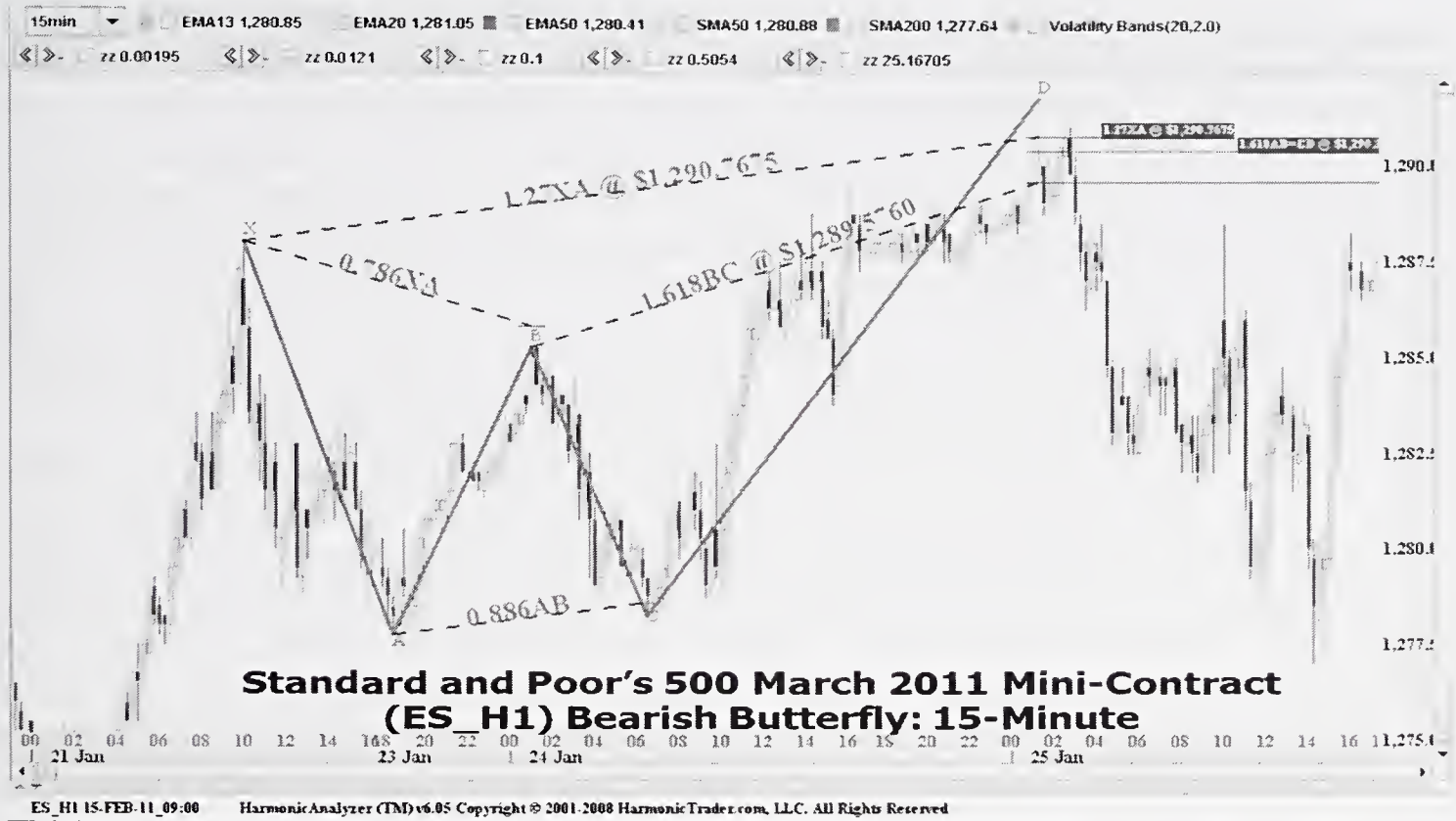
Shark Pattern

The Shark Pattern is a new harmonic pattern that I initially released in 2011 in my *Patterns into Profits* course. Although I was aware of the price structure for quite some time, I needed to refine the identification parameters to discover the best opportunities. Essentially, the pattern is the primary structure that precedes a 5-0 formation. This structure is outside the typical M and W framework. It possesses a unique formation called an Extreme Harmonic Impulse Wave that retests defined support/resistance while converging in the area of the 0.886 retracement – 1.13 extension. In all cases, the completion point must include the powerful 88.6% support/retracement as a minimum requirement. In addition, the unique extreme Harmonic Impulse Wave employs a minimum 1.618 extension.

This combination with the 88.6% retracement defines a unique structure that possesses two profound harmonic measures to define the minimum level. In many cases, the price action will retest the initial starting point of the pattern and define excellent opportunities to take advantage of a market that has moved to far too fast within a limited period of time. These structures typically possess over-extended price action that utilizes the "natural" state of the Extreme Harmonic Impulse Wave which is typically categorized with reactionary trading behavior. This pattern frequently defines excellent opportunities but these reversals are often sharp and require specific management strategies to capitalize on the phenomenon. In many situations, the price action will retest the prior support/resistance level and typically result in a limited counter trend move. This structure should be handled differently than the standard M and W patterns. In fact, the overall expectations in price action should be short-lived and seek to capture the clearest opportunities. The Shark pattern yields many accurate and aggressive reactions that can be successfully traded as long as a more active management is applied.

Trading The Shark Pattern

The Shark Pattern is represents a temporary extreme structure that seeks to capitalize on the extended nature of the Extreme Harmonic Impulse Wave.
Since it precedes the 5-0, the eventual 50% level acts as the optimal profit target. Once executed, the position requires an active trade management strategy. Confirmation at the pattern's completion point demands a demonstrative change in price action character immediately following minimum test of 88.6% retracement and the 1.618 Extreme Harmonic Impulse Wave. After these have been tested, the price action typically will exhibit a change in direction that can be quite volatile. As long as the minimum measures have been tested, the reversal must be anticipated quickly thereafter. It is common for price action to exceed the minimum levels but the overall determination of the pattern's validity depends upon the price action at the completion point.

1.13 Extension – The Failed Wave

The 1.13 extension usually represents a failed breakout (shake-in) or breakdown of an established prior resistance or support point (shake-out). The 1.13 harmonic ratio is the inverse of the 0.886 and it is as important in specific situations. The 1.13 ratio represents a critical structure outside the M and W types.

Bullish   **Bearish**
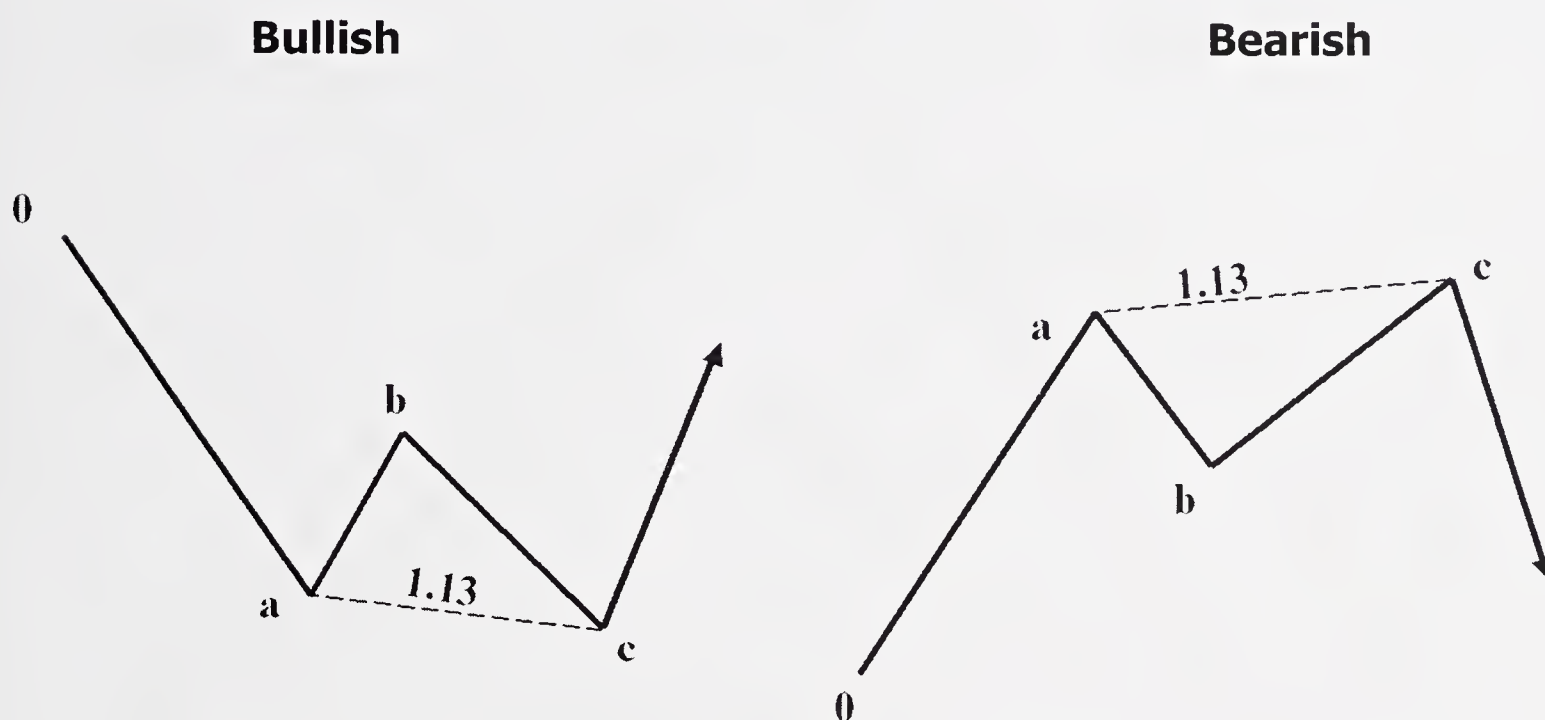

This is an divergent reversal in nature where the secondary test does not have the strength to continue in the directio of the primary trend. The 1.13 extension represents a make-or-break level in many retests of clear support and resistance. In fact, price action that exceeds a critical 1.13 extension level frequently will continue farther to the 1.27 or 1.618 areas.

Harmonic Impulse Waves

Harmonic Impulse waves are defined price movements that adhere to specific ratios. These structures should be treated in the same manner as complex patterns. These are unique structures outside the realm of M and W structures but even more accurate in certain situations.
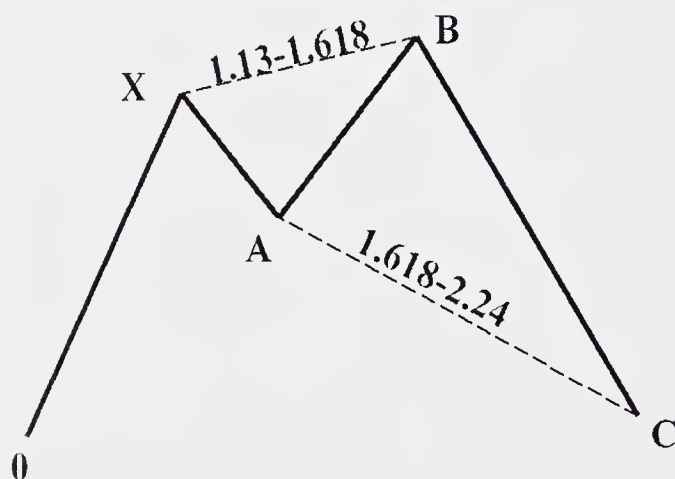
Bullish   **Bearish**
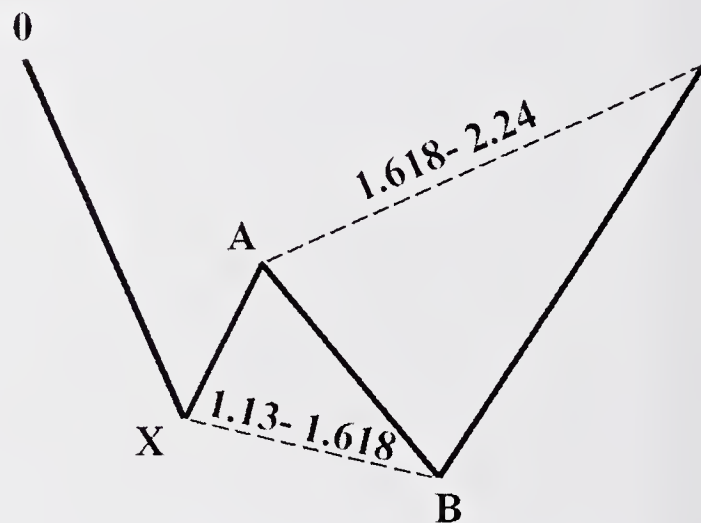
Shark Pattern Management

Because the Shark pattern is a reactive trading opportunity, it requires an active – if not automatic – management strategy. The optimal profit objectives must anticipate a reaction to the 50–61.8 % to test the 5-0 Pattern Potential Reversal Zone (PRZ). Specifically, the initial profit objective for the Shark Pattern should be the LESSER OF the 50% level or the Reciprocal AB=CD Pattern – whichever comes first. Typically, the initial profit objective will be the first price measurement in the 5-0 Potential Reversal Zone (PRZ). Although other discretionary strategies can be employed to determine if a larger reversal as possible, in most cases the management of the Shark pattern seeks to capture the highest probabilty price segment automatically. Although it can be difficult to automatically secure profit targets, in this pattern it is

essential to maximize these opportunities. We will examine the important differences that optimize these decisions.

Bullish Shark Pattern

It is important to note that I have added an additional measure at the 0X retracement of a 38.2 – 61.8% at the A point. Since this is outside of the normal M and W measures, it does differentiate Shark structures as valid opportunities.
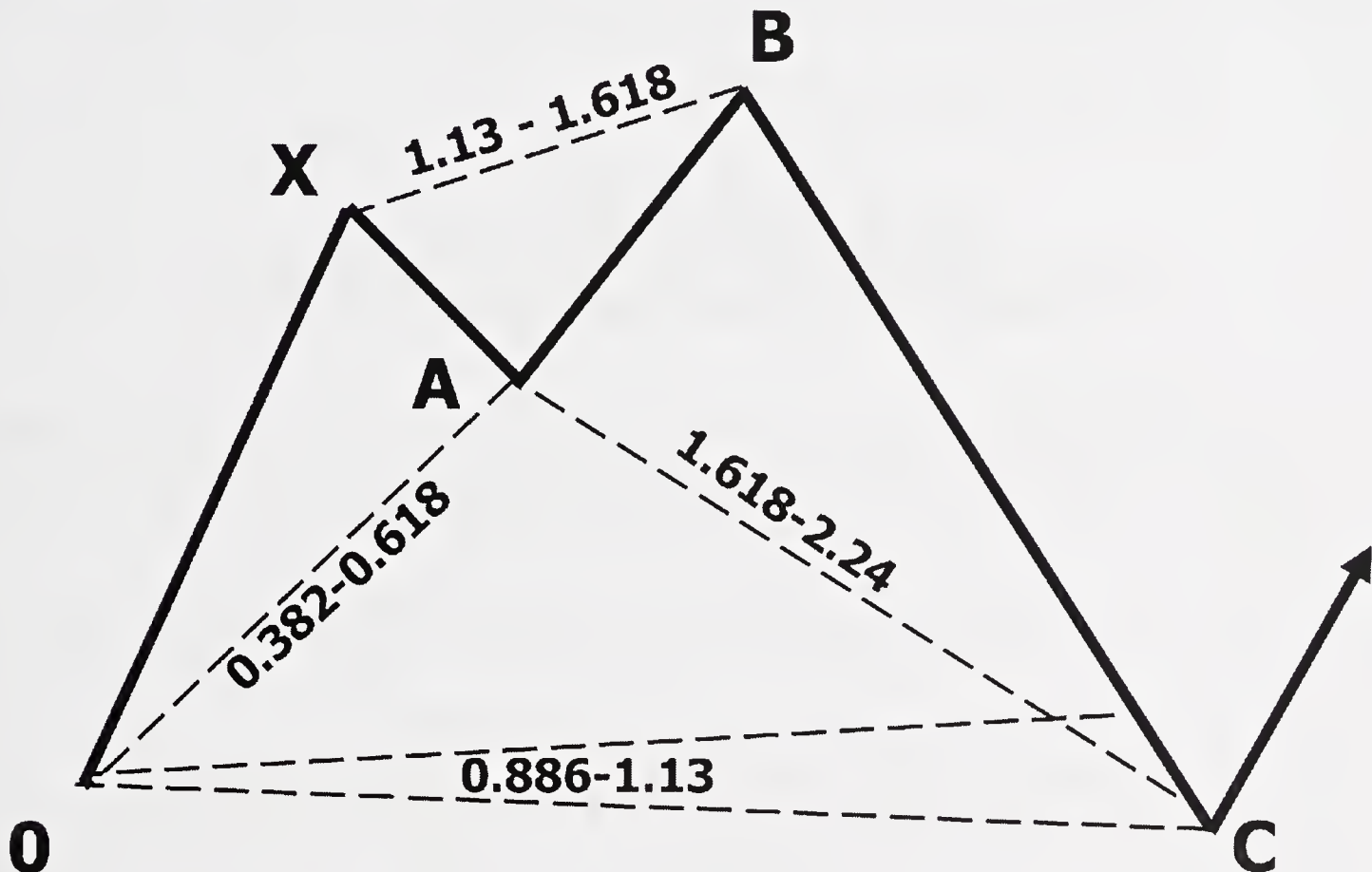
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The Shark is an excellent structural formation but does require some specification to avoid invalid possibilities. The key technical event is the retest of the initial pattern point at 0. Depending upon the impulsive leg, the 0B measurement will occur after the 88.6% retracement has been tested. There can be some variation where price action exceeds the 1.0 level and reaches for the 1.13 but this depends upon the impulsive structure. We will look at some combinations throughout this material the primary price event that is unfolding in the structure is a sharp retest of the initial point that possesses some powerful reactive harmonic phenomenon.

Bullish Shark Pattern Potential Reversal Zone (PRZ)

The Shark pattern defines a unique conglomeration of impulsive and reactionary harmonic structures that provide definitive entries. The bullish Potential Reversal Zone defines the harmonic support at same area as the retest of the initial point pattern. Essentially, this alignment of structures identifies an opportunity to buy at established support. Although the 88.6% retracement is an important minimal consideration, the larger focus should analyze price action in the area of the 1.0 XA level as well.

Bullish Shark Pattern
Potential Reversal Zone (PRZ)

0.886 0B

1.618-2.24AB

1.13 0B
XXXXXXXXXXXXXXX (Stop Loss Limit)
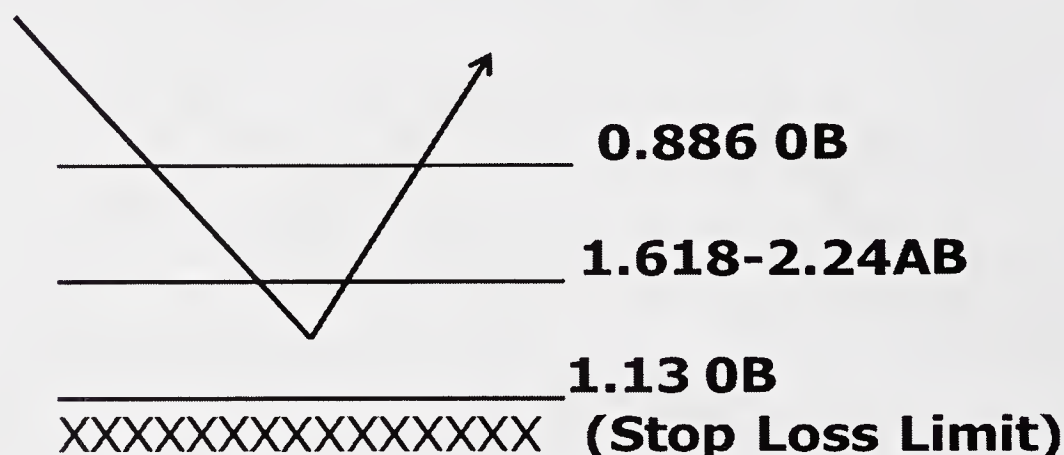
The key in determining whether to execute at the 88.6% retracement or the 113% extension is to analyze the impulsive minimum 1.618 extension. Depending upon where this completes, it will dictate whether the Shark pattern will complete at the prior initial low or there will be a situation of extended price action to the 1.13 level. If the minimum 1.618 impulsive wave completes before the 88.6% retracement, then 2.0 or 2.24 would be use to best compliment the harmonic support. Regardless of how far the price action trades beyond the minimum levels, the key in all reversals is to see demonstrative price action that continues in the countertrend direction following completion of the pattern. The following example of the Euro/Dollar possesses all of the ideal elements of structure. The AB impulsive leg was a 2.24 extension that completed

before the 0B 88.6% retracement. Since the minimum 1.618 impulsive leg was satisfied, the completion of pattern was focused on the 88.6% level.

EuroDollar (EUR_A0-FX): 15-Minute
Bullish Shark Pattern

EuroDollar (EUR_A0-FX): 15-Minute
Bullish Shark Pattern Potential Reversal Zone (PRZ)
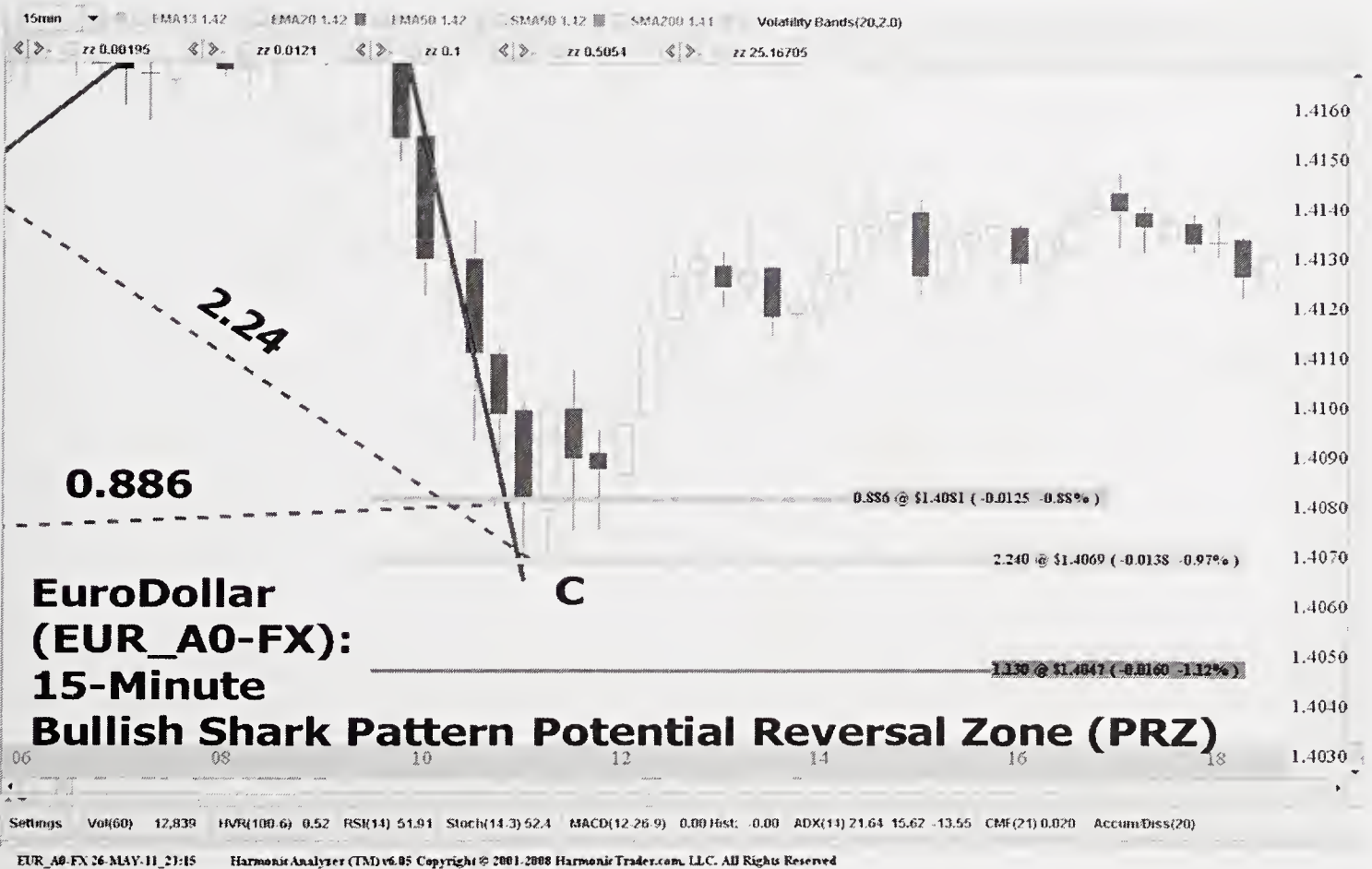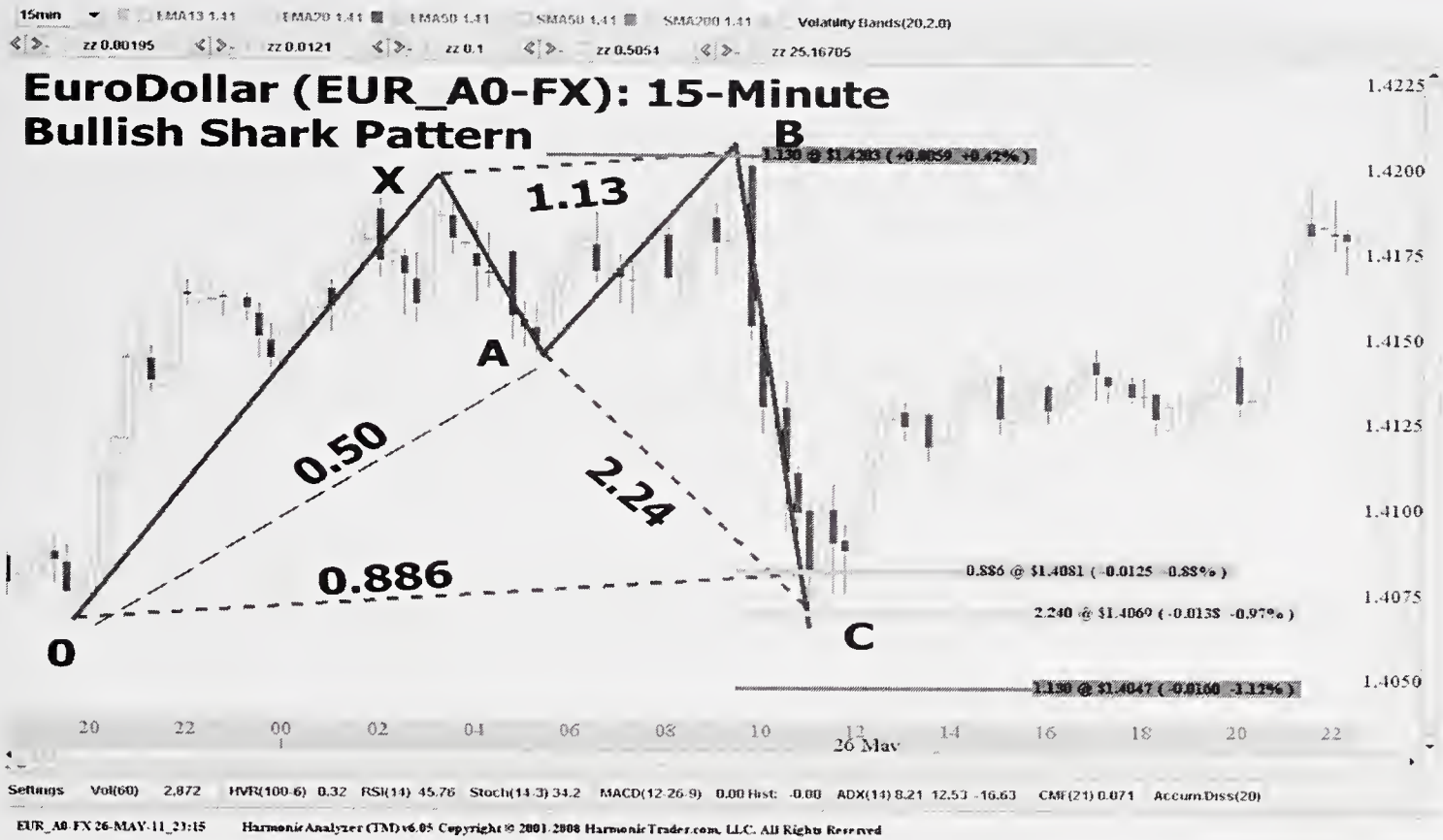
Harmonic Trading Volume 3: Reaction vs. Reversal

Bullish Shark-> Bearish 5-0

As I have mentioned previously, the Shark pattern is a structure that typically precedes a 5-0 formation. We will outline the 5-0 pattern later in this chapter but it is significant confirmation in the handling of Shark pattern opportunities. In fact, the 50% retracement is utilized as the initial target for the Shark. This underscores the importance of recognizing the Shark as a reactive structure first and foremost. In this example of the Euro on a 15-minute chart, the initial reversal from the Shark pattern at 1.4070 served as sharp intraday support while the 50% ratio of the pattern defined an important minimum target. Although it is possible for 5-0 patterns to fail, they most commonly experience consolidation that requires immediate trade management at the predetermined profit target under most conditions. After gaining experience with these trades, it will become clear that the best decision is to capture partial profits at a minimum at these price objectives.

EuroDollar (EUR_A0-FX): 15-Minute
Bullish Shark Pattern + Bearish 5-0
Potential Reversal Zones (PRZ)
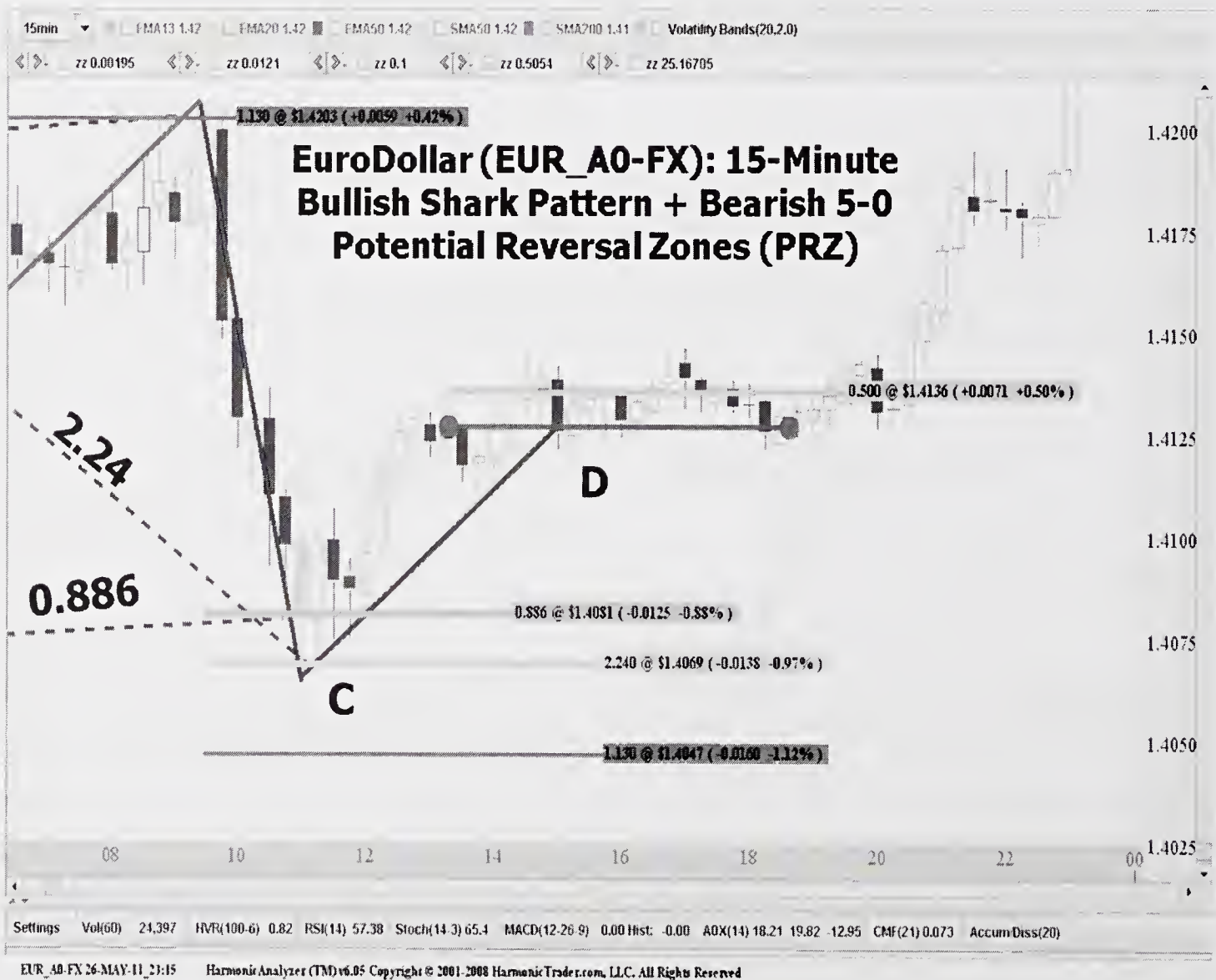
Bearish Shark Pattern

The key in defining the bearish Shark is to distinguish the minimum impulsive leg relative to the 0B retest. Depending upon where the 1.618 minimum impulsive leg completes, the extent of the price action exceeding the initial point of the pattern can be clearly determined.

0

C

0.886-1.13

0.382-0.618

1.618-2.24

A

X

1.13 - 1.618

B
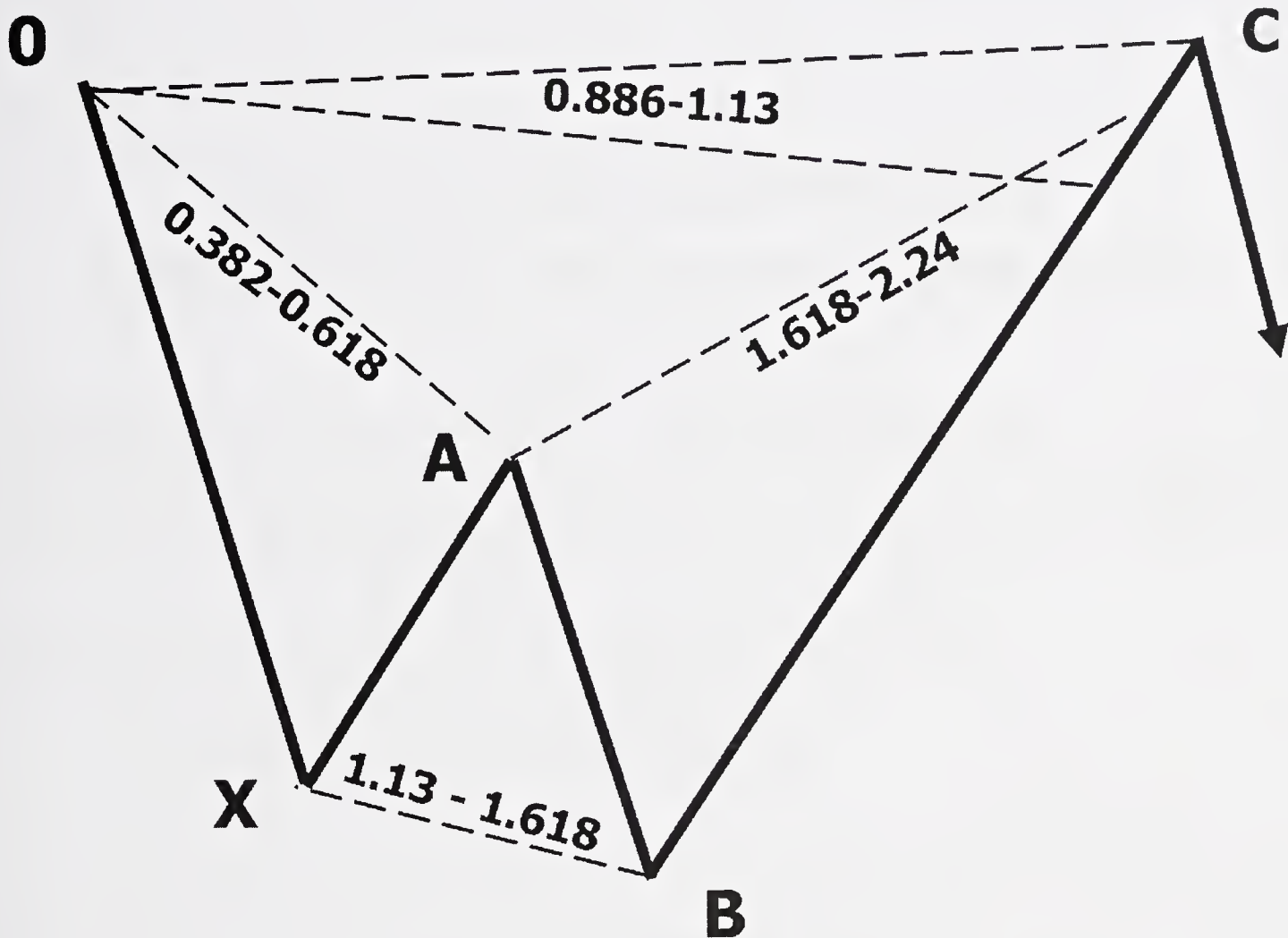
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Bearish Shark Pattern Potential Reversal Zone (PRZ)

Generally, the price action in the Potential Reversal Zone will require confirmation at the pattern completion point but the overall bias of whether the reversal will be a retracement at the 88.6% level or an extension at the 1.13 XA measure will be dictated by the impulsive leg. In most cases, I expect the Shark to retest the initial point of the pattern (1.0 0B). Therefore, price action that exceeds the 88.6% level is common for structural types.

Bearish Shark Pattern Potential Reversal Zone (PRZ)

XXXXXXXXXXXXXXXX   **1.13XB (Stop Loss Limit)**

1.618-2.24AB
0.886XB
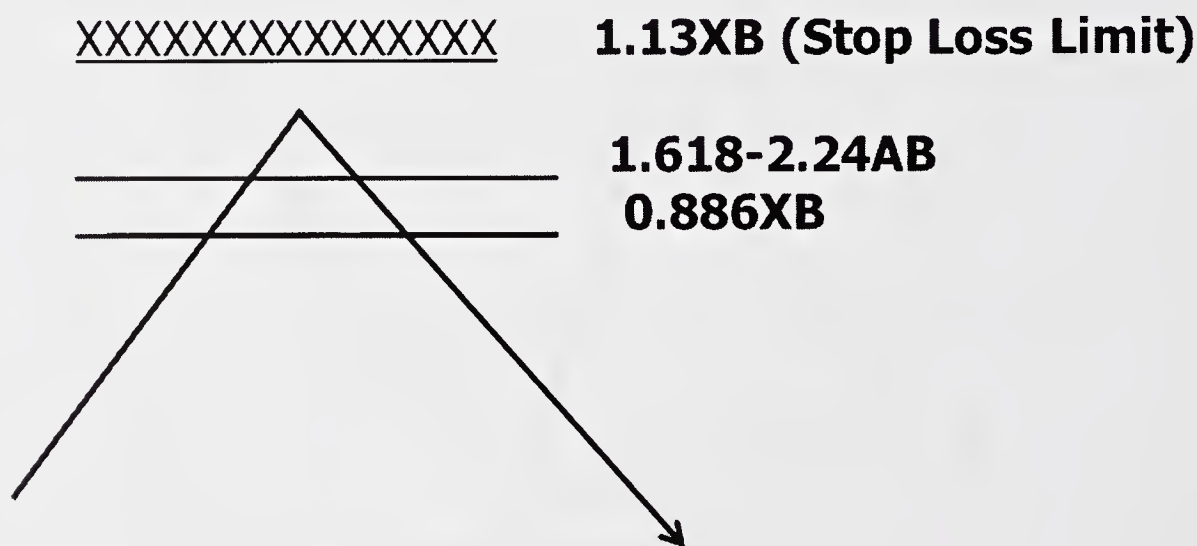
Copyright Harmonic Trader L.L.C.

The following example of the Canadian Dollar on the daily chart possesses perfect structure and exemplifies the reactive nature of the pattern. Although the 1.618 impulsive leg preceded the 88.6% retracement, the alignment of these measures define the area close to the initial point of the pattern as the preferred area for completion. It is important to note that the price action exceeded these minimum measures but reversed on the exact day it tested the entire zone.

Bearish Shark Pattern

Canadian Dollar (CAD_A0-FX): Daily
Bearish Shark Pattern

Canadian Dollar (CAD_A0-FX): Daily
Bearish Shark Pattern
Potential Reversal Zone (PRZ)
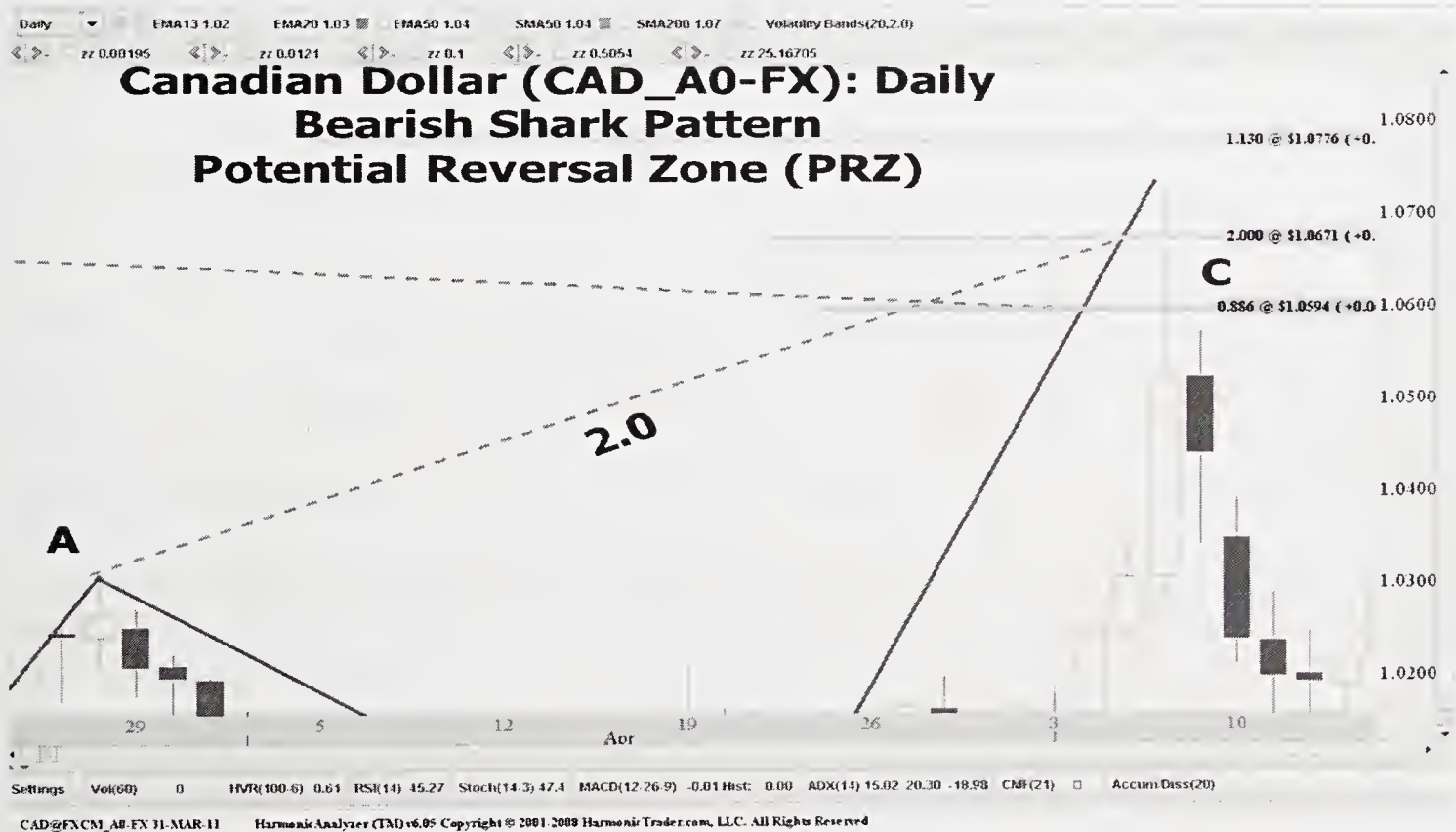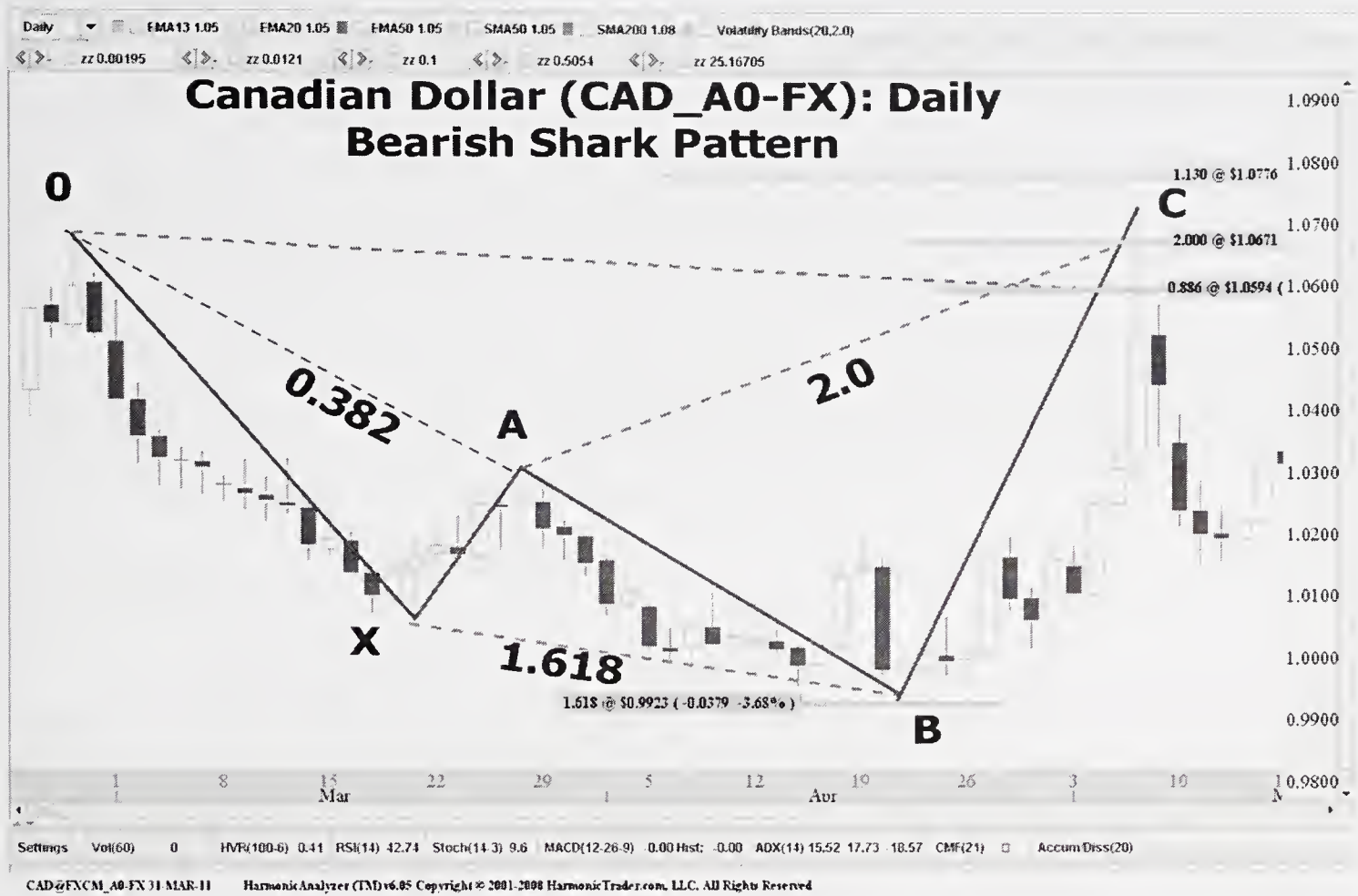
Bearish Shark > Bullish 5-0

Regardless of the timeframe, the Shark pattern always incorporates the minimum 50% level as its profit target. In this instance, the pattern will morph into a Bullish Shark into a Bearish 5-0 structure. Again, these situations are best captured with automatic profit targets on a portion of the position at a minimum. On this daily chart, the reversal was severe and exceeded the minimum 50% level. This is typical but automatic profit objectives secure these reactive moves most efficiently.

Canadian Dollar
(CAD_A0-FX): Daily
Bearish Shark Pattern>Bullish 5-0
Potential Reversal Zones
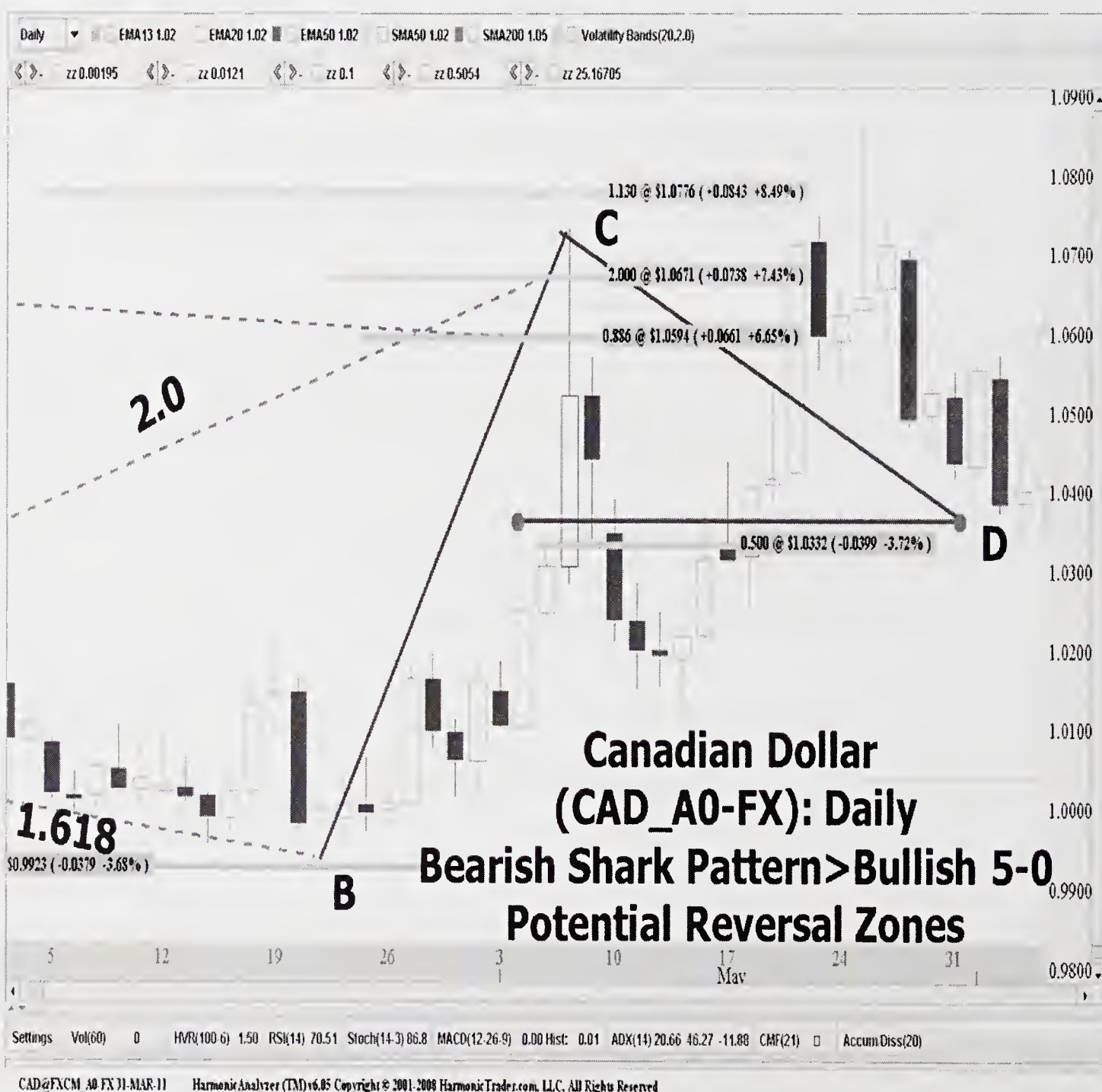
Shark Pattern Conclusion

This is a distinct structure but different than the M&W harmonic pattern types. This structure serves as the precursor to the 5-0 Pattern that also helps define its optimal profit target. The pattern works extremely well retesting prior support/resistance points (0.886/1.13) as a strong counter-trend reaction. Remember, the extended AB Extreme Harmonic Impulse Wave must be at least a 1.618 (can be as much as 2.24) but it serves as the definitive price segment as long as the minimum 88.6% 0B retracement is tested. The 1.13 0B Extension can not be exceeded and defines the area for the stop loss limit. In most cases, it is essential to automatically capture the profit objective at the first measurement in 5-0 within the Potential Reversal Zone (PRZ). Finally, this is Harmonic Trading history since it is the first book where I have released the advanced specifications of the the pattern.

5-0 Pattern

The 5-0 pattern was originally presented on HarmonicTrader.com in 2003 and released to the public in an article on TradingMarkets.com in March 2005. (http://tradingmarkets.com/recent/are_you_a_fibonacci_fan_youll_like_this_patt ern-655968.html) The 5-0 requires an exact alignment and ideal symmetry. *Harmonic Trading Volume Two* (2007) defined the exact alignment of ratios and all aspects of the structure. This nature of this pattern is a relatively new discovery in the field of Technical Analysis. Although other interpretations of extended structures have been presented in previously, the exact rules for the 5-0 pattern are unprecedented and exemplify why Harmonic Trading is different from the rest.

5-0 Pattern Basics

The 5-0 structure is different from the M-type and W-type alignments in the other patterns but the same Harmonic Trading principles apply. The measurements employed with the 5-0 place greater emphasis on different price segments than the other patterns. For example, the 0B point AND the BC projection determine the validity of the structure. The initial XA leg of the structure typically possesses a 1.13, 1.27, 1.41 or 1.618 extension. The Reciprocal AB=CD pattern - a variation of the regular structure – is utilized to define the Potential Reversal Zone (PRZ). The 50% XA retracement is the defining limit at the pattern's completion point but the 61.8% XA retracement is included in the determination of the setup, especially in the Stop Loss determination.

Reciprocal AB=CD

  The Reciprocal AB=CD measured by first counter-trend move within an established trend. It typically resembles a lazy "Z" or "S." The Reciprocal AB=CD is more of an estimation that must be complemented by other harmonic measurements and it is applied to non-M &W-type structures. Also, it is effective in distinct price channels to gauge the predominant reactive counter moves that can define important continuation zones within a primary trend. Remember, these are approximation measures that are employed in specific situations. Other distinct measures must be included with this pattern type but it is effective in structures such as the Shark and the 5-0.

Bullish
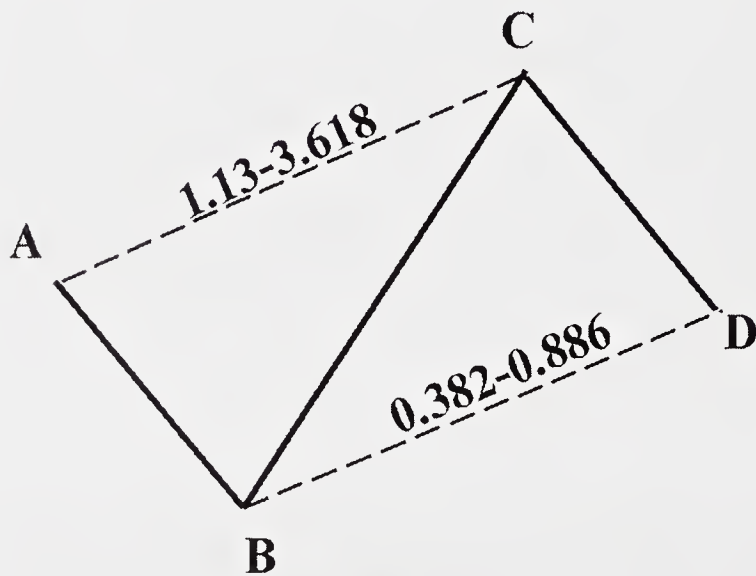
Bearish
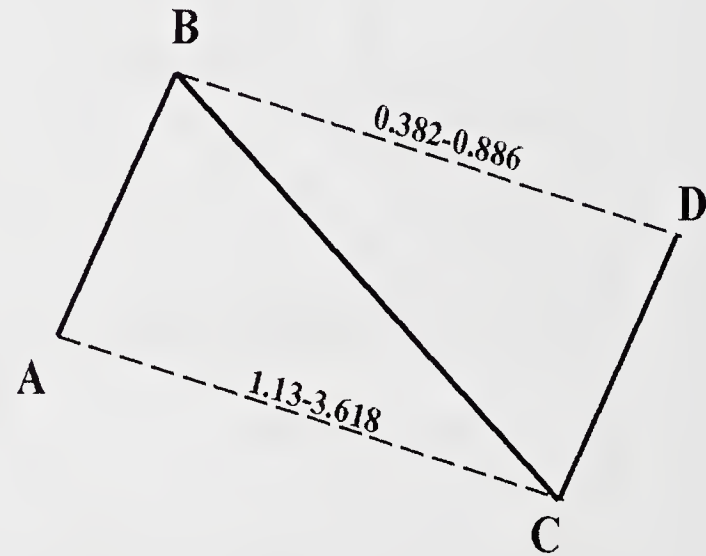
Bullish 5-0

The Bullish 5-0 pattern is an extremely effective formation but it must be identified properly. There are a number of situations that can closely resemble this structure but if any individual point of the formation fails to satisfy the pattern ratio requirements, it must be dismissed. However, when clear formations develop with the correct measurements, these harmonic zones are extremely accurate. In particular, the incorporation of the 61.8% retracement provides a dynamic means of identifying important continuation levels.
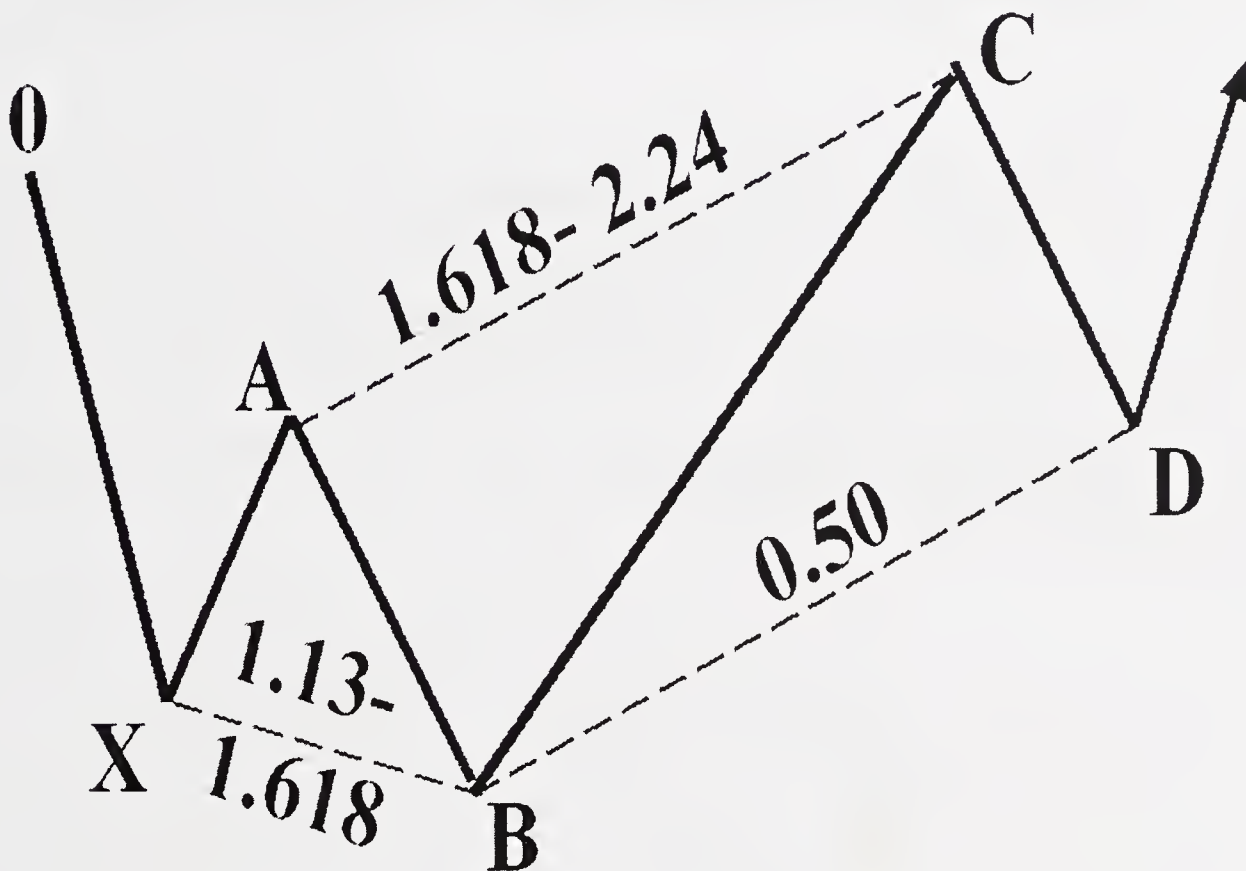
If the 61.8% retracement is the most powerful ratio of all Harmonic Trading measures, its implementation in the 5-0 pattern is the most effective of all price structures. Depending upon where the Reciprocal AB=CD completes, the exact

Harmonic Trading Volume 3: Reaction vs. Reversal

termination point for the execution of the structure will vary. In the bullish pattern, if the Reciprocal AB=CD completes before the 50% retracement, the execution will be immediately at this level. However, a Reciprocal AB=CD that completes lower than the 50% level will always include the 61.8% retracement as the optimal entry price for the trade. Although the stop loss in both situations is beyond the 61.8% level, each total determination depends upon the Reciprocal AB=CD.

Bullish 5-0 Pattern
Potential Reversal Zone (PRZ)

50%AB

Reciprocal AB=CD

0.618 AB (Stop Loss Limit)

XXXXXXXXXXXXXXX

Australian Dollar (AUD_A0-FX): Bullish 5-0 Pattern

2.240 @ $0.9905 (+0.0372 +3.90%)

2.24

0.50

1.27

0.500 @ $0.9750 (-0.0216 -2.17%)

0

A

X

B

C

D

AUD_A0-FX 11-MAR-11 11:00   HarmonicAnalyzer (TM) v6.05 Copyright © 2001-2008 HarmonicTrader.com, LLC. All Rights Reserved

Australian Dollar (AUD_A0-FX): 60-Minute Bullish 5-0 Pattern Potential Reversal Zone (PRZ)

2.240 @ $0.9905 (+0.0372 -3.90%)

2.24

0.50

0.500 @ $0.9750 (-0.0216 -2.17%)

C

D

AUD_A0-FX 11-MAR-11 11:00   HarmonicAnalyzer (TM) v6.05 Copyright © 2001-2008 HarmonicTrader.com, LLC. All Rights Reserved

Harmonic Trading Volume 3: Reaction vs. Reversal

Bearish 5-0

   The Bearish 5-0 structure is an excellent continuation pattern within established trends.   Although the execution of the opportunity is determined by the Reciprocal AB=CD, the 61.8% bearish retracement will always be the most important measure in the set up. At a minimum, it serves as the defining area for the stop loss level and is vital in the determination of the validity of the trade, especially on the initial test of the Potential Reversal Zone.
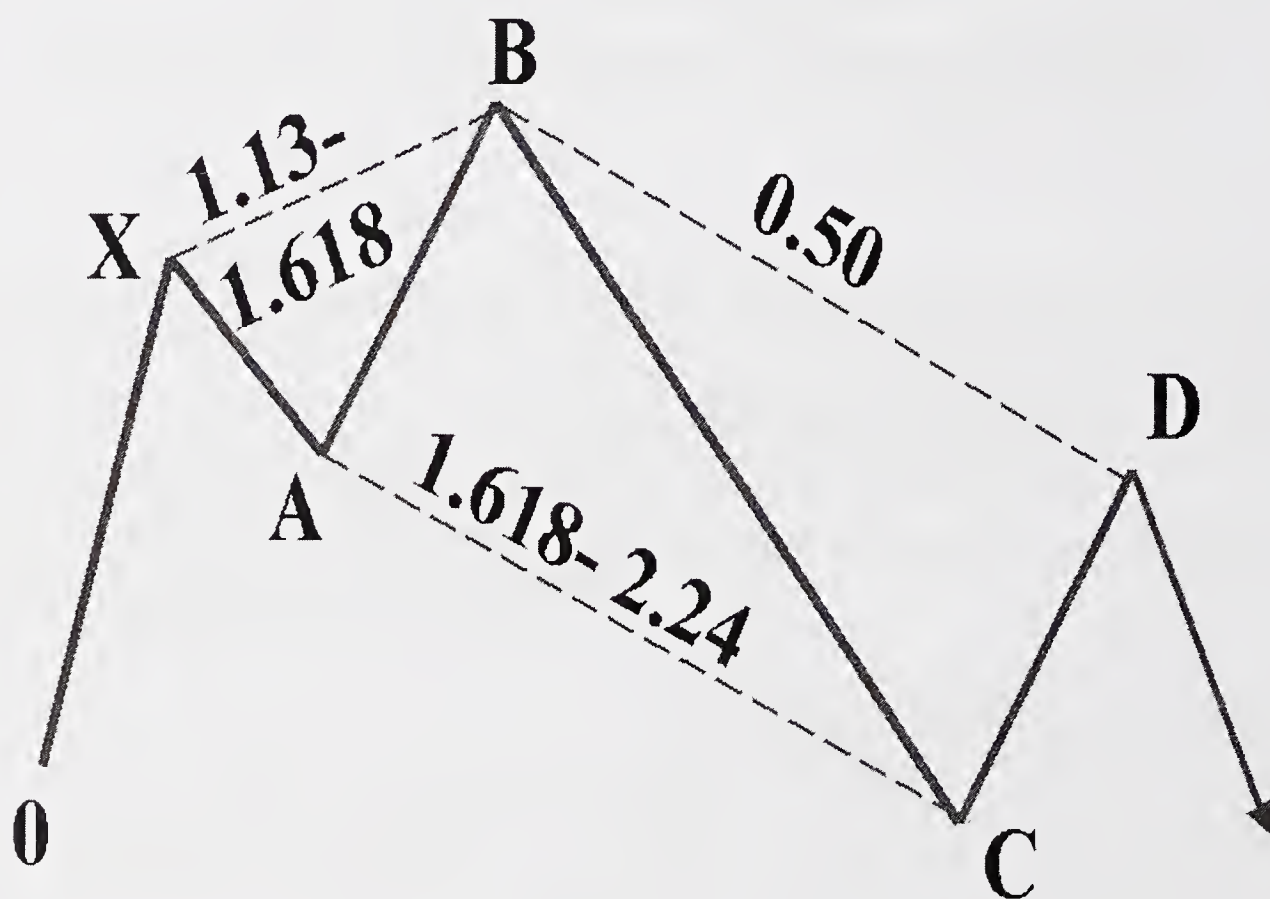
In the Bearish 5-0 Potential Reversal Zone, the 61.8% limit will be the top end of the resistance in every situation. The only difference will be whether or not the Reciprocal AB=CD defines the execution closer to the 50% or higher. In most cases, the Reciprocal AB=CD will converge closely to the 50% ratio but if it is above that the execution will default to the 61.8% price level.

Bearish 5-0 Pattern
Potential Reversal Zone (PRZ)

XXXXXXXXXXXXXXX **0.618XA (Stop Loss Limit)**

Reciprocal AB=CD
50% XA
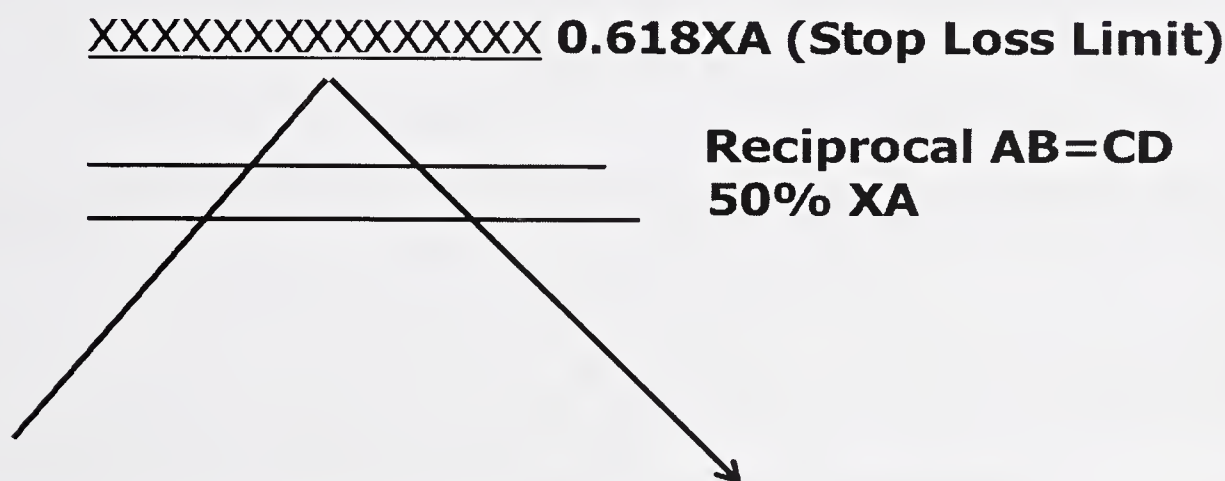
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The following 15-minute chart of the GLD exemplifies the continuation nature of the structure. After an extended decline, the price action formed a distinct bearish 5-0 at the 134 level where the formation pinpointed the acceleration of the downtrend. The Reciprocal AB=CD was slightly below the 50% level which defined the Potential Reversal Zone for the harmonic resistance. The most important aspect of this example is to note the immediate effect that the resistance had on the price action. The inability of the GLD to trade above these levels was the first sign that the pattern was proving to weigh heavily on the short-term rally. After several hours of sideways consolidation in the zone, the price collapsed and accelerated lower.

This type of price action is common in most harmonic patterns when the initial reaction seemingly stalls at the exact zone. Although these are early signals, the distinctive change in the character of the uptrend at the Potential Reversal Zone was quite clear. These situations are comprehended readily with experience but this type of price action should be closely monitored as an early sign of pattern validation.
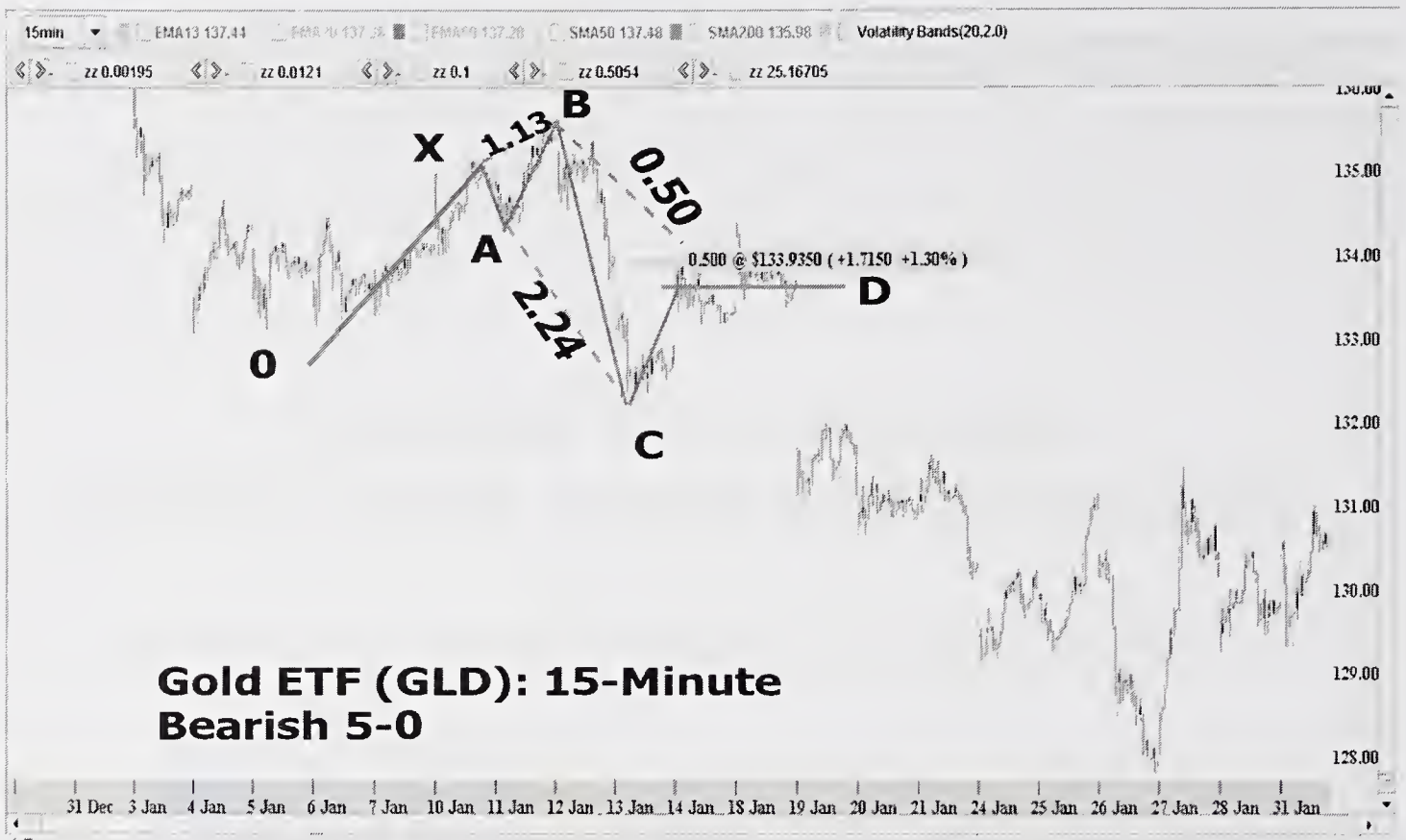
Gold ETF (GLD): 15-Minute
Bearish 5-0

Gold ETF (GLD): 15-Minute
Bearish 5-0 Potential Reversal Zone (PRZ)

Harmonic Trading Volume 3: Reaction vs. Reversal

Harmonic Head and Shoulders Pattern

In this book, I have gone to greater lengths to provide other classifications for states of price action during the trade execution and trade management phases. I strongly encourage Harmonic Traders to consider the importance of this degree of categorization. My emphasis with this detailed analysis is to ascertain the precise signals and termination points that provide information throughout the trading process.

I have held this belief for a long time that any technical reading geared to provide an actionable signal must possess a definable limit as to when it is immediately validated. In terms of classic price formations, I have tinkered with various alignments over the years to create a definable means to validate these structures. In fact, I believe that the breakthroughs in harmonic patterns were similar to the work that Arthur Merrill presented in his material nearly 50 years ago. He was attempting to define M and W price formation phenomenon but ended up presenting more Zig-Zag type classifications.

The most famous classic price pattern is the Head and Shoulders formation. Technicians have studied this structure for decades. However, all presentations of this formation have presented various Zig-Zag definitions without any ratio measurements. For me, I have experimented with various ratio applications in relation to the basic premise that was initially presented regarding the structure. Although I will not get into classic rules that were originally presented, my interpretation employs reciprocal harmonic ratio relationships of the formation to more precisely identify when these patterns are actionable trading opportunities.

In my opinion, the original rules for the structure lack the precision of exactly measuring where the pattern completes. Harmonic Trading measurements can close the gap to precisely measure price levels to define exact completion of the opportunity. In doing so, I feel that I have brought more clarity to the structure. I am refining more advancements in the years to come for many classic pattern formations.

Bullish Harmonic Head and Shoulders Pattern

The bullish pattern is also referred as an inverse Head and Shoulders. In the reciprocal application of Harmonic ratios, the two most important characteristics of the structure are that it should possess related ratios and ideal symmetry to distinguish these patterns. It is quite common to see a bullish pattern form in the right shoulder that would signal a more complex harmonic scenario than a singular ratio. These are interesting situations that do unfold regularly but the most important aspect of the Harmonic application to the head and shoulders pattern is to recognize only the clearest of structures.
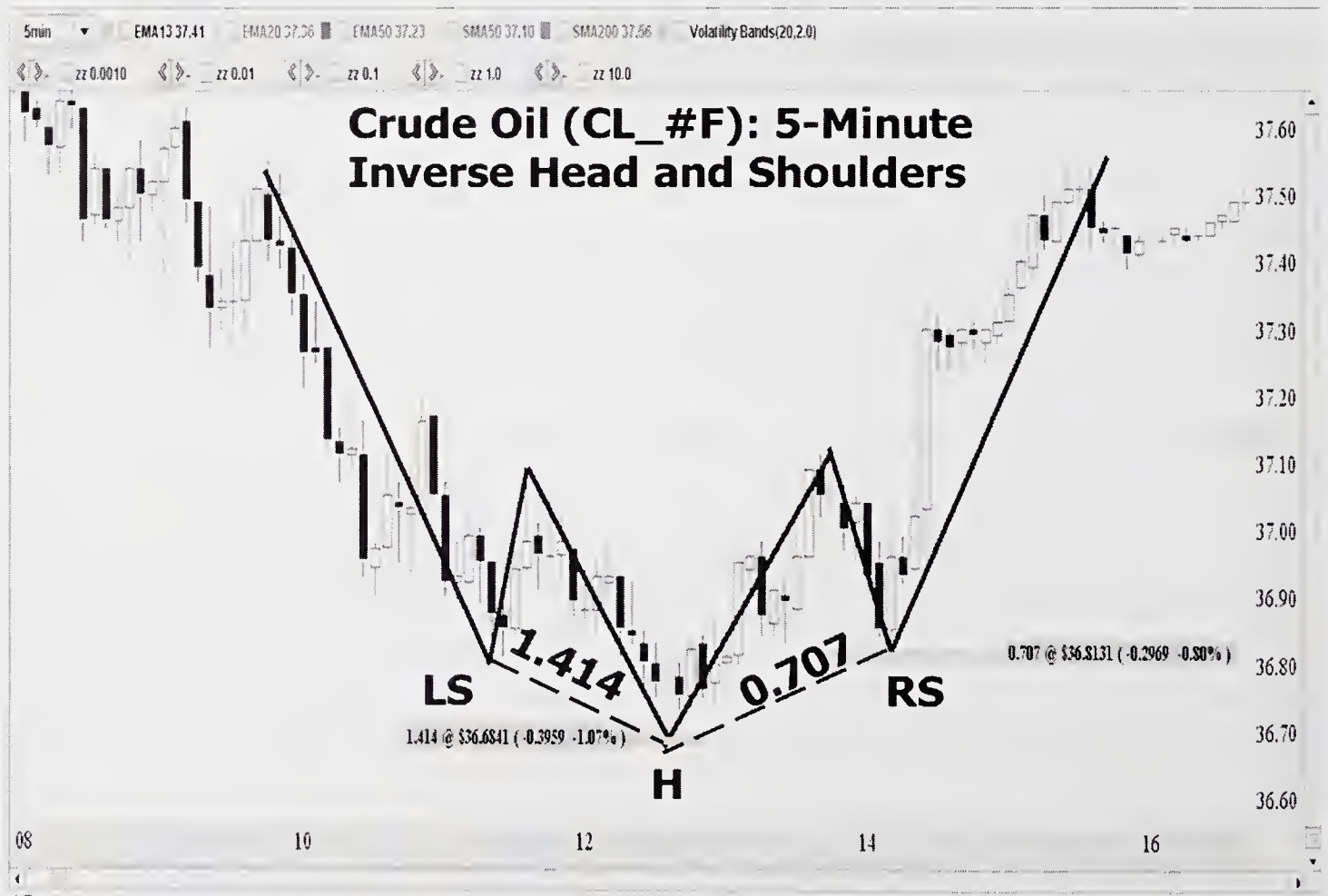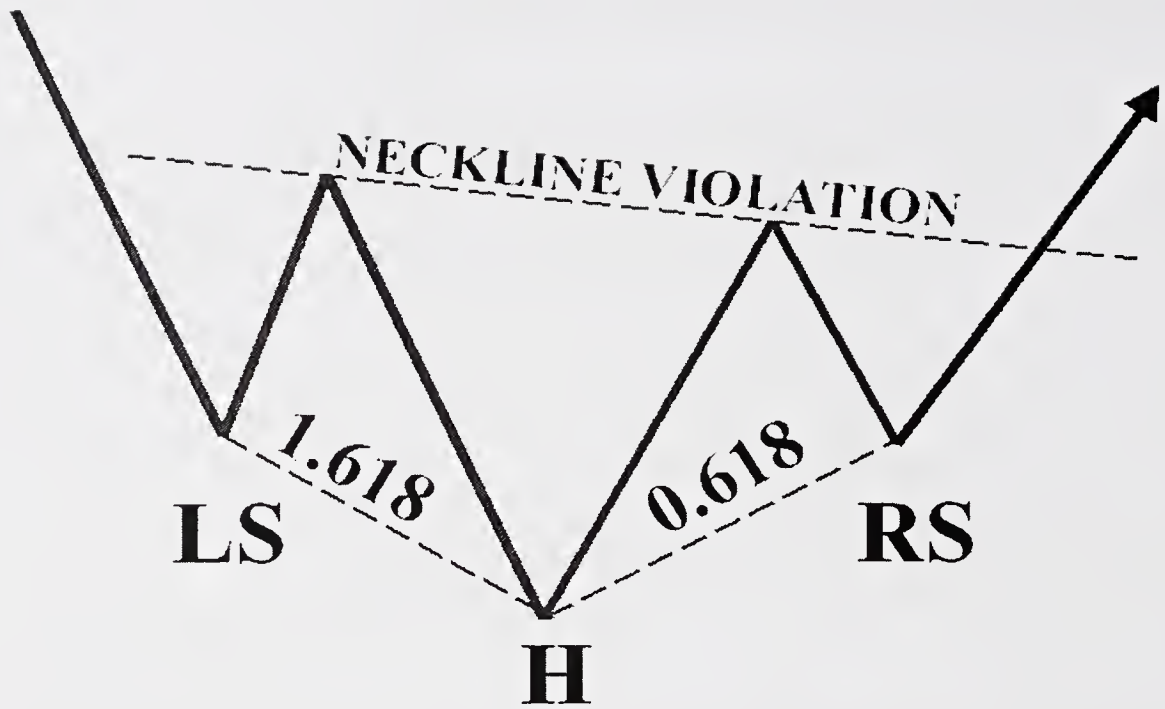
NECKLINE VIOLATION

1.618   0.618

LS   RS

H

Crude Oil (CL_#F): 5-Minute
Inverse Head and Shoulders

LS   1.414   0.707   RS

1.414 @ $36.6841 (-0.3959 -1.07%)

0.707 @ $36.8131 (-0.2969 -0.80%)

H

Harmonic Trading Volume 3: Reaction vs. Reversal

Bearish Harmonic Head and Shoulders Pattern

Australia Dollar/Swiss Franc
(AUDCHF_A0-FX): 60-Minute
Head and Shoulders Pattern

Harmonic Trading Volume 3: Reaction vs. Reversal
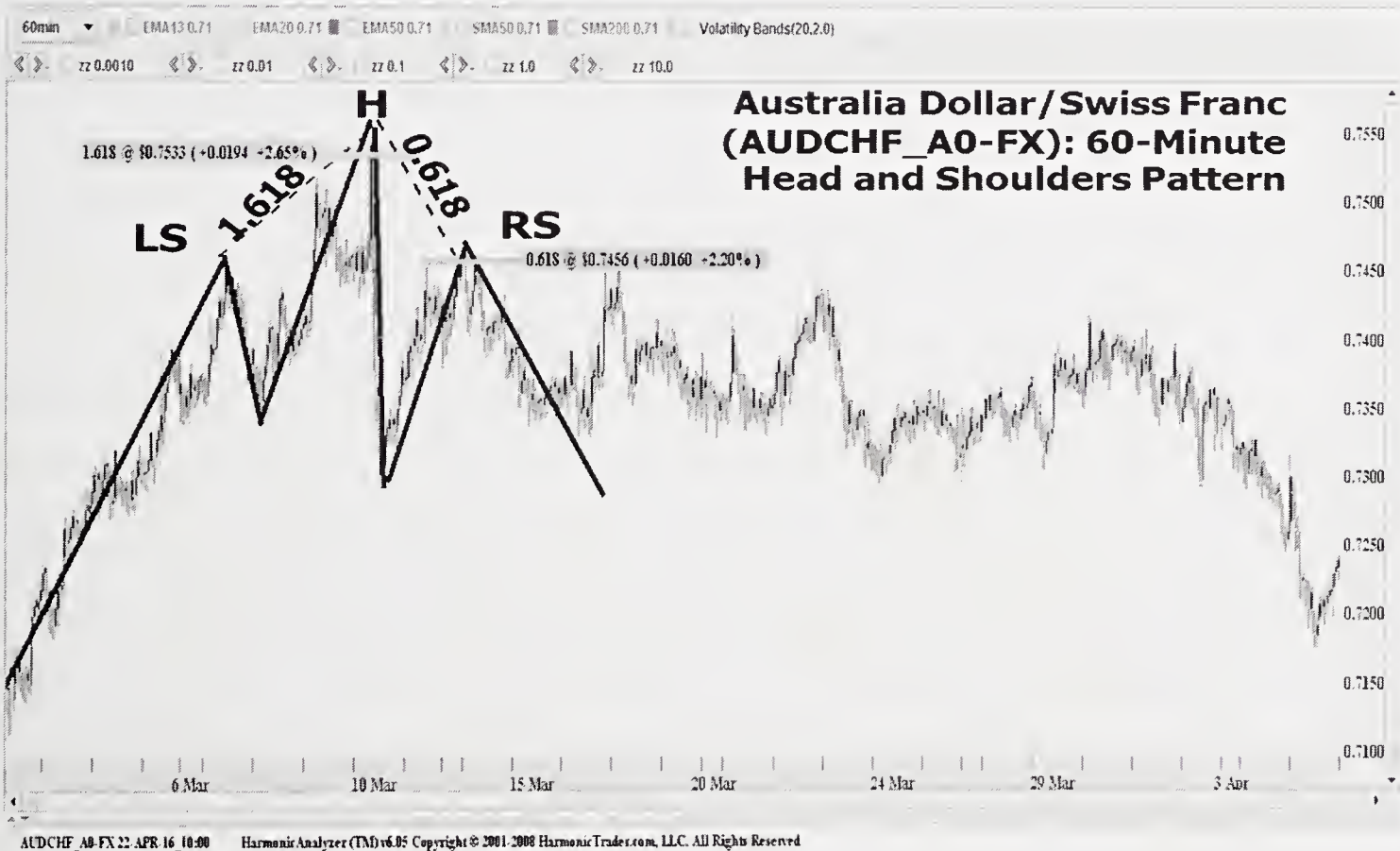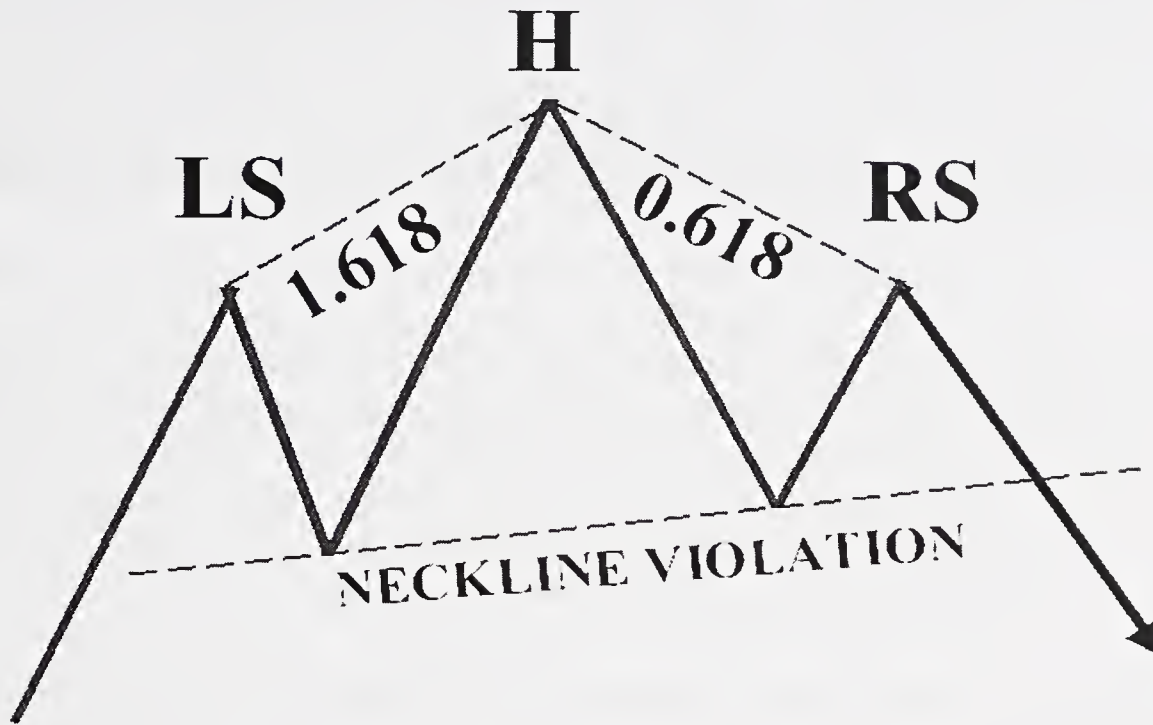
It is important to note that in both examples the symmetry was quite ideal. Not to mention, the right shoulder of the structure in each example possessed the reciprocal of the ratio exhibited left shoulder. The previous 60-minute chart of the Australian Dollar/Swiss Franc formed an ideal Head and Shoulders pattern. This was validated in particular due to the ratio relationships. Although these are simple advancements, I believe that any structural signal must be entirely quantifiable to be of actionable value. Hopefully, this interpretation might move the needle a little bit to help traders employ this formation more effectively.

The historic dilemma with the Head and Shoulders pattern underscores the frustration within Technical Analysis. For years, people have attempted to quantify exactly what the Head and Shoulders pattern really means. In my research, I found many individuals trying to outline Head and Shoulders patterns that simply did not possess the ideal elements as prescribed in the original interpretation. I believe that the pattern was presented in attempts to define a specific market environment. Although there is more to the structure than the simple formation, its classification based upon precise ratio measurements is a leap forward.

Standardized Harmonic Trading Identification Measurements Conclusion

Although I have discussed pattern identification rules in each of my books, I felt it necessary to present a quick review of all parameters that define these structures as Harmonic Trading opportunities. I thought it was necessary to be precise to emphasize the limitations of each structure. Of course, there will be some allowance for real-world trading beyond measured objectives. However, these structures represent standardized harmonic models. I believe that structures such as the Shark and the 5–0 go a long way in analyzing those pattern possibilities outside of the M and W formations. Although the Harmonic Head and Shoulders pattern is more of an observation than a preferred trading opportunity, it exemplifies how simple measured relationships can provide greater technical information regarding the overall state of price action.

For decades, many were aware of the phi (0.618/1.618) ratios as potential support/resistance. However, the application of this ratio never advanced beyond the simple measurement until they were incorporated into harmonic patterns. Therefore, the complex rules that categorize price structures as unique technical entities are designed to convert recognizable phenomenon into actionable strategies. I will continue to refine structural measurements like these in all my work. As I have done so, my realization has shifted my focus from purely structural considerations to the principle of defining the larger context within which harmonic patterns complete. In doing so, the basic foundation that harmonic patterns have provided is now a larger analytical perspective that incorporates other critical measures with equal importance at the execution and management phases of every opportunity.

Chapter 3
Advanced Harmonic Trading Execution Strategies

Every trader must have a sound reason to enter a position. No matter what type of methodology is employed, all successful traders define those variables that signal opportunities consistently and reliably. Within the Harmonic Trading approach, we establish a variety of measured variables and readings that define states of potential price behavior. Harmonic patterns are one example that measures unique cyclical formations with prescribed ratios to consistently identify accurate price ranges for anticipated moves. This predictive ability is derived from a comprehensive measurement and overall assessment of multiple conditions of the market. Applying proven strategies that can be statistically quantified, it is possible to identify market conditions when they manifest characteristics of complex models that have been historically substantiated.

In this book, I discuss a variety of standardized measures and general statistical expectations that help to establish the proper framework of expectations for any market environment. Most of the strategies presented herein are the result of refining multiple variables to uncover those situations that have yielded the most significant results consistently over time. In fact, it is one of the reasons why I have waited so long to present much of these concepts. In my own research, I tinkered with the initial foundation of many of these ideas for quite some time before optimizing all parameters of the opportunity. This is an area that I plan to expand upon and present detailed research on exact situations within particular markets in future material. For this discussion, I am only outlining broader statistical biases consider with each individual strategy. Furthermore, my focus on all of this material is to tie it into the comprehensive process to understand complex environments more readily.

The Harmonic Trading execution strategies encompass a variety of considerations much the same manner that pattern identification rules define possible entry levels for trading opportunities. I consider the execution phase the most difficult skill set to master, as decisions are compressed within a relatively small time period. Although this challenge can be overcome through thorough preparation, the execution process typically experiences the greatest degree of human error. Therefore, successful navigation of the execution phase requires defined skill sets and confirmation signals that validate what the structural pattern measures are suggesting.

The execution phase starts with the confirmation of an anticipated price reaction. There are numerous confirmation strategies that can be employed but the best measures with harmonic patterns typically reflect a similar environmental reading to

that of the price structure. One way to think about it is that an execution seeks to capitalize on the reaction to a particular technical stimulus. A harmonic pattern that defines the natural limits of any price move and/or technical reading such as Relative Strength or the Harmonic Strength Index can gauge intensity of a particular price move. I discuss throughout this book, the primary objective of establishing those parameters that define larger reversals versus minor reactions is most essential in the execution phase. In fact, all Harmonic Trading executions must include some combination of price structure with a coordinated technical measure to further refine and categorize the situations with the greatest potential in advanced.

The integration of price and environmental measures creates a clearer framework of expectations to guide trading decisions. Both harmonic patterns and indicator strategies are effective analytical approaches in their own right. However, in concert they are vastly more precise and help define a larger comprehension of market direction. I have always emphasized importance of measuring the market to define expectations. It is the only way to consistently guide trading decisions and have confidence in signals your analysis is generating. Furthermore, it is essential to consistently "get in the right ballpark" on most trades – that is, your analysis does not put you in situations where you get blown to pieces instantaneously. Although mistakes may be made, the overall facilitation of one's analysis demonstratively identifies opportunities with defined price parameters. Although anything can happen in the market, a reliable trading skill set must include a clear understanding of various trading situations that must be handled properly. In most cases, the strategies fall into only a few different categories to develop general rules that shape trading decisions regarding probable future price action.

Expectations within the Harmonic Trading Process

Trading is a defined process and it must be treated as such. It is a matter of discipline. The trader must be prepared with a defined skill set of accurate expectations to guide decisions. A simple understanding of required tasks and points of concern in each step of the process will facilitate decisions effectively. There are mandatory actions that must be realized at each stage to successfully identify, execute and manage harmonic opportunities. Regardless of the phase in the process, each step possesses defined measures that distill infinite possibilities down to one or two clear causes for action. In fact, all harmonic measurements are designed to eliminate the impossible and focus on those finite possibilities within any situation. The simple understanding that all trading situations possess finite possibilities instills a degree of confidence by simply quantifying the unknown to a greater degree. Later in this chapter, we will examine the various strategies that help explain these finite possibilities and clarify how this larger understanding of expectations can signal those flawed situations well in advance. This comprehension helps to limit losses by identifying those scenarios that are not exhibiting anticipated response. Simply stated, if in doubt, get out! Those situations that do not provide confirmation immediately at the completion of a harmonic pattern

opportunity typically signals a price structure that will not yield any measurable profit. Although it is common for price action to nominally pause at these levels, the possibility to capture any degree of profit is muted. When those situations become obvious, the trader must exit the position at breakeven or with a small loss and be happy that they were smart enough to make the assessment of a flawed scenario rather than hoping it would work out. Again, we will address these strategies in detail but the general expectations of each step of the process are essential in optimizing trading decisions, especially when market conditions can easily create confusion.

1. **Trade Identification Expectations:** The most important aspect of this initial step is to properly measure pattern structures with harmonic ratios to define the execution price range. For new traders, this may require a period of study to fully understand the individual measures of each pattern structure and how other confirmation methods can validate those with the greatest potential.

2. **Trade Execution Expectations:** As the shortest phase in the trading process, the execution of a harmonic opportunity must assess multiple factors simultaneously. The most important initial step is to identify exact pattern completion point – known as the Terminal Price Bar(T-Bar). Immediately following the completion of this price bar, the anticipated reversal must be demonstrative within a limited period of time. We will review this concept in detail momentarily but it is an essential singular price point upon which secondary calculations can facilitate the analysis of price action and ultimately the execution of trade. Furthermore, confirmation factors must be coordinated with price action to gauge the real-world trading behavior results against the model of harmonic measurements. We will discuss numerous scenarios that provide enormous insight to determine best opportunities.

3. **Trade Management Expectations:** After properly identifying distinct harmonic pattern opportunity and coordinating execution confirmation strategies, the trade management parameters facilitate a defined understanding of what is possible. We still need to employ exact rules to instill the proper expectations during the trade management process to maximize profit and minimize loss. It is important to note that there are clear strategic assessments that must be considered in advance before even executing the opportunity. Respective timeframes as well as specific price action must be assessed to gauge the probable future price action. Although these strategies are not complex, they must be clearly understood to thoroughly understand the possibilities of the Harmonic pattern opportunity.

Potential Reversal Zone (PRZ) Review

The Potential Reversal Zone (PRZ) is the founding principle of Harmonic Trading. The ultimate objective of any approach that attempts to identify opportunities in the markets is to define clear price levels that consistently pinpoint when to enter the trade. Harmonic Trading is absolute in the nature of its classification of what constitutes a potential trade opportunity. In my opinion, 80% of all trading mistakes are made in the identification of a particular opportunity. I believe these are avoidable mistakes, as well. One of the most common mistakes is not identifying patterns correctly and executing trades at the proper levels of support resistance. Harmonic Trading employs specific ratios and measurement strategies that eliminate many possible opportunities based upon a discrete combination of structures to validate the execution. This concept was one of the initial discoveries within the Harmonic Trading approach. Once identified, the potential opportunity is monitored until the price action tests all of the numbers in the Potential Reversal Zone (PRZ) to mark the official completion of the structure. These harmonic measurements create a price range to focus on and observe other affirming phenomenon in the same precise area as the completion of the pattern. Although one singular price bar does not define a trading opportunity, significance of Potential Reversal Zone highlights the critical area where this phenomenon is possible. As I mentioned previously, this is known as the Terminal Price Bar (T-Bar).

Terminal Price Bar (T-Bar)

The Terminal Price Bar represents a definitive interval of price action that marks the projected reversal area within the context of the relevant pattern that is completing. I outlined this concept in *Harmonic Trading Volume 1*. As most people already know, the Terminal Price Bar represents the exact completion of the pattern. Simply stated, the structure is only an actual trading opportunity at the completion of this data point. If we consider all patterns as a collection of data points – which they are, we must be able to identify the precise set of trading data that is meaningful and material in the identification of a pattern's exact completion point. In particular, it represents an important advancement within the Harmonic Trading approach, as it is a complementary measure beyond the simple identification of patterns that confirms the precise entry point for a trade. Other strategies such as indicator confirmation techniques, trendline analysis and time projections have facilitated harmonic pattern identification signals. The biggest step that must be mastered starts with the realization that the identification of patterns is only a starting point.

The concept of ratio alignments and strict measurement classifications has advanced the general pattern concepts of the past, as Harmonic Trading has become known for yielding precise technical information as measured by the market's own movements. There are not many methodologies that even attempt to identify market moves in such

an exact manner. As anyone who is really trading, the translation of ideas into profits involves some real-world challenges that requires reliable information and clear direction for any position in the market. Every trader must know when to get in, have an idea how long to stay in the position, optimize the entry as to minimize loss and maximize profit with proper management.

"An ideal reversal usually tests all of the numbers in a Potential Reversal Zone (PRZ) on the initial test. The predominant trend usually reverses from this initial test of the entire PRZ and continues in the reversal direction shortly thereafter. In an ideal reversal, the price bar that tests all of the numbers in the PRZ is called the Terminal Price Bar(T-Bar)."

Harmonic Trading Volume 1 pg. 185
Scott M. Carney Copyright 2004
Financial Times Press 2nd Ed. 2010

The concept of Potential Reversal Zone (PRZ) is the most important price range that is measured in Harmonic Trading and serves as the basis for most trading decisions. Although this price range is relatively small within the total price history that comprises most patterns, the precision of focusing precisely within this "window of opportunity" is another reason that Harmonic Trading is so effective, as it outlines the most important price levels within any trend.

For some, the Potential Reversal Zone (PRZ) takes time to integrate within one's trading plan discipline requires. Once mastered, other important relationships typically materialize within these ranges that provide substantial confirmation of the larger timeframe. For example, it is common for a Potential Reversal Zone (PRZ) to comprise only 3-5% of the total range of the pattern. Also, this finite range is frequently about the same amount with respect to time. It is in the commonality of these situations facilitates analysis of price action during these phases and defines consistent characteristics that provide early signals of validation.

Terminal Price Bar in the Potential Reversal Zone (PRZ)

I first discussed the concept of the Terminal Price Bar in my book *Harmonic Trading Volume 1*. The principle of what the Terminal Price Bar represents has been a major step forward in the refinement of Harmonic Trading strategies to pinpoint exact price levels that represent significant change. Remember, the Terminal Price Bar is the price for that tests the extreme range of Potential Reversal Zone (PRZ) – that is, the

price bar that ultimately tests the final number been established price range. It is very common for harmonic patterns to experience a degree of consolidation as the pattern completes. In these cases, it is common for the price action not to immediately test the entire Potential Reversal Zone (PRZ) and require some consolidation before reversing. In fact, the price action can linger for some time and then test the final number that defines the zone at the pattern completion point. In some cases, the price action will test all of the numbers in a single bar. These are the most ideal cases while more complex reversals benefit from such standardization by categorizing price action behavior at the completion of these opportunities.

Terminal Price Bar Tips

- The price bar that tests the last measured number of the entire Potential Reversal Zone (PRZ) is the official Terminal Price Bar.
- The T-Bar marks the price level where the pattern can be considered officially complete and look to execute immediately thereafter (T-Bar+1).
- The T-Bar can test the entire PRZ at one time or require some consolidation before testing all of the harmonic measurements.
- Acceleration in the anticipated reversal is typically realized in the price action after the entire range is tested.
- Assess the Potential Reversal Zone (PRZ) measurements closely in relation to the price action, particularly the relative AB=CD structure in comparison to the XA and BC calculation.
- Assess Confirmation Factors simultaneously with reversal progress in the PRZ.
- Price action must exhibit a change in "character" by expressing individual price action shortly after completing the Terminal Price Bar of the pattern that confirms the anticipated direction. For example, a bearish pattern must exhibit individual bearish price bars immediately following the Terminal Price Bar as early occasion of some type of countertrend reaction.

Terminal Price Bar Psychology

The Terminal Price Bar strategies fit into a framework where a valid opportunity must exhibit the required price action triggers to confirm structural price level. Although it be a challenge at first to maintain the discipline to find situations and wait for them to complete, the ability to apply a predetermined plan and wait for the market to provide the necessary signals to dictate opportunities is when the beginner graduates to a professional skill set. The triggers that validate Potential Reversal Zones must exist to generate an execution and they serve as evidence for what the pattern is dictating. Therefore, the associated psychology and expectations involved with the Terminal Price Bar create definitive limits, especially when a situation is not working out.

When the price action cannot confirm the anticipated reversal, traders must ask themselves whether or not they are correctly reading the signals the market is providing. Sometimes, traders fail to make the correct assessment and/or admit what is clearly happening immediately following the Terminal Price Bar as they lose sight of the individual importance of this price analysis in real world conditions. Of course, confusion can happen to everyone. However, the key is to continually improve your understanding of the significance of the Terminal Price Bar within the execution phase. As experience bolsters trading comprehension, the ability to capitalize on such information becomes easier and overall results prove.

For me, trading psychology must focus on what is possible at all times. The mind must be in a constant state of possibility that seeks to optimize all decisions based upon the relevant signals that the market provides in general. The challenge can be if the trader ignores information that is presented in front of them. It is a common human error within the trading process but one that continually motivates the integration of acting upon the information presented by harmonic expectations to turn analysis into profits.

When it comes to the Terminal Price Bar, we must think of this singular data point as the "Execution Light Switch" that turns the trade opportunity ON! Simply stated, the trade opportunity becomes valid immediately AFTER the completion of the T-Bar. In doing so, the expectations of the harmonic pattern and the relative confirmation strategies create a definable price range of predictable behavior. It is only within this price range that these assumptions are valid. Beyond these price limits, the anticipated behavior must be considered incorrect and money management strategies must kick in to minimize losses. It is in this transition of measuring identifiable phenomenon and converting it into executable opportunities is where the greatest challenge exists for traders. However, awareness is always the first step in any solution. If we are able to precisely measure all aspects of this point in the process, it is possible to isolate those consistent factors that dictate success and limit failure. These measures can be compiled to create a Defined Trading Realm.

Defined Trading Realm

Any methodology that seeks to measure the market and find opportunities based upon specific measures is attempting to establish parameters that help quantify particular market movements as unique environments. Volume, Moving Averages, MACD and Elliott Wave are all examples of technical strategies that are attempting to measure unique situations to define trade opportunities. Most of these measures are of no value on their own. However, they do possess some merit in combination with other considerations.

From a Harmonic Trading perspective, the most important focus is the price range of support or resistance as defined by the pattern. Beyond this, Relative Strength is the primary means of confirming the pattern at hand. The structural information provided by the measurements of the pattern define the entry for the trade and help

ascertain the stop loss for the entire set up. All of these measurement strategies eliminate the impossible first and then define the remaining possibilities that can be considered. The Defined Trading Realm of harmonic measures provides this insight by establishing proper expectations and defining price objectives for each step within the process. Furthermore, this understanding eliminates confusion and clarifies the tea jig options in advance.

Ultimately, this "Defined Trading Realm" is the window of opportunity where all price parameters of entry, exit and stop loss targets are known in advance. There must be a degree of clarity before any trade can be executed. That is, the position considered possesses overwhelming technical measures that clearly outline the critical price levels of the opportunity before its completion. Within the Harmonic Trading approach, we employ patterns to define price levels for identification, price action and indicator analysis for execution, and predetermined targets and trendline considerations to dictate management. Each step possesses specific price levels that are measured in advance that help to guide decision-making process.

The Defined Trading Realm is important because it advances the concept of precise measurement strategies to be as exact as possible categorizing the analysis of price action. The Defined Trading Realm starts immediately after the pattern has completed. As soon as the Potential Reversal Zone (PRZ) has been established, the Terminal Price Bar marks where the pattern completes and the point where specific confirmation strategies must confirm what the structural signals are suggesting. Finally, the Defined Trading Realm also instills a degree of discipline, as it requires multiple conditions to be satisfied before entering the trade. Furthermore, the confirmation of multiple signals reduces the noise of the market to define only those situations with the greatest potential for profit – focusing more on reversals and less on reactions.

Defined Trading Realm Expectations

Throughout the evolution of my trading experience, I've come to realize that consistent success comes from a superior methodology that has been tested thoroughly and applied uniformly. Many people argue that certain individuals are naturally more gifted to be traders and others. I completely disagree with this and tend to argue that the application of one's methodology is what defines success. Although some people may be more adept at implementing a system of strategies, the general litmus test of success depends upon if the actions taken are inherently effective. Specifically, the Harmonic Trading approach can consistently pinpoint the ballpark areas on pattern measurements alone where even the beginner trader can take advantage of these strategies. Although they may not understand everything that is unfolding before them, the simple fact that these measurements create price limits that can facilitate the proper handling of potentially catastrophic trades by signaling failure well-before it is realized.

Most important, the Defined Trading Realm establishes a framework for expecting success. A well-defined trading plan that consistently proves itself instills a

great deal of confidence and engenders an attitude of clarity. Many traders do struggle throughout their career as they try to find those strategies that can define opportunities for them. During this trial and tribulation, traders must focus only on those methods that can lead to the realization of consistent success. Quite simply, a trader who is not achieving success does not possess the proper measurement strategies to analyze the markets. It is imperative for those individuals to stop trading and take a hard look at what they're doing. If their methodology is not providing them the signals necessary to accurately decipher price action and define opportunities, the trading analysis is simply expressing a random and erratic state. And, random analytical strategies always yield random results.

Effective trading strategies must able to consistently define clear opportunities that can dictate the relevant expectations to predict probable future price action. Any measurement of price behavior can be rationalized to possess certain strategic value. However, all strategic trading measurements must possess an ability to be applied uniformly across all timeframes and markets in order to avoid making assessments based upon random price action. This is why the Harmonic measures are so critical within the Defined Trading Realm. If a particular strategy is accurate, the anticipated trading opportunity should be easily definable and possess elements of a well-defined environment that are particular to that situation. The ability to recognize complex variables and understand these various types will clearly define what type of market environment must be considered relative to the pattern.

The proper expectation based upon accurate measurements creates a perspective of anticipation that is a required element of trading success. Although anything can happen in the financial markets, price action can adhere to cyclical and structural patterns that provide likely outcomes of projected circumstances. Moreover, complementary technical readings and other critical price measurements can enhance a specific scenario and confirm the prevailing expectations of what is happened. Again, I must stress that these are valid points to consider but are only helpful to the trader if they are employed according to the prescribed expectation framework. For example, a trader may understand that a pattern will likely fail when the situation fails to provide confirmation or immediately triggers a stop loss but not react to take the action necessary to appropriately respond situation. This is a case when human error simply overrules the overwhelming evidence of the Defined Trading Realm. We'll talk about this later in the material but it is a primary conflict that all traders must overcome. The Defined Trading Realm provides the parameters to assess the opportunity but it is still up to that person to execute strategies and expectations the market is presenting to them.

I want to take a note to emphasize the importance of the correct expectation at each harmonic price level. In this book, I have outlined a variety of situations that detail likely scenarios based upon complex measurements. I want to take that step further and stress the direct interpretation of each measure within the gamut of harmonic ratio measurements. The simple price measures unto themselves provide standardized assessments of what to expect. This was a new concept when I initially introduced it in

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The Harmonic Trader. However, I would like to further emphasize this concept and apply it across all harmonic measurement strategies.

Harmonic Trading is a great deal more than just simple measurements. These measurements constitute the elements of analysis that is derived from the structural signals the market forms. As I mentioned previously, these labels or categorizations may seem obvious but no other market approach has attempted to describe price measurement integration. In fact, each measurement serves as a building block of evidence to describe situation at hand. If multiple measures signal the same conclusion, these of the situations have greater probability of being realized than other less clear examples.

Defined Trading Segments

When all parameters of the trade are defined in advance, the known outcome defines what I call a "Defined Trading Segment." These Defined Trading Segments are areas on a price chart where the anticipated outcome is quite clear. It could be the next obvious harmonic target or the Potential Reversal Zone (PRZ) of a pattern as the price action is completing the CD leg. All traders are trying to analyze charts to identify specific conditions that form over time and anticipate their fruition. Within the Harmonic Trading approach, measured situations frequently materialize where the targeted objectives are quite clear even when the possibility may seem remote. These defined segments help to create a bias, especially when the parameters of particular market identify situations where only one possibility seems relevant based upon the structural and technical condition at hand.

The defined price segment is even clearer when the obvious price target possesses multiple technical readings converge in the same direction. These variables are effective especially as the determining factor signaling reversals that determine which patterns are profitable which are not. Essentially, these overwhelmingly clear situations are the result of a deeper comprehensive understanding that comes with experience. Most traders are able to understand various aspects of trading processes but when the advanced strategies are integrated to basic price measurements, these price segments present incredible opportunity to capitalize on clear technical signals.

Bullish Terminal Price Bar

The price bar that tests the lowest measured number of the entire bullish Potential Reversal Zone (PRZ) marks the price level where the pattern can be considered officially complete. The price action can test the entire PRZ at one time or require some consolidation before testing all of the harmonic measurements. The most important aspect is the pattern is considered complete when the final number in the entire range has been tested.

Bullish Terminal Price Bar

- **Bullish price action is realized immediately after the entire range is tested.**
- **Focus on the critical harmonic measurements in the Potential Reversal Zone (PRZ) - particularly the AB=CD and the XA calculations.**
- **Assess Confirmation Factors simultaneously with reversal progress in the PRZ.**
- **Price action should exhibit a change in "character" closing ABOVE the PRZ shortly after completing the Terminal Price Bar of the pattern.**

Terminal Price Bar

(TBar)

1.134
1.132
1.130
1.128
1.126
1.124
1.122
1.120
1.118
1.116
1.114
1.112
1.110
1.108
1.106

12 02 04 06 08 10 12 14 16 18 20 22 00 02 04 08 10
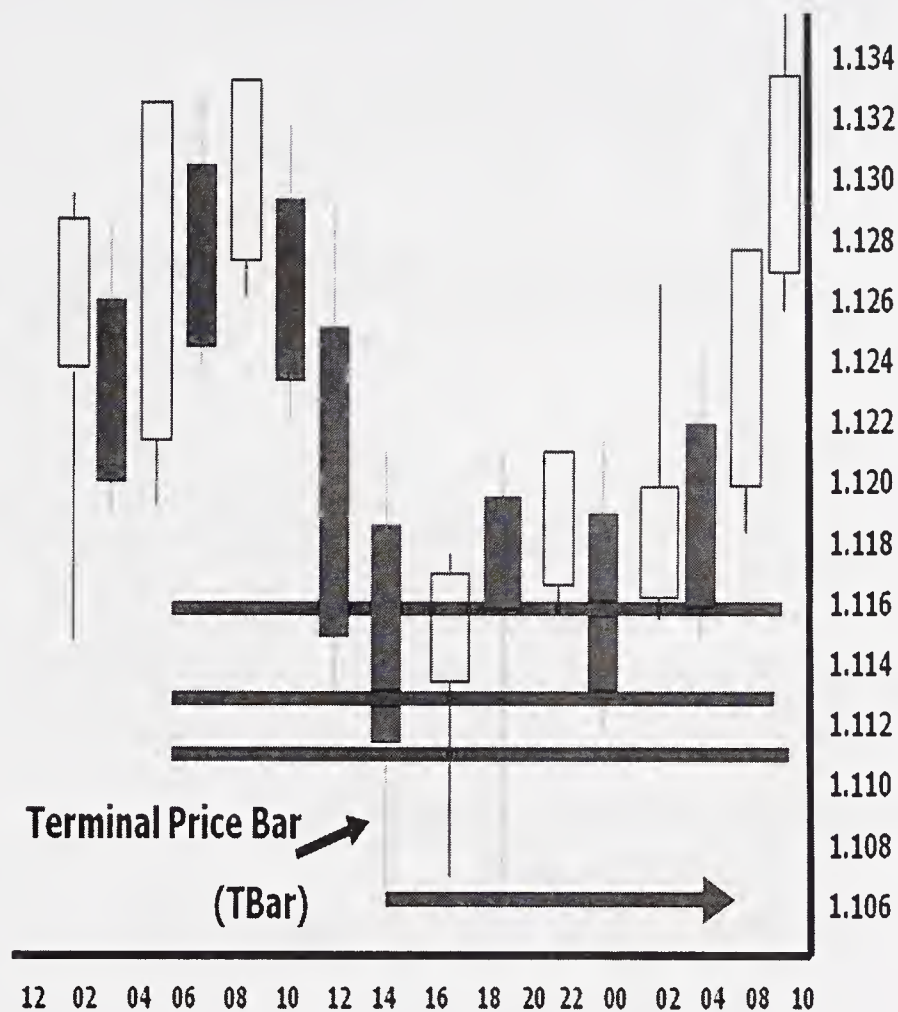
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The following 5-minute chart of Apple shows ideal reversal behavior at the completion of a short-term pattern. The price action formed a distinct pattern that defined the intraday completion point in the 306.50-307 range. The price action stabilized after a sharp drop as it entered the range of harmonic support. The Terminal Price Bar was established after testing the pattern completion point. The reversal rallied higher within three price bars after the pattern was complete.

>- zz 0.00195 <|>- zz 0.0121 <|>- zz 0.1 <|>- zz 0.5054 <|>- zz 25.16705

Apple (AAPL)
Bullish Butterfly
Potential Reversal Zone (PRZ):
5-Minute

0.886AB

0.786XA   1.618BC @ $306.9135

1.27XA @ $306.8355

1.270AB=CD @ $307.1155

1.618BC @ $306.9135

1.27XA @ $306.8355

309.50
309.25
309.00
308.75
308.50
308.25
308.00
307.75
307.50
307.25
307.00
306.75
306.50

12   14   10

<|>- zz 0.5054 <|>- zz 25.16705

Apple (AAPL): 5-Minute
Bullish Butterfly
Potential Reversal Zone (PRZ)

BC @ $306.9135

.8355

1.270AB=CD @ $307.1155

1.618BC @ $306.9135

1.27XA @ $306.8355

Terminal Price Bar

309.50
309.25
309.00
308.75
308.50
308.25
308.00
307.75
307.50
307.25
307.00
306.75
306.50

14   10

*Harmonic Trading Volume 3: Reaction vs. Reversal*
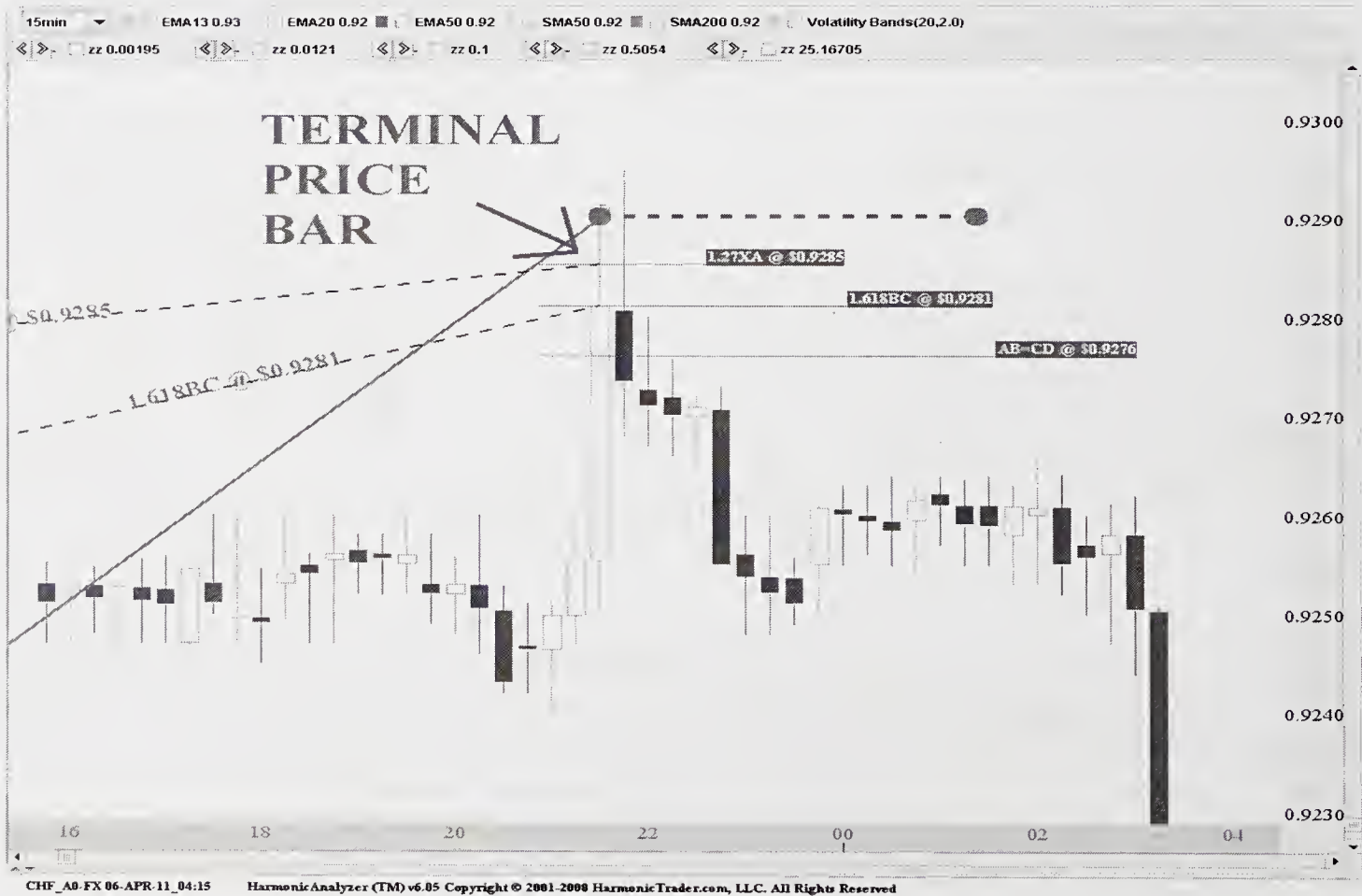
Bearish Terminal Price Bar

The Bearish Terminal Price Bar will signify the important resistance to focus on within the overall zone. One important consideration as the pattern completes is the action immediately after completion of this individual bar. This requires close monitoring of the price action as it tests the Potential Reversal Zone. However, the reaction after this completes should be immediate. At a minimum, individual bearish price bars should begin to signal an early validation of the pattern at hand.

Bearish Terminal Price Bar

- **Bearish price action is realized after the entire range is tested.**
- **Assess the Potential Reversal Zone (PRZ) particularly the relative AB=CD structure in comparison to the XA calculation.**
- **Assess Confirmation Factors simultaneously with reversal progress in the PRZ.**
- **Price action must exhibit a change in "character" closing BELOW the PRZ shortly after completing the Terminal Price Bar of the pattern.**

Terminal Price Bar (TBar)

12 02 04 06 08 10 12 14 16 18 20 22 00 02 04 08 10
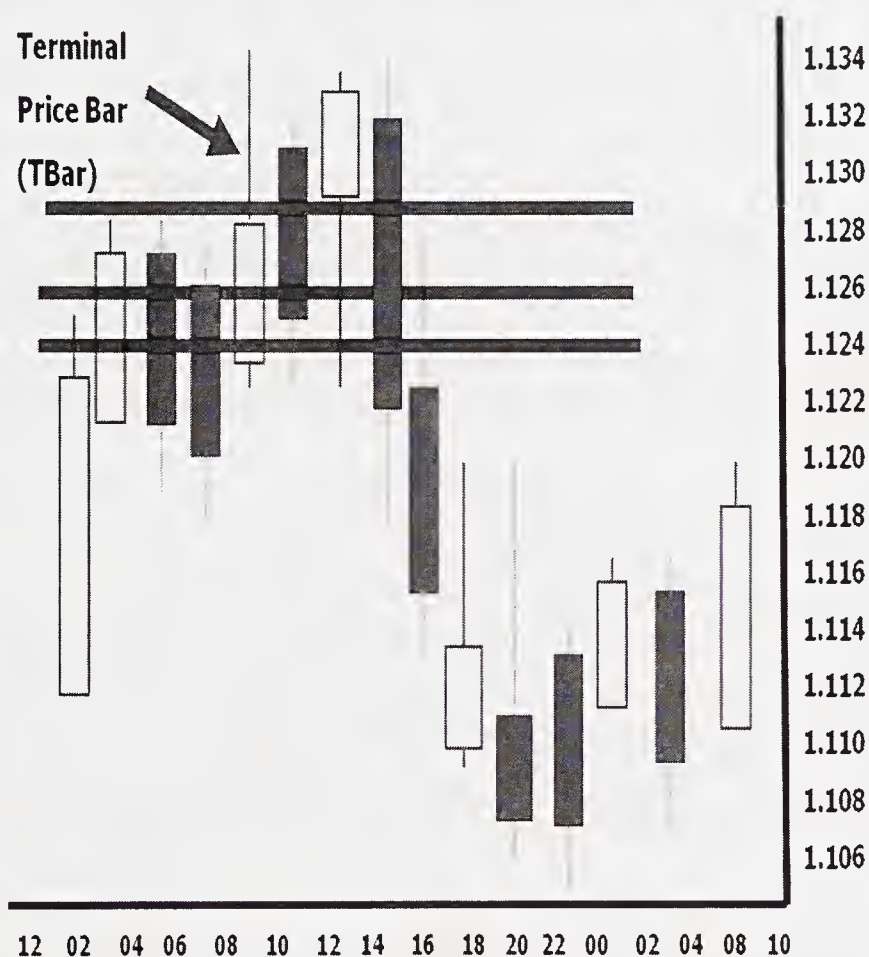
The following chart shows a distinct Bearish Butterfly pattern that completed on the 15-minute timeframe. This is an excellent example, as it shows a rather volatile reversal despite the distinct structure. The pattern completed in the 0.9285 area and stalled immediately after the Terminal Price Bar was well-established.

Harmonic Trading Volume 3: Reaction vs. Reversal

Terminal Price Bar (T-Bar) Overspill

I want to make a comment about the importance of assessing price action following Terminal Price Bar. It is quite common for the Terminal Price Bar to exceed the extreme of the Potential Reversal Zone (PRZ). Such price action can create some doubt regarding the ability of the pattern to mark an important reversal in the overall price trend of the market. The Terminal Price Bar is immensely significant in validating the entire price range where a reversal may unfold. The Terminal Price Bar typically sets the limit for any price action beyond the measured zone.

It is common for by section to exceed the Potential Reversal Zone (PRZ), especially on the initial test. Although there is some degree of what I refer to as technical "overspill" - the amount price has exceeded the ideal harmonic measured levels, this assessment is one of the most important considerations to master. Although harmonic patterns are quite precise, there will always be some degree of live trading that exceeds the measured levels. The difference between the pattern's ideal entry point versus the extent of live trading that exceeded these levels requires skilled interpretation and experienced management abilities. It can be tricky to differentiate between price action that is clearly violating the projected completion point of a pattern versus a similar set up that requires a more consolidation beyond the Potential Reversal Zone (PRZ) before the entire scenario can unfold. However, the individual price action immediately following the Terminal Price Bar provides material information regarding how much room is permitted beyond the ideal calculations to determine the validity of any trade.

As I have discussed previously, I do believe the sum total of the second calculations and trading cycles that converge into unique areas create kind of an electrified atmosphere where by price action uncannily reacts at the projected measurements and defined harmonic zones of support/resistance. After the Potential Reversal Zone has been established, the extent of the price action at the completion point will validate the overall structure. It is important to recognize the importance of the price action immediately following the completion of the Terminal Bar. The Terminal Bar extreme creates an ideal integration of the PRZ measures to define a *permissible* price range to optimally execute the opportunity.

Permissible Execution Zone (PEZ)

After defining the official completion point of the pattern, the realization of the trading opportunity begins. The assessment of the execution must occur quickly and in accordance with other clear confirmation signals. In fact, there are other important considerations beyond the price action of the pattern that must be assessed between the time the Terminal Price Bar has been established and the undeniable trigger of price action that confirms the structural reality. Immediately following the completion of the pattern, the Terminal Price Bar serves is the defining technical level to validate the

structure. As long as the price action changes course shortly after the Terminal Price Bar as established, the validity of the pattern is greatly assured. These small but significant signals happen frequently within the Potential Reversal Zone (PRZ) and help to define what I call the Permissible Execution Zone.

The area that comprises the Permissible Execution Zone is extremely small relative to the total size of the pattern. Despite the required preparation, such discipline is one of the advantages that separates the best traders. I believe that a thorough understanding of the price history of a particular market is required to have an idea of important support and resistance levels. In relation to patterns, the Potential Reversal Zone (PRZ) serves as the mechanism to define these areas. Added with the confirmation of a few other important measurements, the execution within the trading process becomes simple. If the proper elements provide the evidence to suggest an opportunity, these are the best situations where a trader can stack of probabilities in their favor.

Permissible Execution Zone (PEZ) Tips

- PRZ+T-BAR Extreme = Permissible Execution Zone (PEZ)
- Potential Reversal Zone (PRZ) AND the extreme of the Terminal Price Bar identifies the ideal measurement area that accounts for the real-trading behavior within an acceptable tolerance beyond the ideal Potential Reversal Zone (PRZ).
- Improves Risk/Reward ratios by optimizing trading decision relative to current price action.
- Advances Harmonic Trading Execution Strategies from POTENTIAL REVERSAL ZONE (PRZ) to PERMISSILE EXECUTION ZONE (PEZ)
- Execute trades in this area STARTING ON THE NEXT PRICE BAR = T-Bar+1

The concept of the Permissible Execution Zone is the next level within the Harmonic Trading approach. Over the years, I have distilled a gamut of measurement strategies to pinpoint the most important measure cyclical areas that seek to minimize loss and maximize the. The Permissible Execution Zone reduces the entire trading process down to a precise window. The various readings at this point are tantamount for the entire future scenario. The price history manifested here represents the definitive action for the larger trend. There is a degree of discipline required to be able to distill situations down to such a small window of opportunity. Regardless, these conditions serve as a reliable limit that defines probable future market action.

In theory, the Permissible Execution Zone is based upon the notion that can measure the markets movements to garner the most important signals that define where it's headed. The ability of price action to react to these areas provides further evidence of their validity. Although most situations will require some degree of consolidation, the signals within the zones are quite clear and have greater significance within their defined ranges.

Terminal Price Bar (T-Bar) +1

The most difficult aspect of any trade is the assessment and recognition of stop loss limit. Within the Permissible Execution Zone, stop loss limit could be comprised of two or three measures. Although most people know the standard stop loss limit as base upon the pattern measurement, there are other smaller factors that can be calculated that complement the Permissible Execution Zone relative to the stop loss limit. Again, the Terminal Price Bar serves as the initiating event in the Permissible Execution Zone. Sometimes, reversal can occur quickly while other situations may require greater consolidation. This is where the skills of the trader are required to be patient and wait for clear signs to confirm the scenario.

Permissible Execution Zone (PEZ) Psychology

The Permissible Execution Zone is the ultimate realization of the Defined Trading Realm. The ability to define and measure every stage of trading process provides price levels to guide trading decisions. All of these parameters must be determined before the trade is even executed. The research required to learn which strategies work best does require some time but no money. Therefore, I strongly encourage everyone to understand these concepts and various combinations that can occur before jumping in. Realizing that the market can be measured in this regard should instill a degree of confidence. Our focus should be on discovering what we are not measuring properly rather than believing that our mistakes are not measurable.

Again, there are many steps involved in the trading process. The identification principles within the Harmonic Trading approach are powerful enough to make any person feel as if they understand the market's movements. The problem develops over time when variations of price action do not unfold consistently and a certain degree of doubt is instilled due to the inability to decipher price action.

Everyone has overcome periods of confusion throughout their career, especially when things go awry. Stock market crashes, a particular market moving event or even the reduced capacity of price action can skew one's normal expectation of trading history. Regardless, the proper perspective realizes that opportunities are defined within a box of important conditions to validate the evidence of the trading decision. If opportunities are not measured and quantified, trading executions are random and not based on any consistent set of conditions.

Harmonic Trading Volume 3: Reaction vs. Reversal

The Permissible Execution Zone is determined by the T-Bar extreme and can be confirmed by several factors but the key is that executions occur within this area. As soon as we have an active entry, the stop loss and profit targets are monitored. Essentially, we have to define all trading possibilities in advance. These parameters outline the tolerance limits permitted in harmonic levels of support and resistance to allow for real world trading action beyond the projected measures.

## Execution Triggers in the Permissible Execution Zone (PEZ)

There are specific technical events to follow that determine the ultimate execution entry within the Potential Reversal Zone (PRZ). Ultimately, the action of execution must be triggered and the trade deemed to be live. This is where the classification of technical character helps to define those phases of the price action where the expected outcome is closest to its realization as long as the relative stop loss that is risked is still in the trader's favor. After establishing the Permissible Execution Zone, the penultimate signal before the actual trade will typically be some type of technical event that unfolds on the shorter timeframe. For example, a pattern that completes on a 60-minute chart will typically possess some type of set up on the 15-minute and provide an early reading of the larger reversal at hand. We will address these situations later in this material.
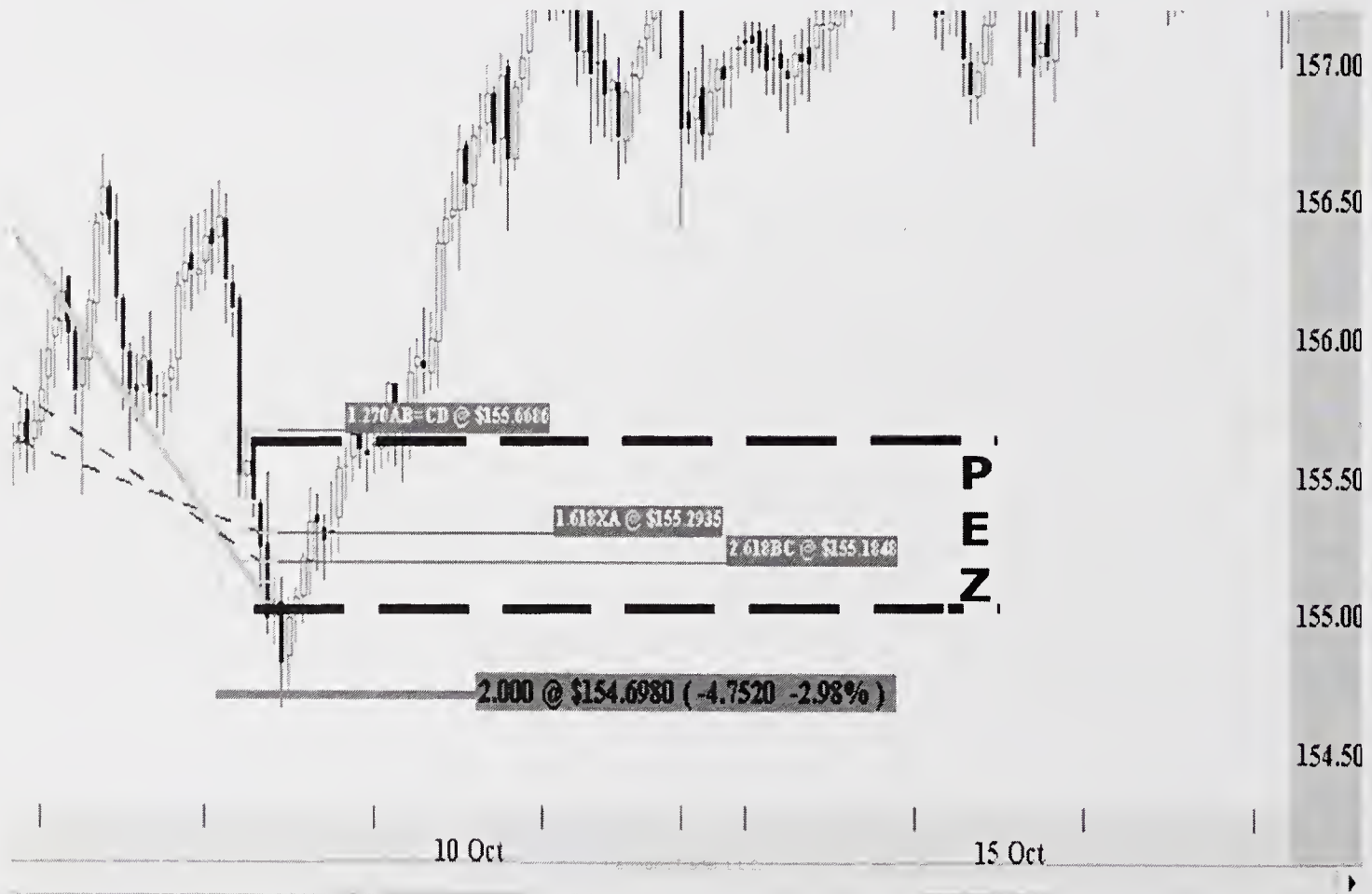
Bullish Permissible Execution Zone (PEZ)

The Bullish Permissible Execution Zone is extremely effective when harmonic support is exceeded by the Terminal Price Bar beyond the ideal measures. The price action at the pattern completion point can gauge how far to allow any further consolidation beyond the Potential Reversal Zone and the Terminal Bar extreme. This limit allows for those situations where the immediate test possesses strong price behavior but the harmonic pattern opportunity remains valid. Other confirmation signals can facilitate the analysis at this price level but the extra tolerance is extremely effective in optimizing executions.

Bullish Permissible Execution Zone (PEZ)

- **Assess Permissible Execution Zone (PEZ) established by the Terminal Price Bar extreme to define the beginning of the execution process.**

- **Anticipated reversal behavior must be exhibited immediately after the Tbar+1 unfolds.**

- **Analyze confirmation factors with respect to the defined trade parameters – Stop Loss, Profit Target and the measurements that define PEZ.**

Terminal Price Bar ➜

(TBar)

12 02 04 06 08 10 12 14 16 18 20 22 00 02 04 08 10
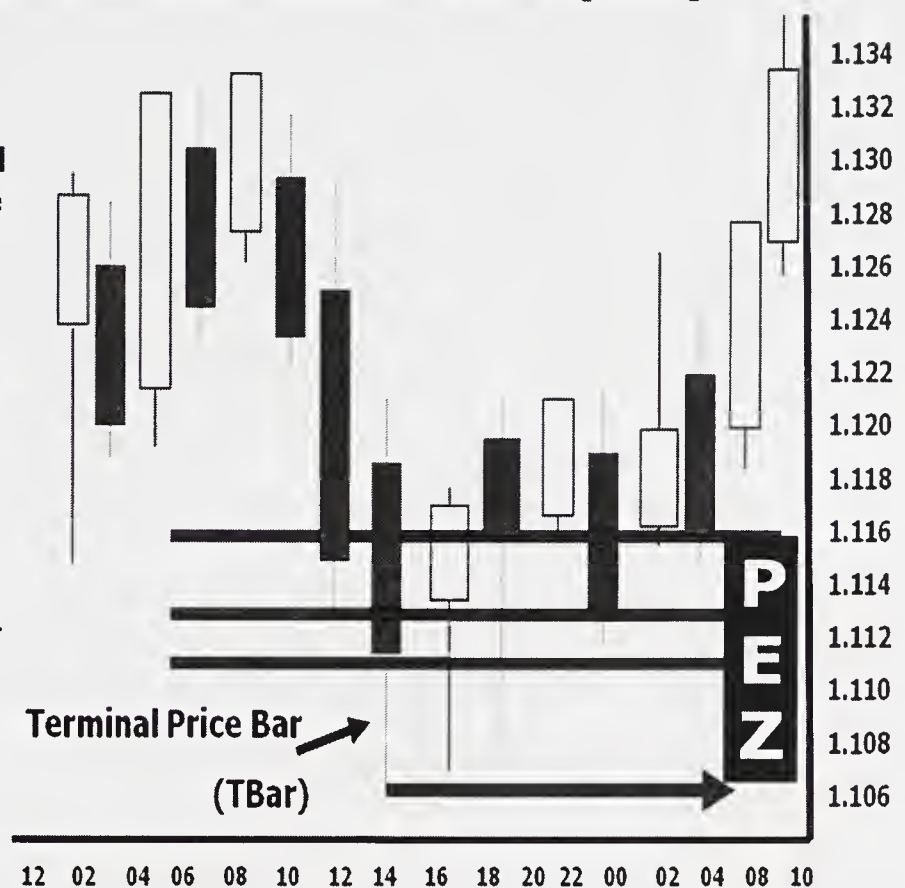
The following chart examples of GBP/JPY possess a PRZ that defined support between the 155.70-155.15 level while the terminal Price bar exceeded this area on its initial test. This established an extreme low at the 155 level. The nature of this price action beyond the ideal measure indicated a wider Permissible Execution Zone that optimize the entry below the PRZ. In fact, the price action was quite severe as it entered the zone of harmonic support. However, after testing the final number, the price action stabilized immediately thereafter. It is also important to notice that the initial test nominally hit the stop loss limit but did not exceed this level. Remember, stop loss limits are assessed by standard measures but must analyze the immediate action much like the Terminal Price Bar. We will look at how to handle these situations a little later in the material but this exemplifies the integration of real-world trading with harmonic measurements.

Harmonic Trading Volume 3: Reaction vs. Reversal

Bearish Permissible Execution Zone (PEZ)

Any assessment of the bearish Permissible Execution Zone must focus on the individual price bars immediately after the pattern has completed. An easy execution confirmation method is to simply wait for an individual bar to confirm the anticipated direction. If a pattern has completed but requires some consolidation at the harmonic resistance, it can be helpful to simply wait for the first bearish price bar as a means of confirmation of a larger move at hand. As experience develops, Harmonic Traders typically are able to readily execute based upon these confirmation strategies and clearly navigate any market environment based upon the markets own signals. As we review numerous examples throughout this material, the immediate reversal types do possess individual price bar confirmation signals that effectively trigger optimal trade entries.

Bearish Permissible Execution Zone (PEZ)

- **Assess Permissible Execution Zone (PEZ) established by the Terminal Price Bar extreme to define the beginning of the execution process.**

- **Anticipated reversal behavior must be exhibited immediately after the Tbar+1 unfolds.**

- **Analyze confirmation factors with respect to the defined trade parameters – Stop Loss, Profit Target and the measurements that define PEZ.**
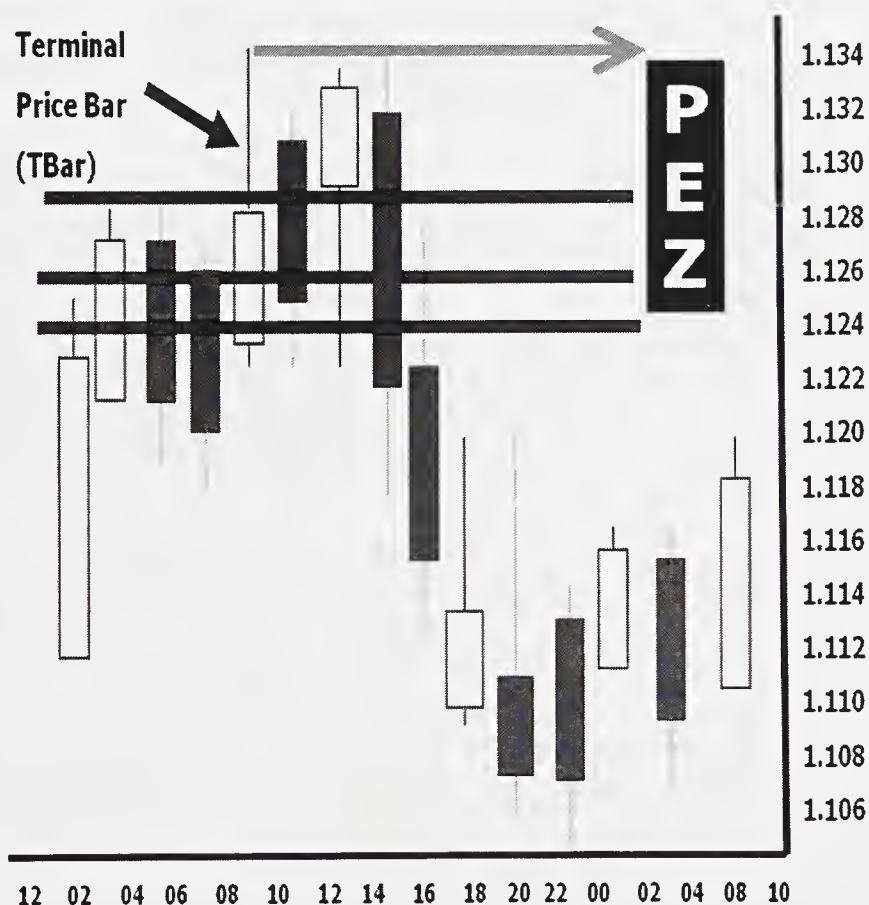
The following chart of the Australian Dollar/Swiss Franc shows a distinct Bearish Butterfly pattern that manifested demonstrative reversal behavior at the harmonic resistance. Furthermore, the Terminal Price Bar slightly exceeded the Potential Reversal Zone on the initial test. The extreme of this price bar help to indicate that the immediate resistance should not experience much consolidation beyond the limits of the Permissible Execution Zone. The extreme of the Terminal Price Bar defined an extra 5 to 10 pips tolerance beyond the minimum limits of the Potential Reversal Zone.

Therefore, the Permissible Execution Zone defined the acceptable tolerance of the real trading action to optimize the entry to favor an entry slightly above the measured levels. This trade defined the 0.9790 area as the ideal entry for the trade.

Harmonic Trading Volume 3: Reaction vs. Reversal
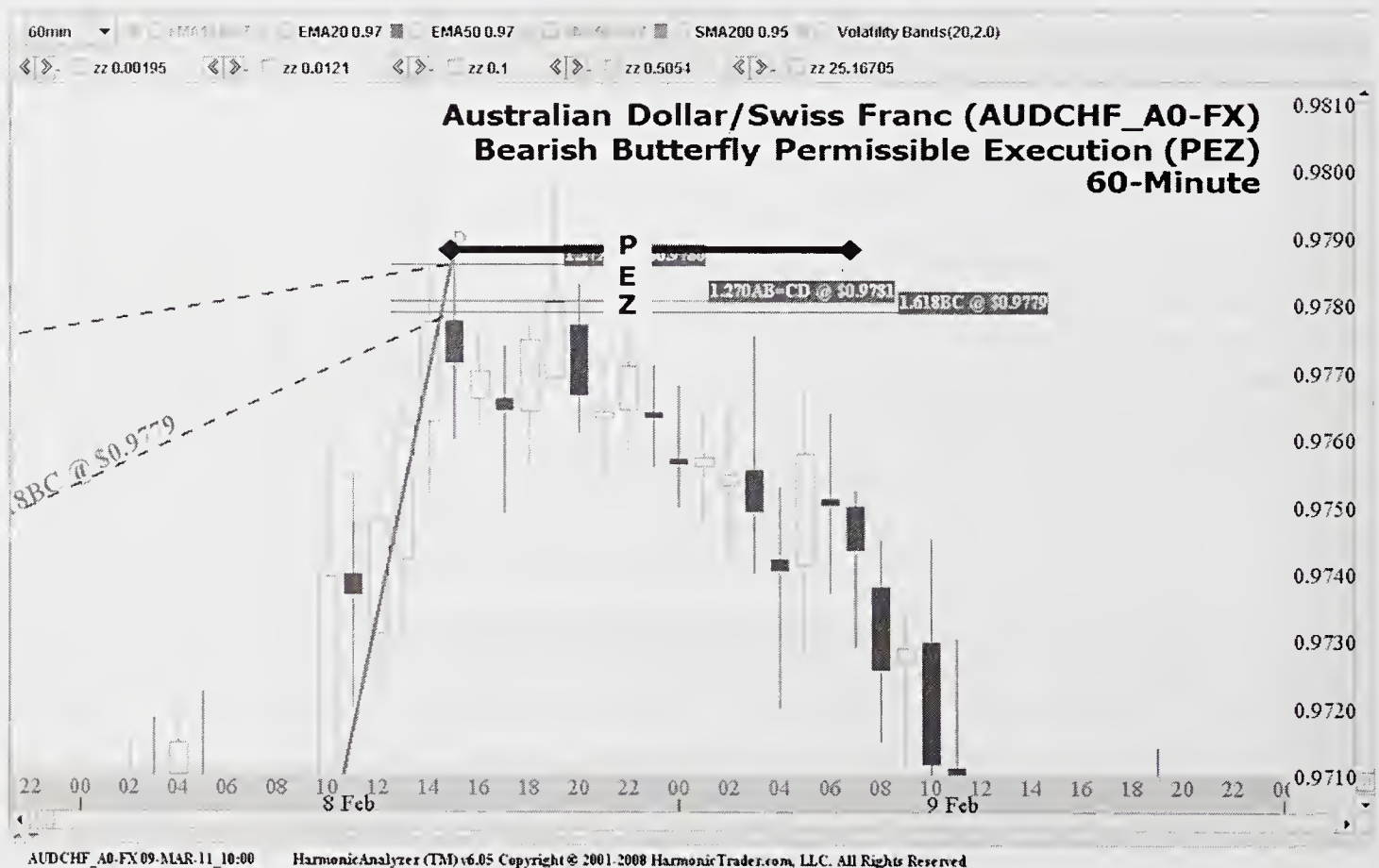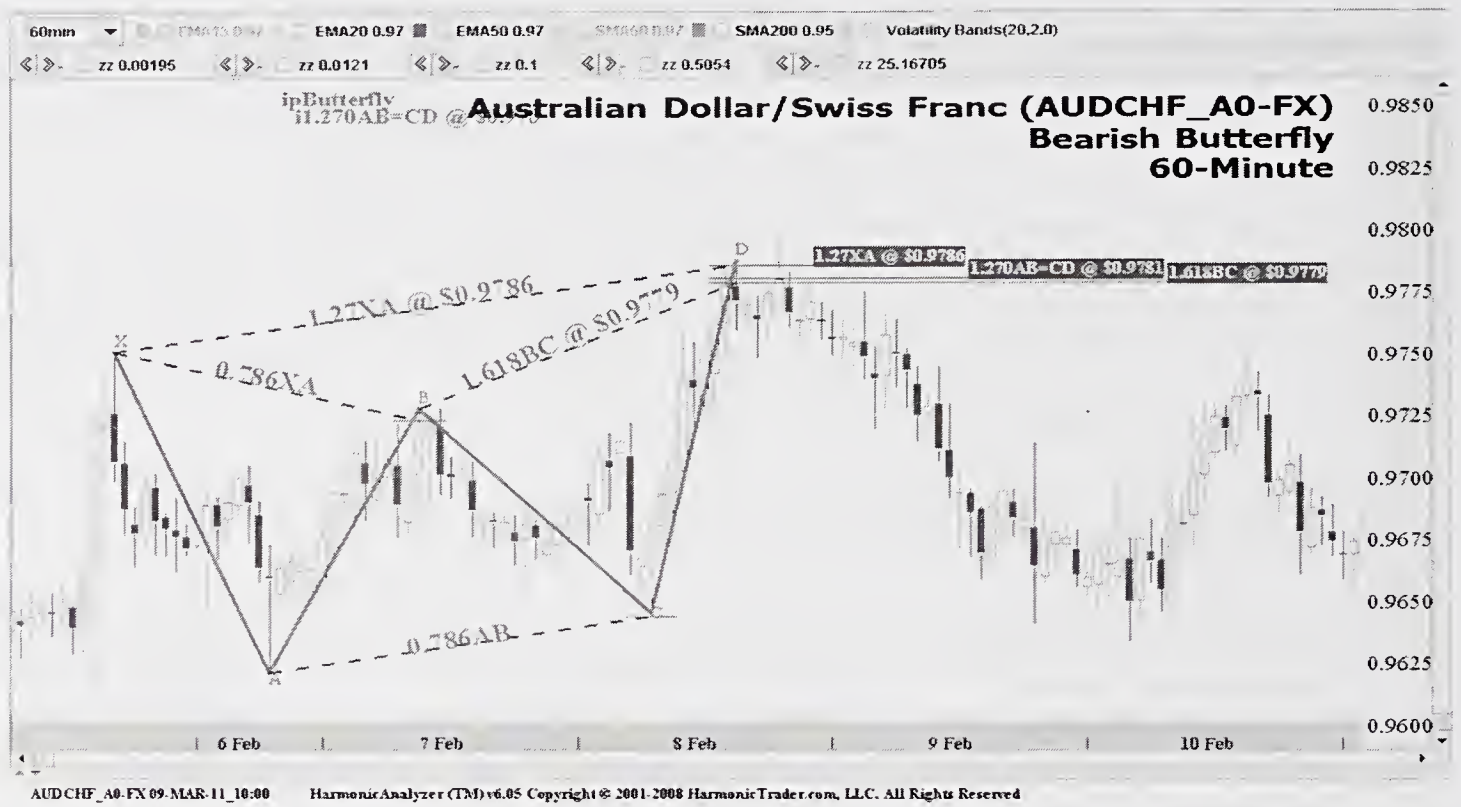
Advanced Stop Loss Considerations

I think it's important to review the exact ratios used at the completion point of all harmonic patterns and the relevant stop loss limits. For example, the Bullish Butterfly employs a 1.2 7X a as its primary projection to define the completion point of the pattern. If price action was to exceed this area beyond a 1.414, the ideal stop loss limit would be triggered and the pattern will be considered invalid. Each pattern has its own stop loss limit. Stop loss limits are more of the general guidelines as they relate to patterns and may be integrated into trade management of the position differently depending upon the price action in the PRZ.

Standard Stop Loss Pattern Limits

Pattern	XA Ratio	Stop Loss Ratio
Butterfly	1.27	>1.414
Crab	1.618	>2.0
Deep Crab	1.618	>2.0
5-0	0.618	>0.618
Shark	1.13	>1.27
Gartley	0.786	>1.0
Bat	0.886	>1.13
Alternate Bat	1.13	>1.27

Establishing Measured Stop Loss Limits

The ideal stop loss ratio levels are dependent upon the Terminal Price Bar. The Potential Reversal Zone defines the price range for the completion of the pattern. Implicit with these measurements, the associated stop loss ratios that I have previously outlined serve as a guideline in advance. However, the assessment of the real-world trading action beyond the ideal measures is an essential skill that must also incorporate the coordination of confirmation strategies to effectively optimize trading decisions. As with the identification rules for patterns, it is possible to define limits within Permissible Execution Zone that include the Terminal Price Bar to validate the reversal at hand. This is an important trading skill because there will be situations that require an active management approach to effectively handle volatile situations. There is no such thing as a perfect execution. Harmonic Traders must be realistic understand that sometimes

active market environments require dynamic measurements to assess how price action is responding to the harmonic levels.

It is easy to experience success early on and attempt to become more active trader, take on greater risk and begin to reach outside of your level of ability. This can lead to mistakes that can impact trading psychology and overall confidence. It is always better to pass on any trades and only execute those that are obviously clear. Regardless of any difficulties encountered, the proper expectations will always guide the correct trading decisions. If losses are encountered, Harmonic Traders must go back and take a look at the rationale of their opportunities and effectiveness of their execution. In fact, take long to realize that mistakes are being made and consistency evaded. Harmonic Traders must be honest with themselves and focus on improving mistakes and reinforcing good habits. This is particularly important with trade management. When price action does not unfold as expected, there will typically be very clear evidence at hand of a failure. One of the most important considerations early in the reversal process is to assess how price action is unfolding beyond the Terminal Price Bar completion point.

## Terminal Price Bar Advanced Considerations

Over the years as I have refined the strategies, my focus has shifted from mostly an identification dominated trading strategy where I spent most of my time looking for valid harmonic patterns to now mostly concentrating on the price action immediately following the establishment of Terminal Price Bar. The initial few price bars have enormous significance and the character of this action provides immediate insight into the nature of the pattern itself. The key is being able to know when to allow certain price action to consolidate in the general area of a completed pattern versus precise executions that immediately enter trades at the completion of the structure. In either situation, there will be a brief period shortly after executing the position where constant assessments of stop loss considerations and initial profit targets define decision-making process.

Terminal Price Bar Stop Loss Considerations

Some of the earliest technical research that focused on structural patterns in the market identified basic breakout formations that identified the concept of continuation. All markets fluctuate from support to resistance and exhibit price behavior that changes in character based upon the relative position of the trend. The problem for many new Harmonic Traders is that they do not differentiate price action. However, there are definitive conditions where price action signals a failed harmonic level early into the reversal.   This depends upon the Terminal Price Bar as it tests the Potential Reversal Zone (PRZ) to establish the tolerance beyond the ideal measured level. In valid reversals, the price action typically exhibits decisive continuation that does not require a

great deal of time to confirm minimum reaction. However, there are clear situations when the Terminal Price Bar temporarily validates the Potential Reversal Zone (PRZ) on the initial test without exceeding the stop loss limit. In fact, most properly measured harmonic opportunities provide this type of natural reaction must actively assess the general momentum that the initial test possesses as it trades into the PRZ. At a minimum, the price action following the Terminal Price Bar should begin to exhibit individual behavior that is in the direction of the anticipated pattern. Sometimes, it is prudent to wait for these individual signals before even considering an execution. However, the most dramatic failures can be avoided easily. These situations unfold once the Terminal Price Bar exceeds the Potential Reversal Zone and fails to yield any considerable constructive price action in the anticipated direction of the new trend. The signals must be respected and are effective trade management tools.

Bullish Terminal Price Bar Stop Loss Considerations

**EXTREME TERMINAL PRICE BAR
CLOSE THROUGH THE
POTENTIAL REVERSAL ZONE (PRZ)
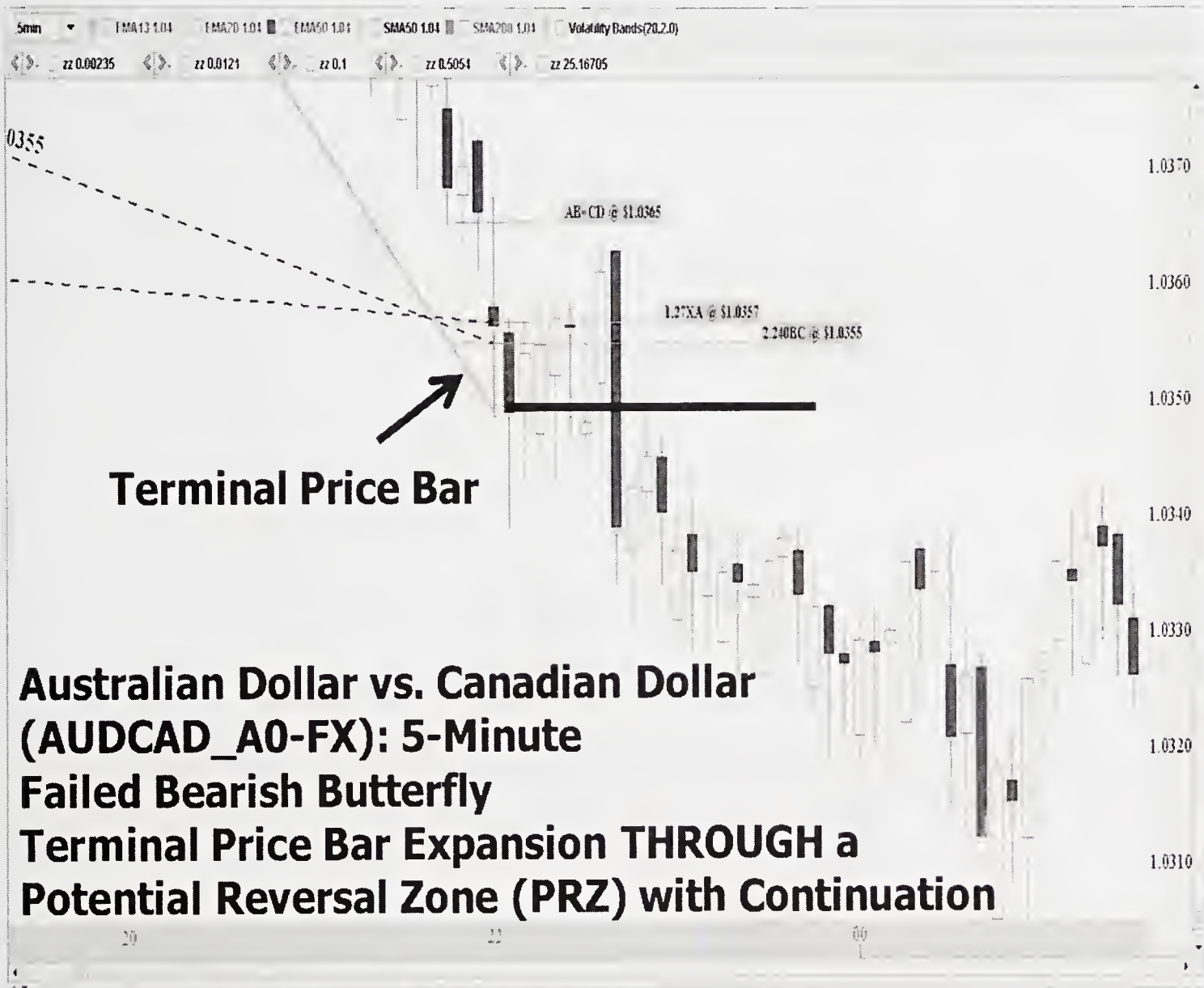FOLLOWED BY IMMEDIATE
BEARISH CONTINUATION**
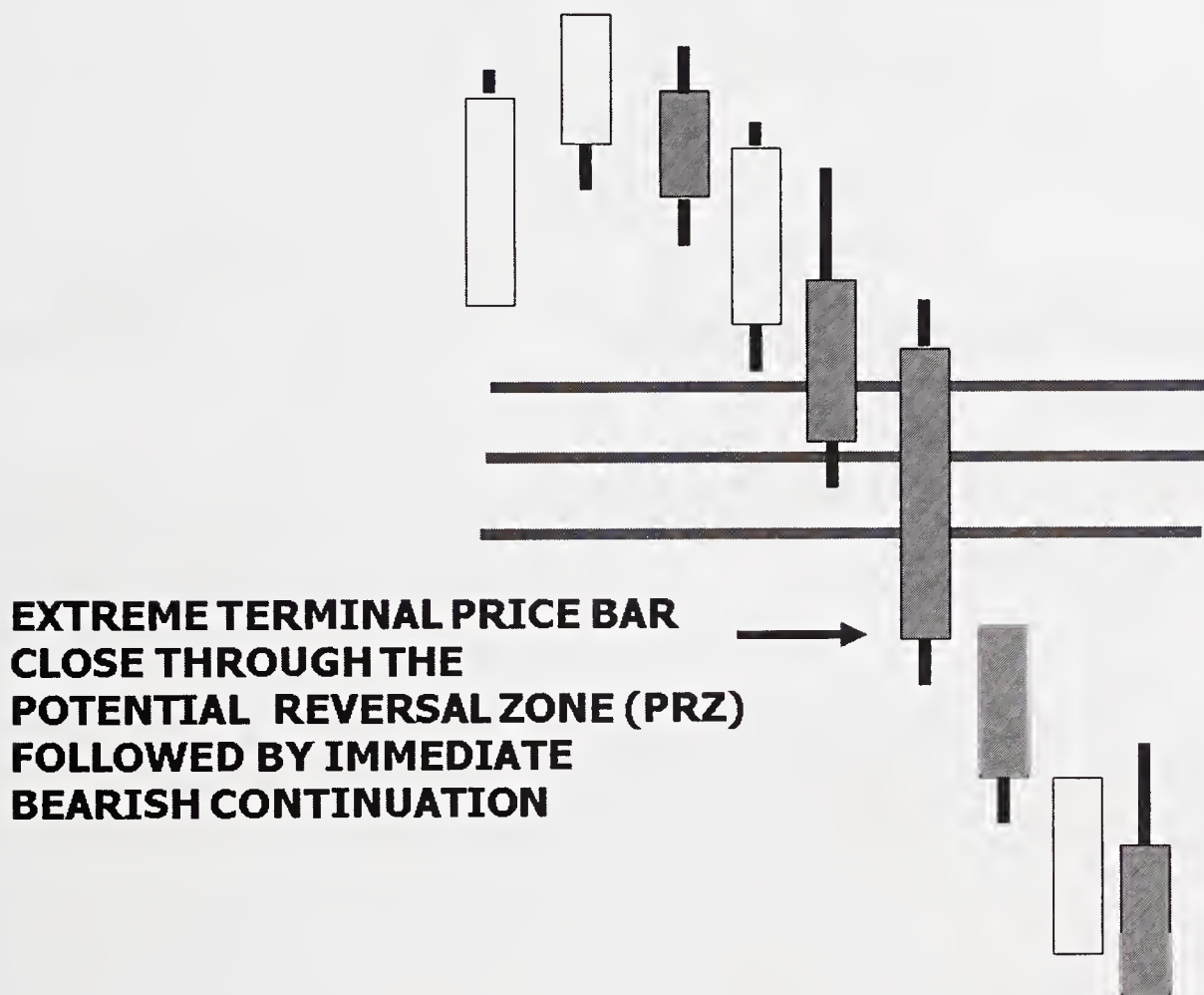
Once price action establishes the Terminal Price Bar, the immediate continuation frequently signals an immediate failure. In the bullish case, any price action that continues in the direction of the downtrend should signal a potential failure at hand.

The immediate bearish continuation should at least delay the execution until further confirmation can be established. The following example of the Australian Dollar/Canadian Dollar shows a distinct Bullish Butterfly that declined through the Potential Reversal Zone and continued lower immediately thereafter.
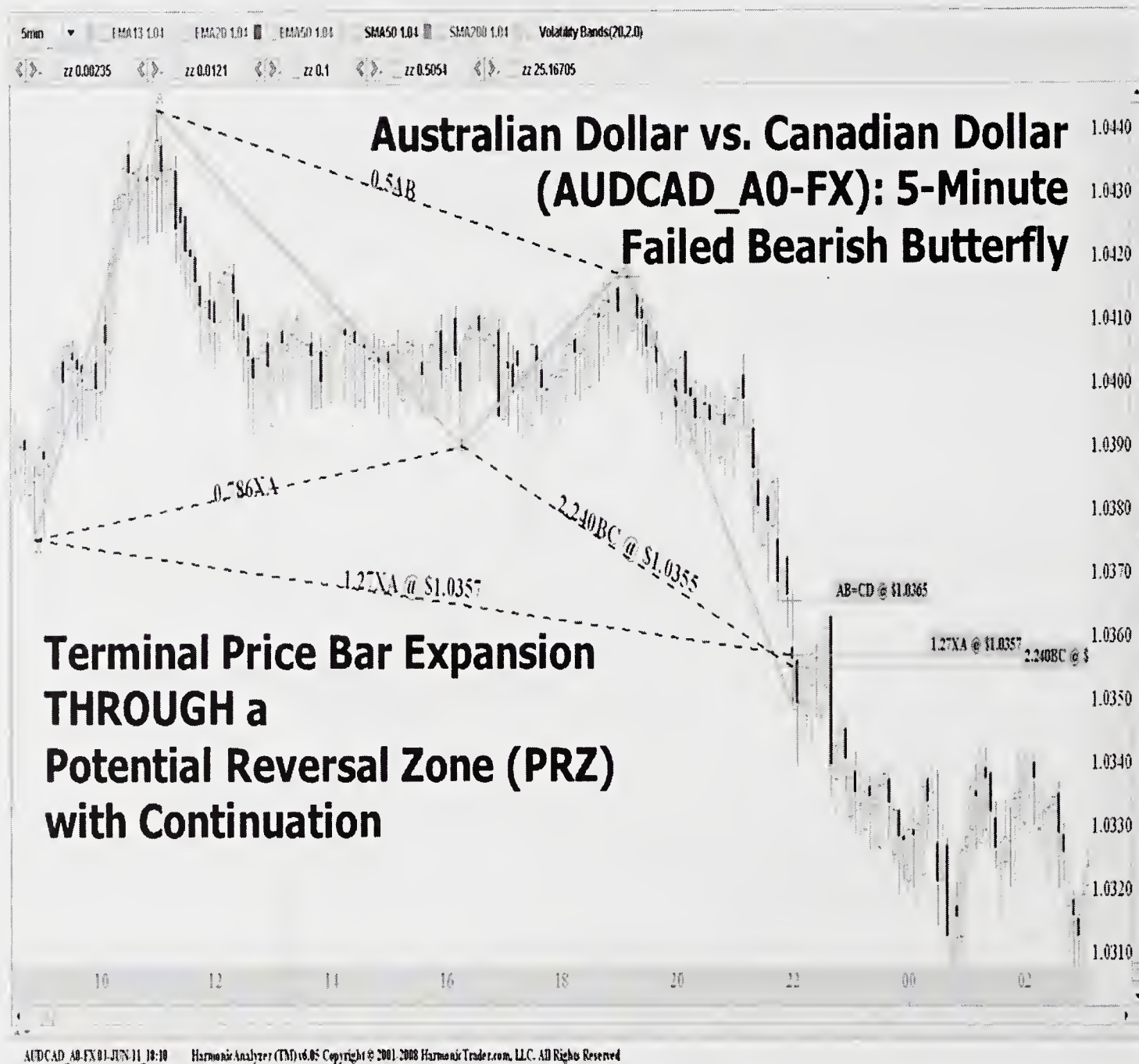
At a minimum, the stop loss should be adjusted to protect against dramatic drawdown or break even if possible. The goal at this point in the trade should be to limit risk, especially when the individual price action violates the Terminal Price Bar and continues in the direction of the predominant trend. The following chart of the price action in the potential reversal zone clearly shows how the harmonic support was violated, provided a brief consolidation and ultimately failed shortly thereafter. We will look at how to handle these situations precisely with confirmation strategies to facilitate

this analysis. However, the simple price action character exhibited overall weakness as the predominant trend continued lower following a nominal reaction beyond the Terminal Price Bar. The ideal support zone was measured between 1.0365 – 1.0355 on the following 5-minute chart. The terminal bar extreme defined the permissible execution zone below this area at 1.0350. The execution of the opportunity favored the price range below the harmonic support. Even with this extra tolerance, it was clear that the price action was not responding and violated the Terminal Price Bar shortly after testing all the numbers in the PRZ.


Terminal Price Bar

Australian Dollar vs. Canadian Dollar (AUDCAD_A0-FX): 5-Minute Failed Bearish Butterfly Terminal Price Bar Expansion THROUGH a Potential Reversal Zone (PRZ) with Continuation

Bearish Terminal Price Bar Stop Loss Considerations

One of the primary challenges all Harmonic Traders face is to gauge the extent of the real-world price action beyond the ideal Potential Reversal Zone. The structural signal does possess a definitive completion point where the character of the price action must change. However, an immediate continuation beyond the Terminal Bar signals a flawed opportunity at hand.

EXTREME TERMINAL PRICE BAR CLOSE THROUGH THE POTENTIAL REVERSAL ZONE (PRZ) WITH BULLISH CONTINUATION
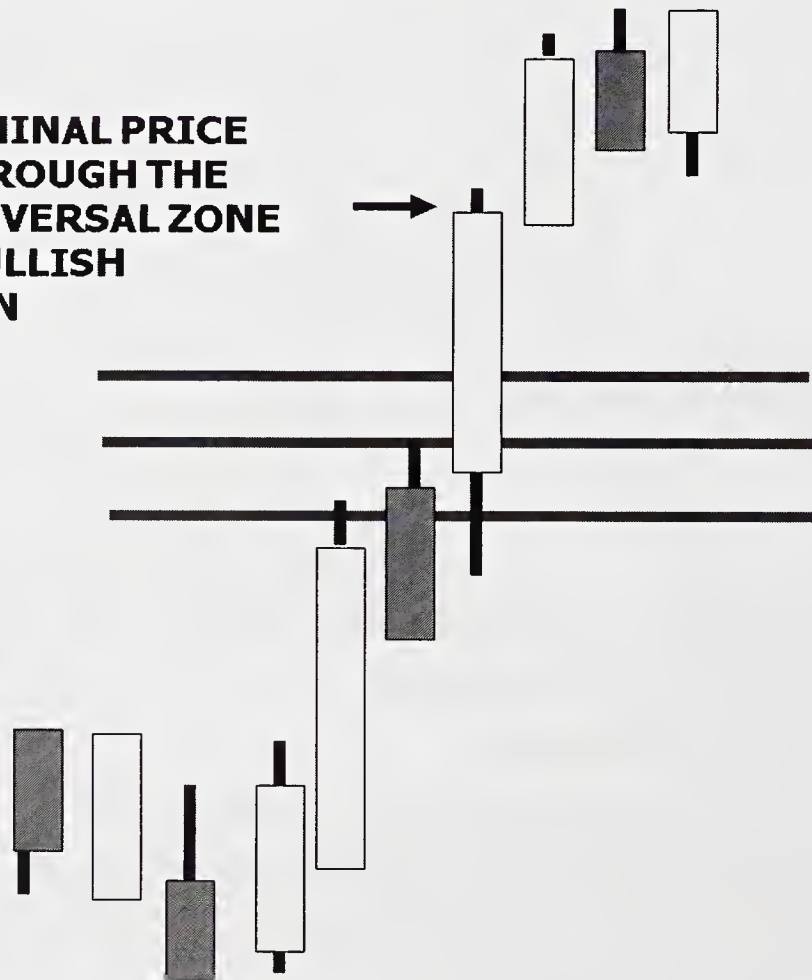
The following chart shows the price action at the completion point of the pattern. Potential Reversal Zone (PRZ) defined the 80.25 area as critical short-term harmonic

resistance. The price action traded through this zone and continued higher, immediately negating the bearish pattern.

Japanese Yen (JPY_A0-FX): 5-Minute Failed Bearish Gartley

0.786XA @ $80.2608

0.618XA

1.270BC @ $80.2790

1.270BC @ $80.2790
AB=CD

0.886AB

Terminal Price Bar Expansion THROUGH a Potential Reversal Zone (PRZ) with Continuation

JPY_A0-FX 03-JUN-11_18:10   HarmonicAnalyzer (TM) v6.05 Copyright © 2001-2008 HarmonicTrader.com, LLC. All Rights Reserved
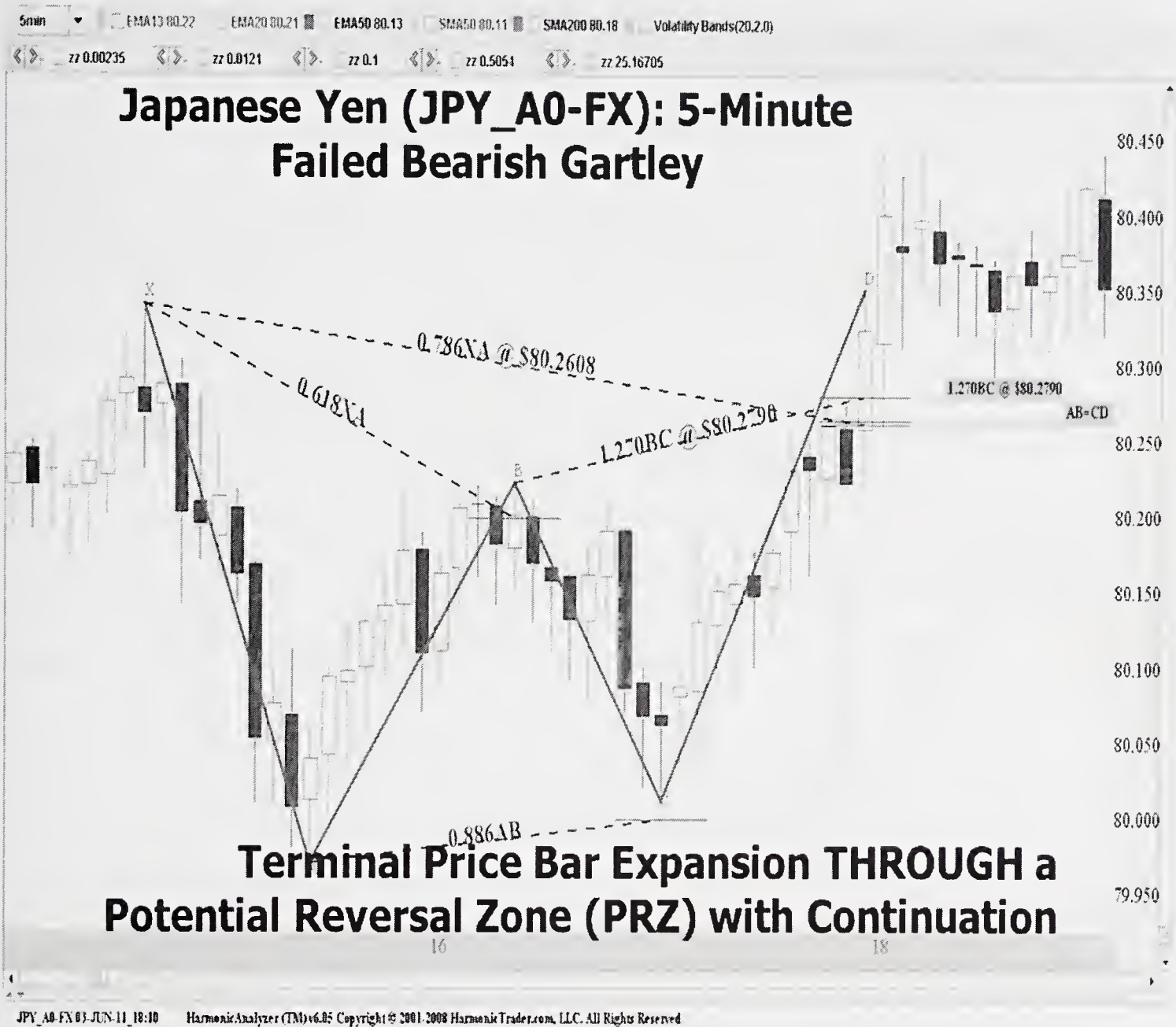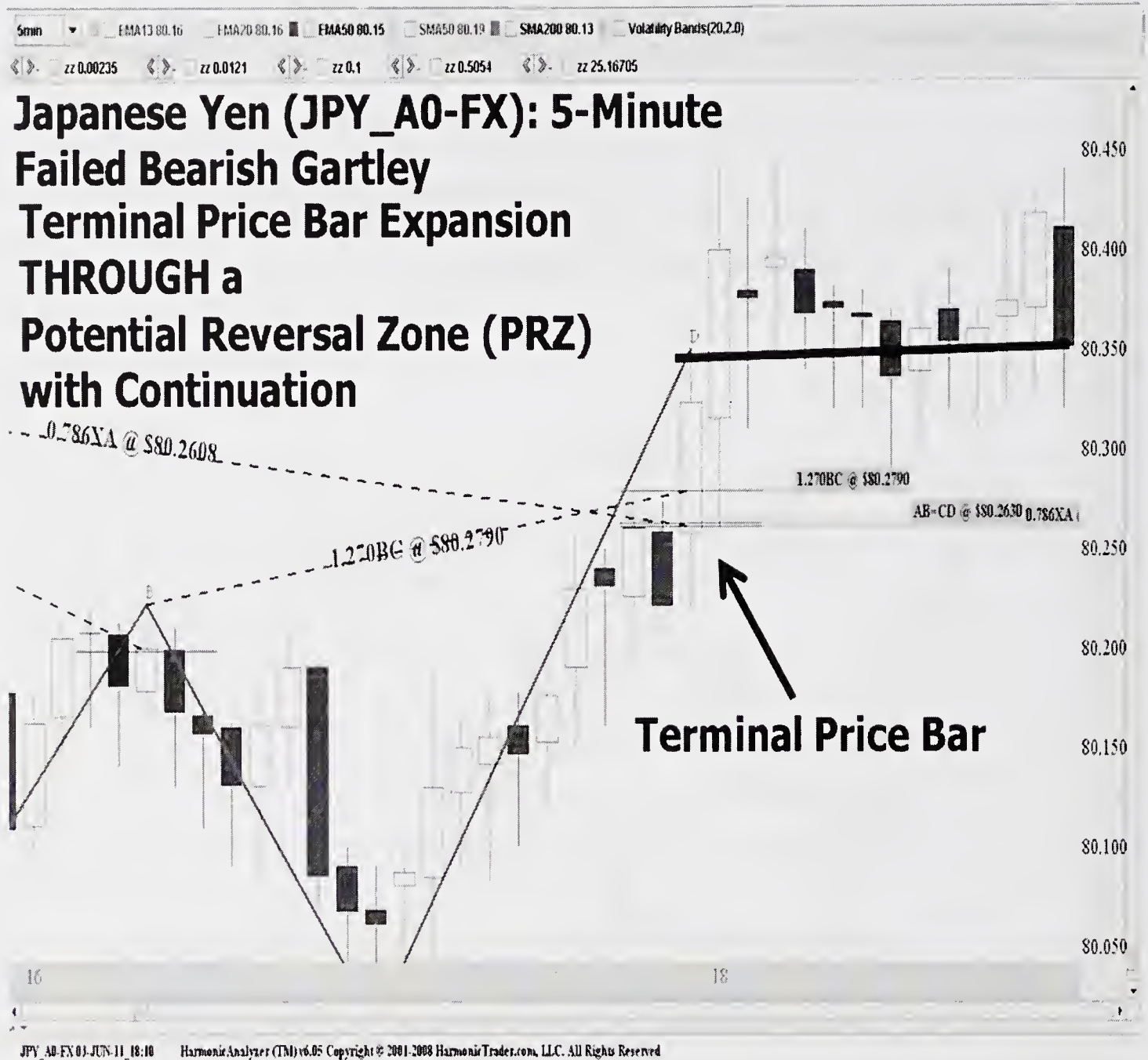
The failed Gartley in the US Dollar/Japanese Yen only required 10 minutes following completion of the Terminal Price Bar to demonstrate its strength. The peculiar aspect of the Terminal Price Bar in harmonic patterns is that it will exhibit extraordinary behavior beyond the norm that signals a flawed level of resistance. As we outlined in the chapter on trade execution, the price bar following the completion point of the pattern is where we begin consider the validity of the opportunity. However, any immediate continuation in the direction of the predominant trend will signal a delayed execution at a minimum. In this case, the price action rallied sharply and never gave a chance to even confirm the reversal.

Harmonic Trading Volume 3: Reaction vs. Reversal

Japanese Yen (JPY_A0-FX): 5-Minute
Failed Bearish Gartley
Terminal Price Bar Expansion
THROUGH a
Potential Reversal Zone (PRZ)
with Continuation

It is also important to note that in most valid reversals there will be a brief consolidation phase to varying degrees. The key is to monitor the position as the pattern completes and execute only if confirmation signals validate the measured price level. Furthermore, if the price action blatantly violates the Potential Reversal Zone, common sense dictates that the execution be delayed and a more cautious attitude be applied to the situation. This comprehension increases with experience but individual price bars do hold the key to the validity of the reversal at the completion of the pattern.

Advanced Harmonic Trading Execution Strategies Conclusion

Beyond the basic measurements of harmonic patterns, there is an important distinction that must be made at the completion point of the structure. One of the basic challenges for all Harmonic Traders is to distinguish how far beyond the ideal measurements can we allow for deviation from the harmonic model while still possessing a valid trade opportunity. Concepts such as the Terminal Price Bar, the Potential Reversal Zone and the Permissible Execution Zone address this issue clearly and provide parameters as the pattern completes to validate the price action. Furthermore, advanced calculations of the Terminal Price Bar exemplify the unique individual data points that provide relevant and accurate measures. These proprietary concepts are founded in the principle that all parameters of the trade are established by the market's own price action.

Most important, the measurable zone of harmonic price phenomenon consistently establishes the natural limits of price action on any time interval. The zones that these measures define provide a dynamic means of assessing how far the market can move in any one direction within a certain period of time before a counter reaction is required. These insights in combination with other standard measures clarify the overall probable future price direction and facilitate trading decisions throughout the process.

Chapter 4:
Harmonic Trading Reversal Types

I noticed over the years the differences in reversals that could be distinguished as distinct types. The first test and completion of a pattern is a highly probable event that some type of a reversal will occur. However, a reversal is not exactly accurate when describing this type of situation. A better term would be a reaction. In the philosophy of what harmonic measurements represent, the cyclical nature of price action mechanisms demands there be some type of inflection point to be realized in any move. No price move can go straight up or straight down. There must be buying to the selling and vice versa. These are the natural forces of the market. Therefore, every singular price move regardless of its direction must experience some type of inflection as part of its natural mechanism. The recognition of this natural occurrence bolsters the argument for recognizing those measurements that reflect the natural cyclical movements – a.k.a. harmonic ratios – where only the relevant measurements are considered. In addition, the initial completion of the pattern represents some type of natural cycle. Even if that pattern is eventually violated, the formation of the structure can identify temporary profitable price segments consistently.

Definition of an Ideal Reversal

One of the earliest challenges most Harmonic Traders face is what to expect completion of the pattern. Many whom have learned identification techniques are not aware essential strategies that facilitate decisions throughout the process. Ideally, price action should reverse after the entire range is tested, assessing the Potential Reversal Zone (PRZ) particularly at the XA retracement/projection (typically the largest leg of the pattern). It is essential to take particular note of the relative AB=CD structure in comparison to the XA calculation and coordinate effective confirmation signals such as indicators simultaneously with reversal progress in the PRZ. The price action following the Terminal Price Bar should close beyond the PRZ in the reversal direction shortly after completing the pattern.

Within the Harmonic Trading approach, the best opportunities for exact reversals of measured patterns occur on the reaction of the structure. We will outline these Type-I situations later in the material but it is important to understand there are differences basic reversal types. There are several considerations that help define the stop loss profit target objectives for the trade, as well.

One of the most important considerations is the type of trendline that the reversal exhibits. Following the establishment of Terminal Price Bar, price action should reverse shortly after testing all numbers in the Potential Reversal Zone (PRZ). An accelerated reversal trendline is typically the best possibility that can take shape from a reaction of the pattern. Essentially, price action reverses immediately after testing all the numbers, reverses sharply and realizes the important range between 38.2% – 61.8% target - the *Initial Profit Objective*. Due to the nature of the reversal, the profit objective is aggressively and automatically managed. This may differ from trading strategies that are involved with reversal situations that require consolidation before establishing a valid reversal. Although the possibility for profit is greater in these trades, the easiest executions can be found at the initial completion of the clearest harmonic patterns. These reactive trades possess sharp and accelerated moves that can be executed time and time again to capitalize on powerful natural cyclical adjustments that provide consistent characteristics of their beginning, middle and end.

Reversal Types

Most of the finer strategies within the Harmonic Trading approach were developed over a process of many years – primarily out of trial and error. After the guidelines were established to measure exact patterns, other considerations became more apparent. I noticed that there was a distinct difference between the first time a pattern completed as opposed to a situation where there is a period of consolidation before the reversal. Similar patterns did not necessarily dictate that each would experience the same outcome. Rather, it was quite common for nearly identical pattern structures to experience varying results. Therefore, price structures unto themselves seemed to yield an unpredictable range of outcomes.

The gradual evolution from simple pattern identification to precise classifications of trading situations was facilitated by advances in software. In 2000, I started work on the first harmonic pattern software program, the Harmonic Analyzer. It is important to remember that there were very few software options and no programs that could automatically scan for harmonic patterns at this time. Most software platforms did not even possess basic Fibonacci measurement tools. I was able to program the algorithms and create a tool that automatically scanned and measured harmonic pattern structures. We were able to establish exact tolerance levels for structural variation to optimize results. After nearly 3 years of development, we were able to offer an unprecedented software program.

The Harmonic Analyzer was the first of its kind and it as enabled me to expand the work with harmonic patterns unlike ever before. Instead of spending hours

scanning a measuring various structural possibilities, I could focus on only those pattern situations that were relevant. I was able to analyze each situation in detail and refine the elements that consistently validated the correct technical environment to confirm the projected reversal as defined by the pattern. Essentially, the number one goal was to find out which harmonic patterns situations have the best opportunity of signaling a substantial profitable move. In the years since, these refinements have become essential advancements that has improved the ability to navigate price action and optimize trading decisions.

In the beginning, my initial comprehension of the differences in patterns was limited. Although my suspicions were correct that price structures must be precisely measured to define unique technical situations, the extent of how much specification was required escaped me. Once the initial structural rules were designed, it was easy to classify every pattern type with its own explanation. But, there were definitive environmental variables that I found to consistently repeat and to signal profitable trades in advance. The patterns for defining the price levels became more of a starting point for execution considerations, while the confirmation triggers were acting as the final determinate of the trade.

The obvious reality of harmonic patterns is that they do pinpoint – sometimes exactly – critical levels of support and resistance unlike any other methodology. The patterns themselves represent complex price signals that define something unusual is unfolding. However, I have noticed through the years that price action typically requires some degree of consolidation before confirming a larger structural reversal. Clearly, the first test of any Potential Reversal Zone (PRZ) will provide some type of sharp reactive move that yielded quick profits with limited risk. Beyond that initial reactive move, I noticed that most situations do not continue in that reversal direction unless accompanied by distinct confirmation factors. It seems that half of those that failed to reverse sharply on the initial move eventually failed the structure on the initial test. Meanwhile, the other half typically seemed to require more time to retest the initial reversal point before experiencing a larger move. These can be tricky situations, as this consolidation can provide challenges in the early stages of an execution.

A common experience for many traders is to measure a pattern properly, execute at the completion point, experience a sizable but brief reactive move only to give it all back as it quickly retests the initial price level of the pattern. These are common early learning experiences that traders must overcome and learn from to be able to manage harmonic price action effectively. For myself, I had to test various theories before I realized certain consistent reactions were unfolding following the completion of pattern. These repeated observations led to the basic Harmonic Trading process model that anticipates patterns in a particular sequence.

Starting with the identification of a distinct pattern, the Potential Reversal Zone (PRZ) must be accurately measured. The key completion point of the pattern is to know which numbers are most important within the collection of measurements that define the Potential Reversal Zone (PRZ). Although I have written extensively about this in prior material, the most important concept to remember is that all the numbers must be

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tested to define the Terminal Price Bar. The Terminal Price Bar marks the completion point for the pattern and the beginning of the Permissible Execution Zone. Essentially, Terminal Price Bar acts as a trading alert – the light switch that turns the trade on – that represents the official starting point for the execution. Within that brief window of the consolidation range established by the Potential Reversal Zone (PRZ), the price action must be closely monitored along with other confirming indicators readings. If those readings confirm the Potential Reversal Zone (PRZ), the trade execution is valid. After executing the trade, it must be monitored closely with a clear objective of the stop loss limit and the profit target.

Serial Bullish Reversal

An ideal bullish reversal typically occurs in the clearest structural opportunities. When a bullish pattern defines harmonic support, the strongest reaction expressed in the price action will change course dramatically on the first test of the completion point. These reversals are associated with price action that reverses sharply and forms a successive pattern of higher highs and higher lows as the bullish price bars exhibit demonstrative continuation in the anticipated direction.
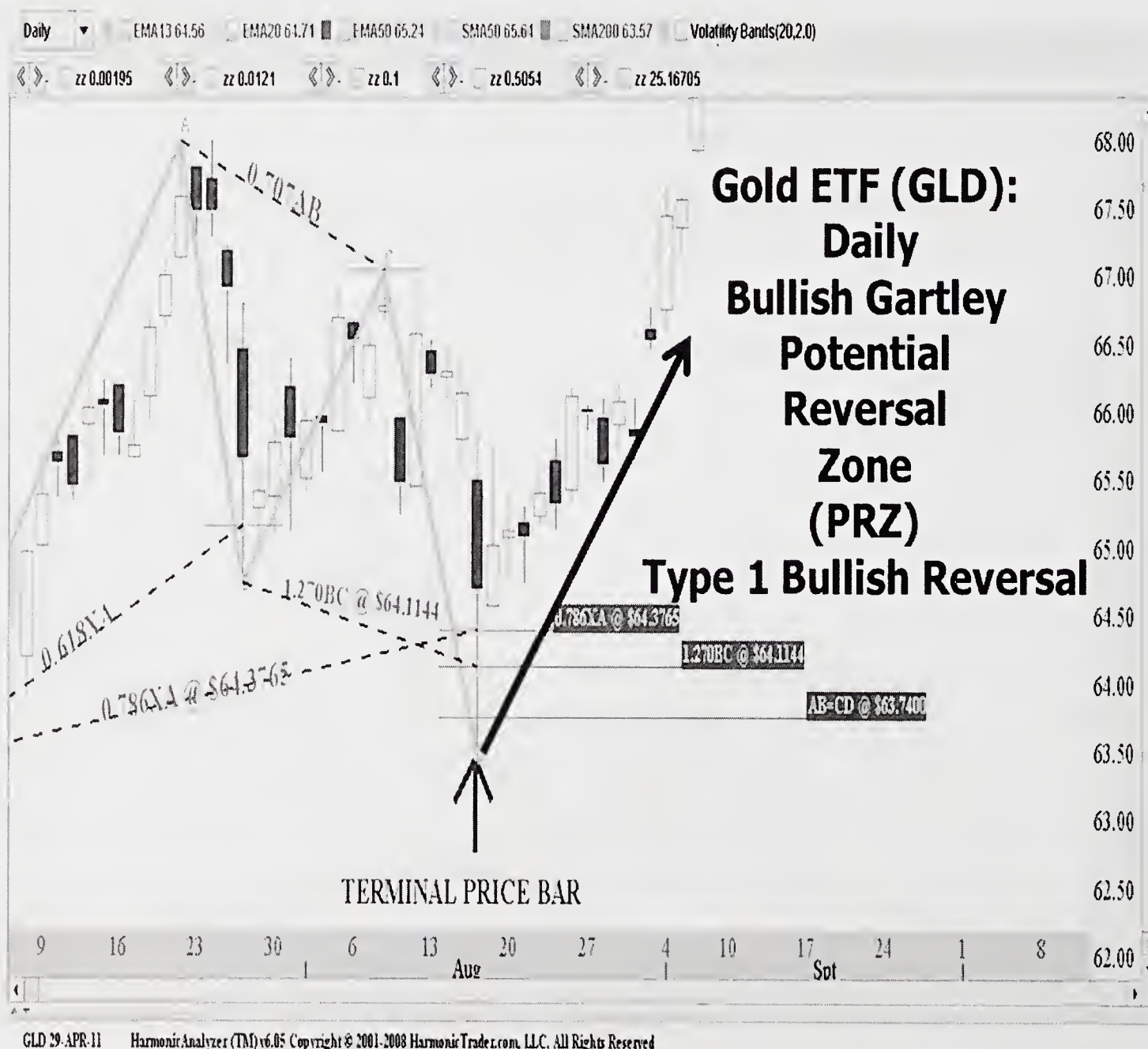

Serial Bullish Reversal
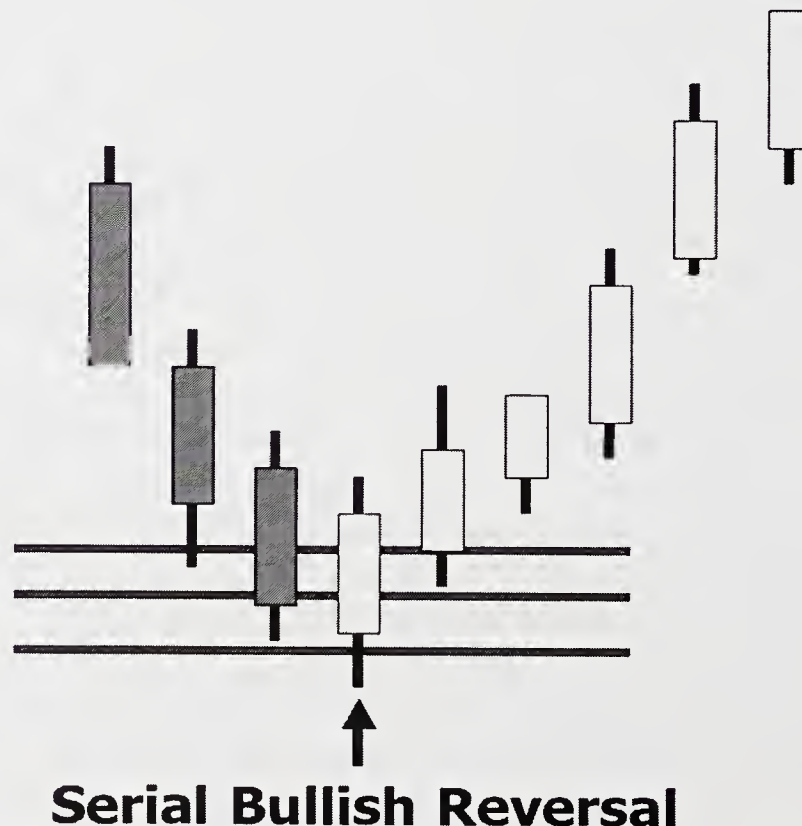
The key is to gauge the price action as the Terminal Price Bar is established. There are complementary strategies that help to define when these reversals will occur. However, the safest course of action is to monitor each price bar beyond the completion point. Until the initial reversal fails to continue in the countertrend direction, it is to be assumed that the pattern reversal will continue. We'll take a look at exact management strategies that help make these distinctions. But, it is essential to assume that all initial tests of significant harmonic pattern opportunities will yield a serial reversal until proven otherwise.

This following daily chart of the Gold ETF shows an ideal Bullish Serial Reversal. The GLD formed a Bullish Gartley that reversed exactly at the Potential Reversal Zone (PRZ). The price action tested all of the numbers and reversed at the low range of the harmonic support. The Terminal Price Bar stabilized shortly thereafter and the ensuing continuation of the new uptrend climbed steadily in the days that followed. This chart shows the price action in the Potential Reversal Zone (PRZ).

Gold ETF (GLD): 15-Minute
Bullish Gartley
Bullish Serial Reversal
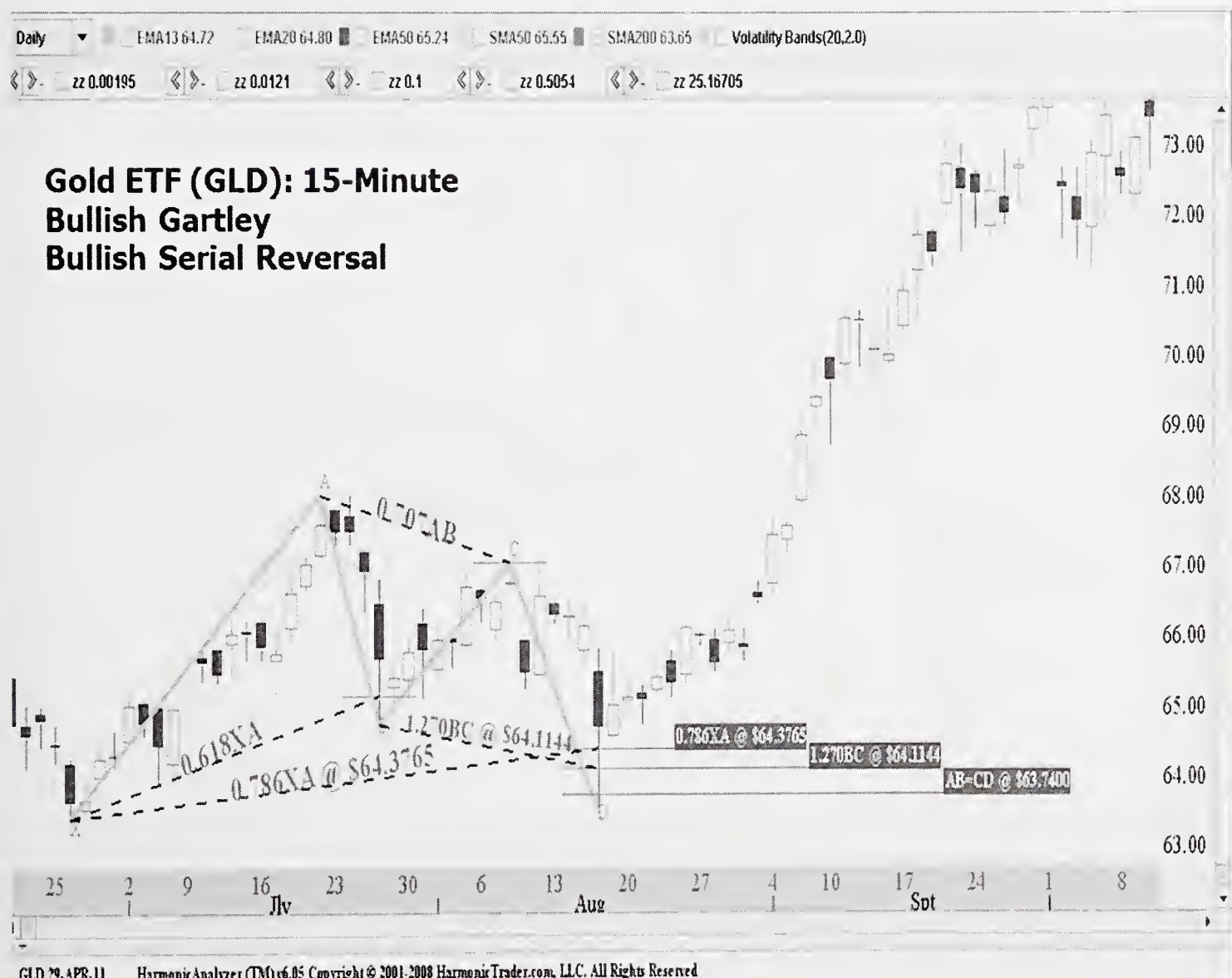
Despite the extreme price action, the Terminal Price Bar was established on the day that it tested all of the numbers. Due to the volatility of the move, this may have been a tricky execution. Regardless, the execution for the bullish continuation was quite clear. The reversal climbed steadily higher, as each successive price bar formed a pattern of higher highs and higher lows. When trading behavior moves in such a linear fashion, it frequently is signaling potential strength beyond the initial reaction. The clearest serial reversals will typically follow in this fashion with overwhelming bullish continuation.

Serial Bearish Reversal

The key technical event that must occur is some type of individual resistance at the numbers defined by the pattern where each price bar fails to move higher above the Terminal Price Bar and begins to slowly roll over. The serial bearish reversal will exhibit a pattern of lower lows and lower highs in the successive price bars following the completion of the pattern.
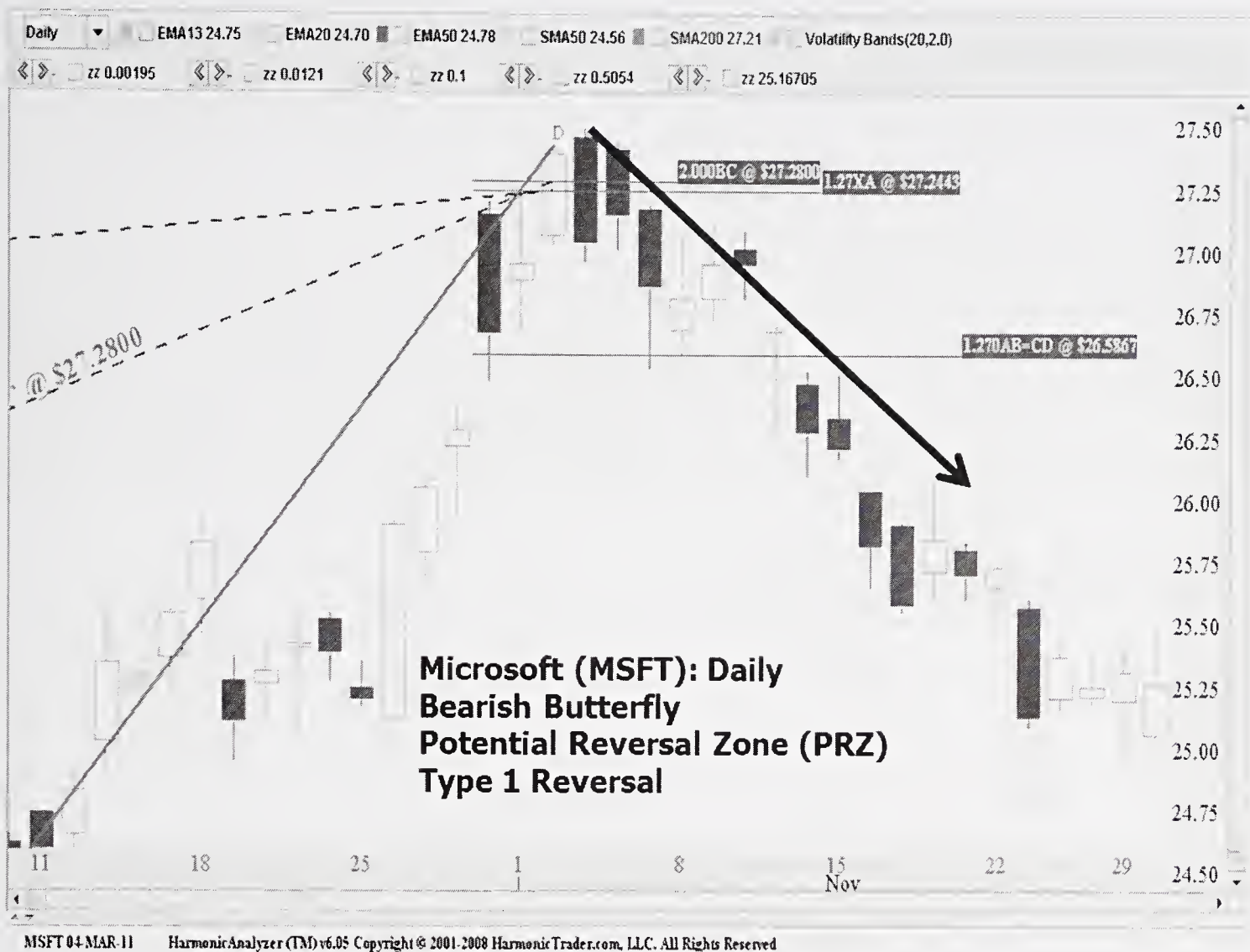

Serial Bearish Reversal
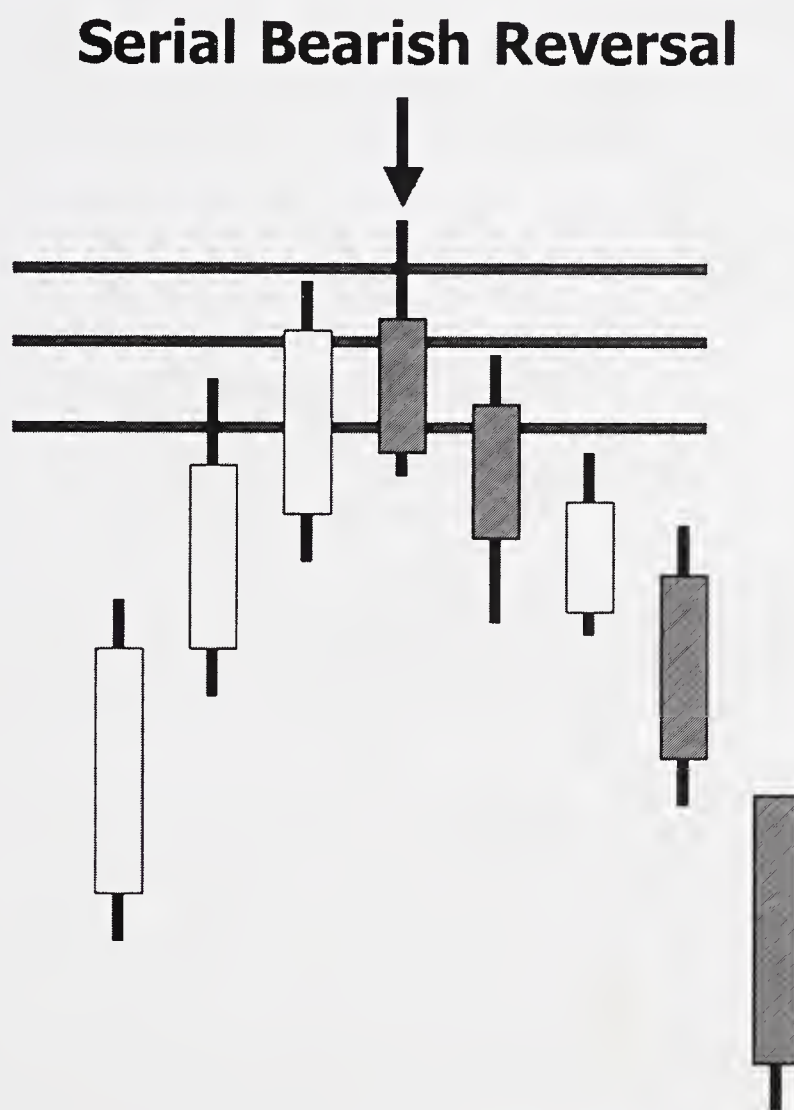
In most cases, the initial reaction of most harmonic patterns will exhibit some type of serial reversal after testing all of the numbers at the patterns completion point. The key to capitalizing on the situations is to understand when these movements will yield minor reactions versus larger reversals. Again, we will look at detailed strategies later in this material that incorporate these ideas. For now, it is important to be aware

of the type of price behavior following completion of a harmonic pattern opportunity. The following daily chart of Microsoft exhibits an ideal serial reversal. The pattern was quite distinct with three measurements defining the Potential Reversal Zone (PRZ) in the 26.50-27.30 area.   Immediately after testing all the numbers at the pattern completion point, the price action rolled over and declined steadily thereafter.

Microsoft (MSFT): Daily
Bearish Butterfly
Bearish Serial Reversal
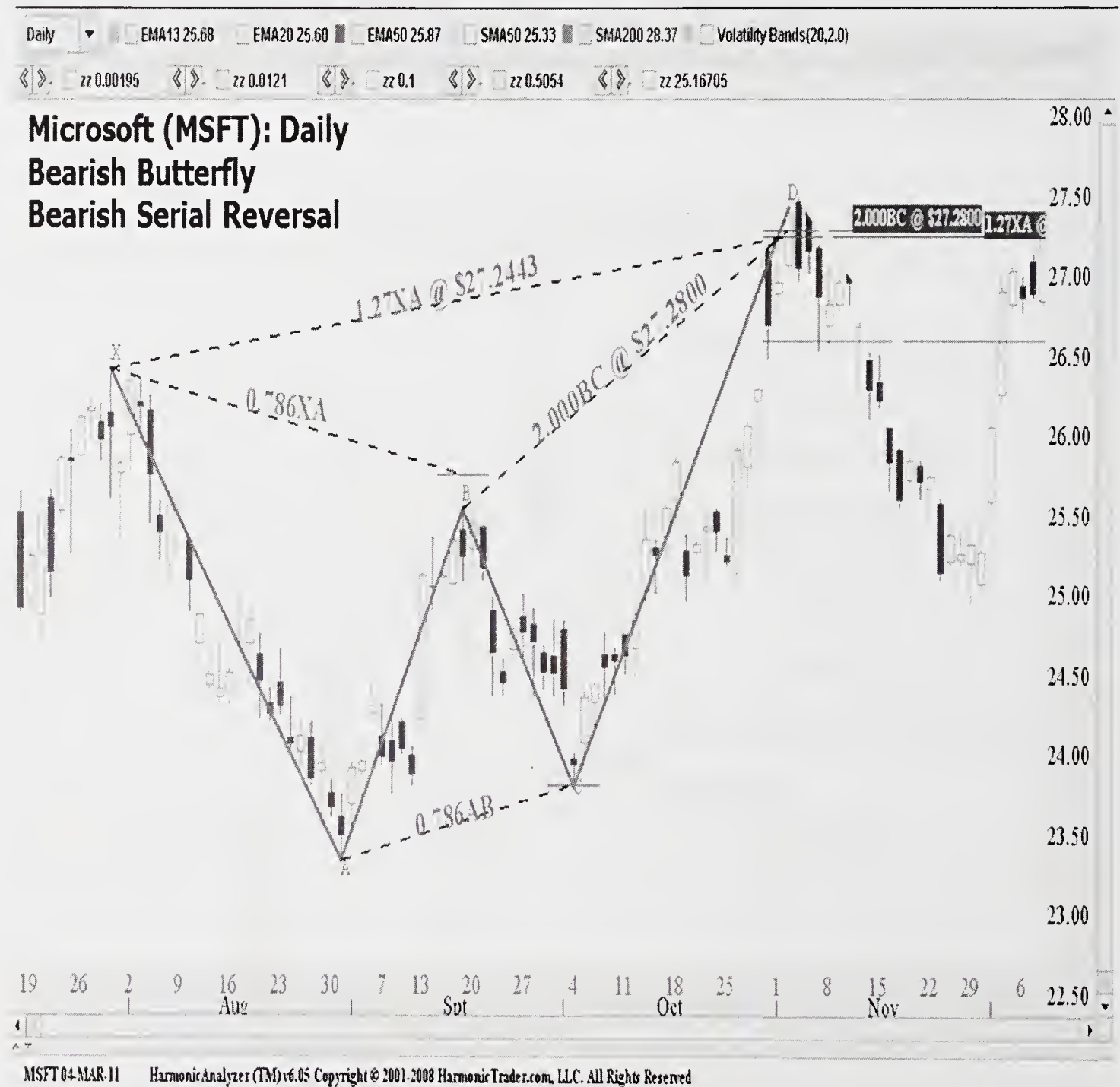
The next chart that shows the price action in the Potential Reversal Zone (PRZ). The Terminal Price Bar was established with a peak of 27.40. In combination with the

other numbers in the zone, the harmonic resistance was established in this area. The most interesting aspect is the price action immediately following the Terminal Price Bar.

Microsoft (MSFT): Daily
Bearish Butterfly
Potential Reversal Zone (PRZ)
Type 1 Reversal

MSFT 04-MAR-11   Harmonic Analyzer (TM) v6.05 Copyright © 2001-2008 HarmonicTrader.com. LLC. All Rights Reserved

The single reversal bar is incredibly significant, as it frequently acts as the first confirmation that the pattern's resistance is taking effect. In essence, the character of the new trend begins to change and is completely confirmed at the end of the second day, where the rally fails to make a new high for the move. Within a few days, the reversal continuation accelerates. Of course, there are more strategies to consider immediately following completion of this initial reaction but the Serial Reversal does help to define proper expectations regarding immediate reactions of clear harmonic levels.
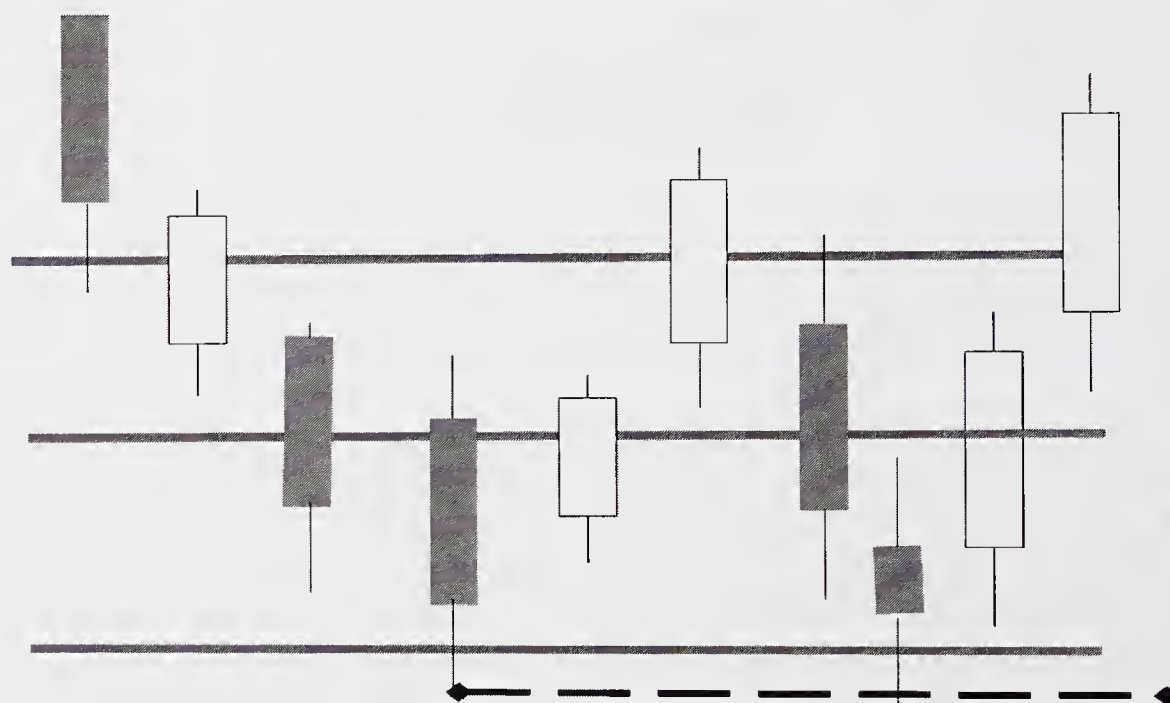
Divergent Reversal

One of the most powerful methods to analyze price action is the ability to ascertain those reversals that require extra consolidation at the pattern completion point while still signaling a valid opportunity. It is common to witness a final price

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divergence in the PEZ where a retest of the TBar extreme marks an important confirmation of the harmonic level.

The gamut of divergence analysis in price action, sector analysis and other relative measures is a broad but powerful approach to compare material variables that can validate important turning points in the financial markets. When it comes to price action, there are many instances where a small series of individual trading points forms a "micro-mechanism" that consolidates as it retests important short-term points of resistance and support. The divergent reversal requires that price action establish an initial range that experiences a brief consolidation to retest the limits of these parameters. The divergent reversal is strictly a price mechanism that precedes more substantial moves. This is a basic concept but it has profound insights when applied to more advanced situations. We will get into this later in the material but it is important to recognize that that these price movements represent a type of cyclical mechanism within the larger trend to highlight those price levels that exhibit behavior that has established technical price levels that can mark the beginning of a substantial change character of the current trend.

Bullish Divergent Reversal

The Bullish Divergent Reversal involves a process of multiple price bars establishing, retesting and ultimately confirming a particular harmonic support level that stabilizes a downtrend. In most cases, the divergent reversal will provide more complex sequence of individual price bars that represents a more significant cyclical turning

point. After establishing an important low that is usually preceded by a steady decline, price action will usually require a few individual intervals to stabilize the downtrend. Although the degree of this consolidation can vary, it typically unfolds within a 3-5 price bar window following the completion of pattern. The following chart of the Euro/Dollar on a 15 – minute chart show distinct Bullish Crab pattern that required a secondary test. After the initial reaction, the price action retested the entire harmonic support and initial point of the first reaction.
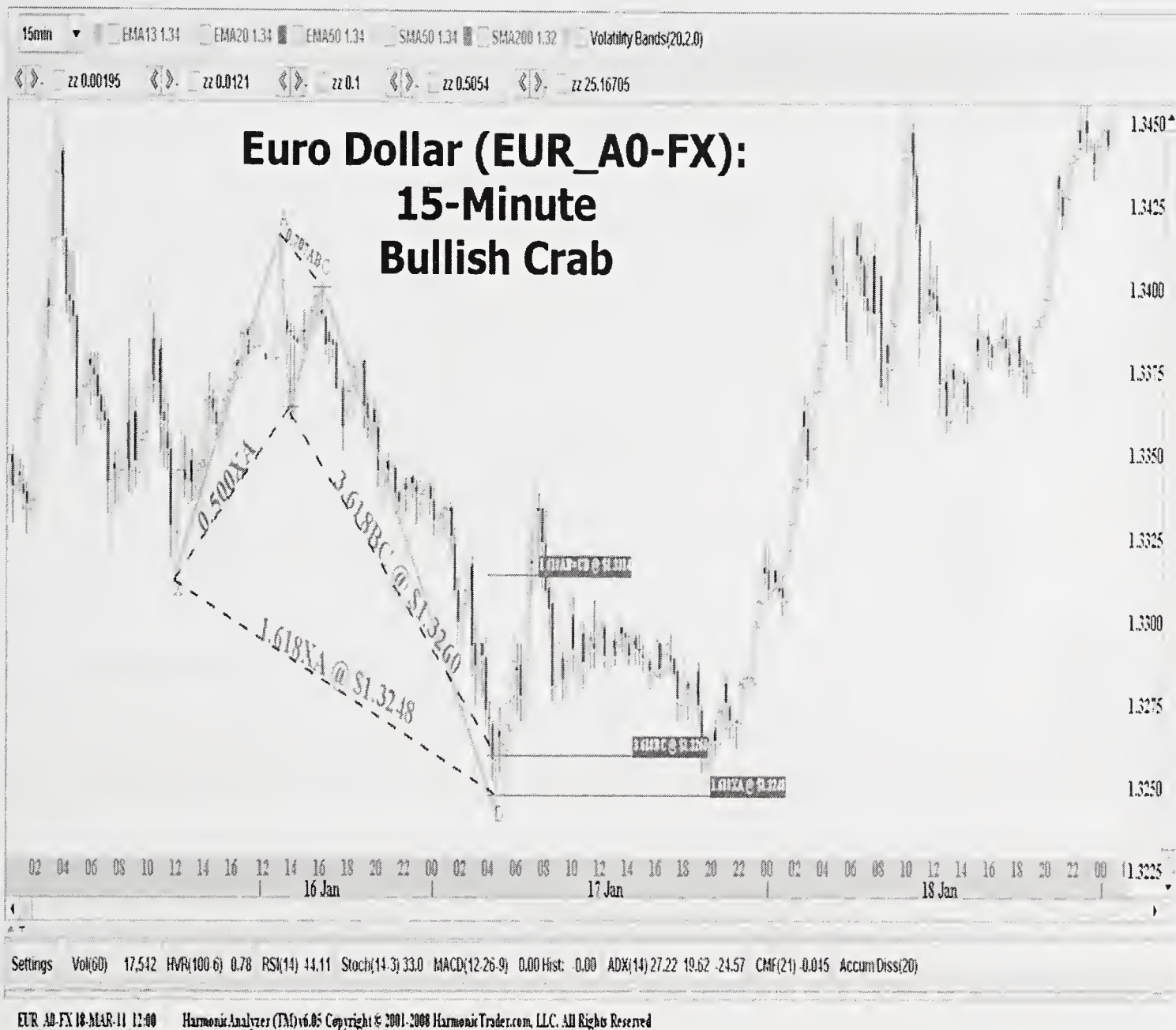
The following chart shows the price action in the potential reversal zone. The Bullish Crab was a distinct pattern that experienced an initial reaction at the completion of the pattern but required a secondary test before a larger reversal could unfold. The support that was established by the initial test was confirmed with a retest of the lowest

measured at the ideal harmonic support. In fact, this was an exact retest but it is common for divergent situations to nominally exceed the initial level. The key characteristic of this retest is to optimize executions based upon the Terminal Bar extreme and anticipate a slight violation before a larger reversal can ensue.
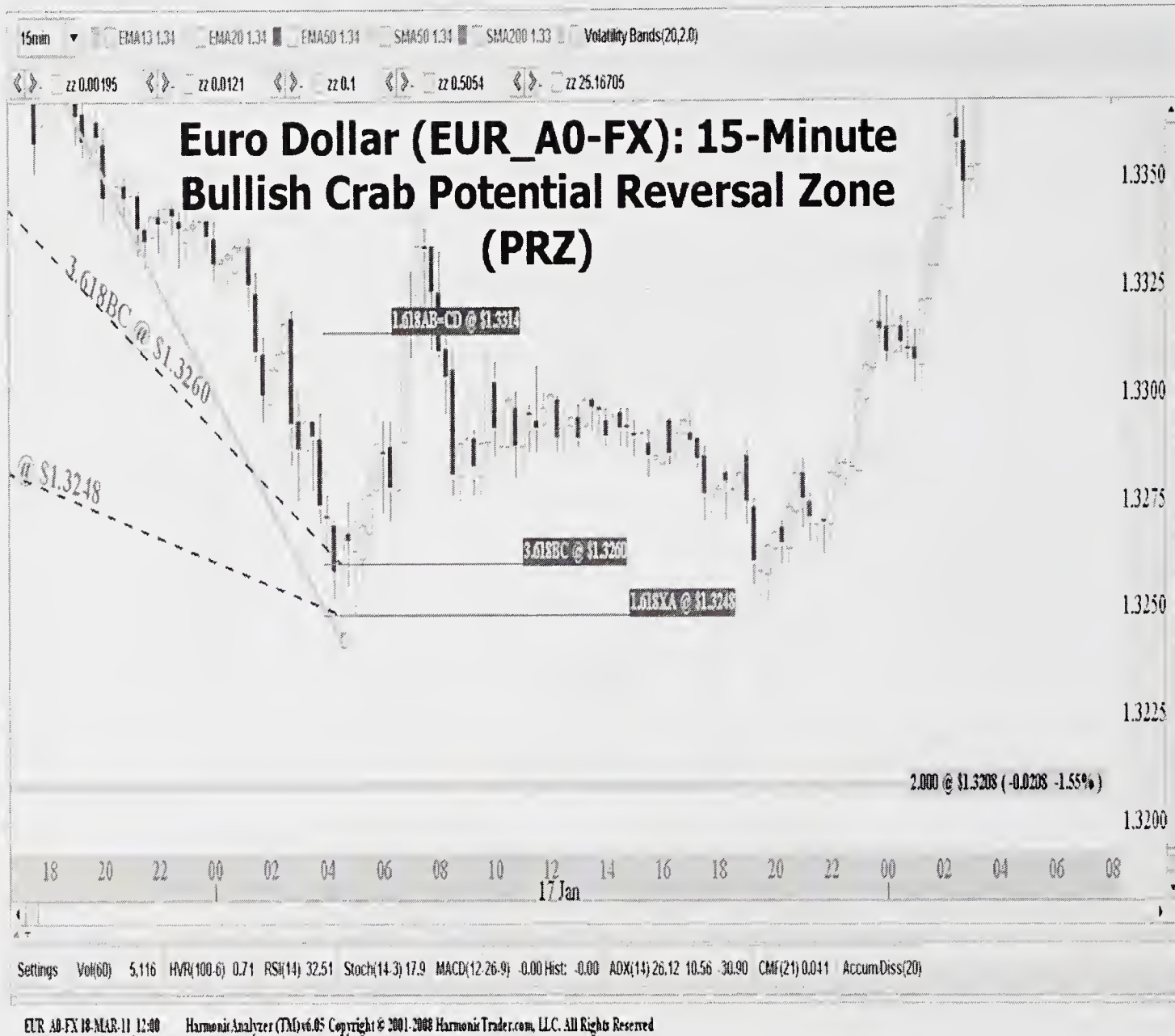
## Bearish Divergent Reversal

The Bearish Divergent Reversal is quite common in those pattern completions that require several price bars to resolve the overall resistance zone. Typically, the Terminal Price Bar will be established on the initial test of the Potential Reversal Zone. Following a brief reaction, the follow-through beyond the first few price bars will

typically experience a pausing behavior that trades within the limits of the Potential Reversal Zone. After this brief consolidation, the retest of initial peak will typically fail and exhibit accelerated bearish behavior thereafter. The real challenge in this type of reversal can be overcome by monitoring the tight consolidation within the limits of Potential Reversal Zone.   Depending upon the results of the immediate secondary retest, the full effect and potential of the bearish divergent reversal can be realized shortly after the initial Terminal Price Bar has been established. In combination with larger pattern measurements and other confirmation strategies, this simple price mechanism acts as a confirming variable to substantiate price levels as an absolute technical event.
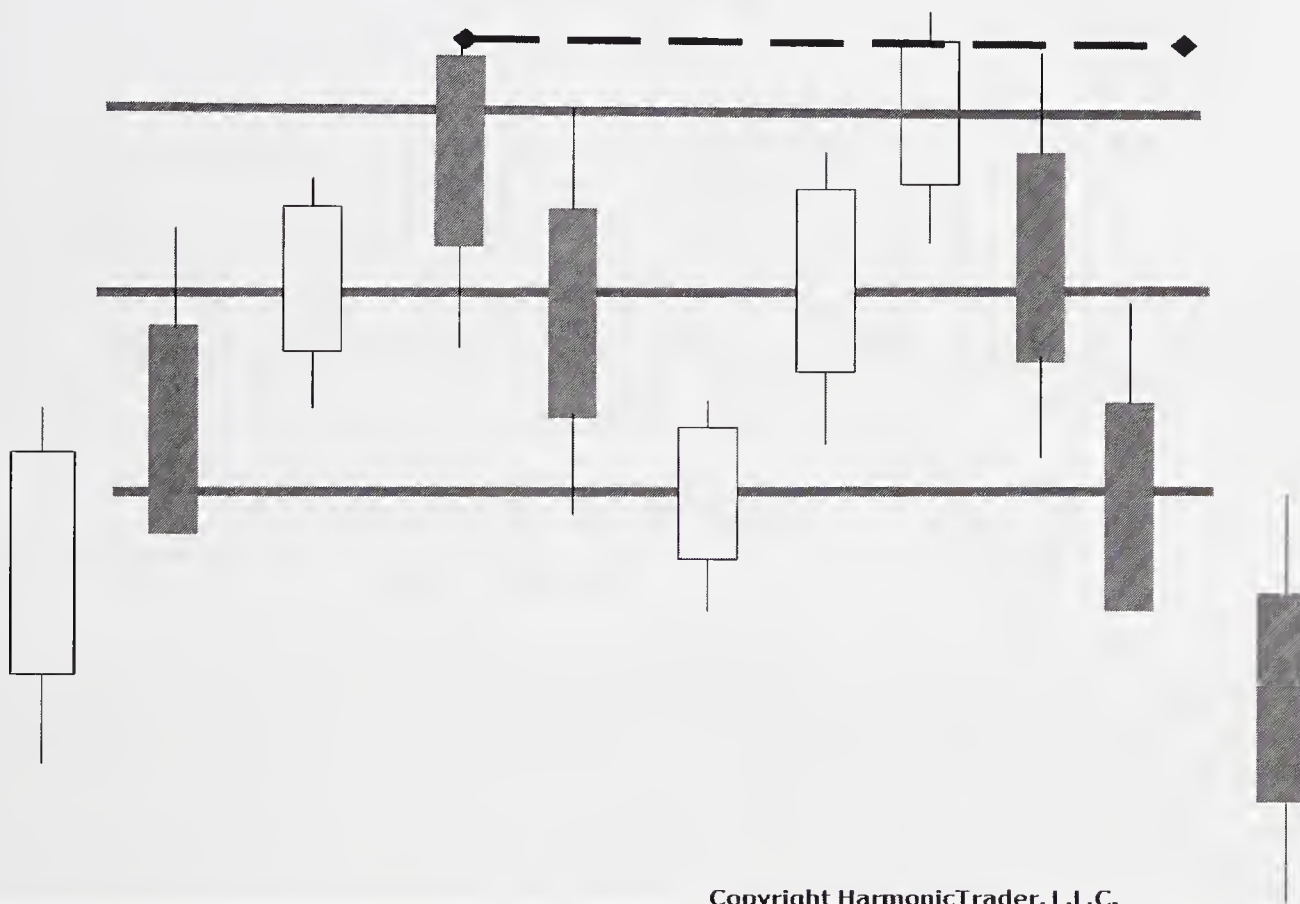

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It is interesting to note that the following chart of the Euro/Dollar exemplifies this type of divergent price move before the acceleration of the substantial reversal. This formation can be tricky to trade because the retest can make it seem that the pattern is about to fail. However, this is when a prepared trading plan identifies reversal types and exact price limits IN ADVANCE that optimize decisions to handle situations properly. In this case, the price action stalled immediately after completing the pattern. After a brief reaction, the price retested the Potential Reversal Zone and confirmed the harmonic resistance by immediately rolling over after hitting the T-Bar extreme
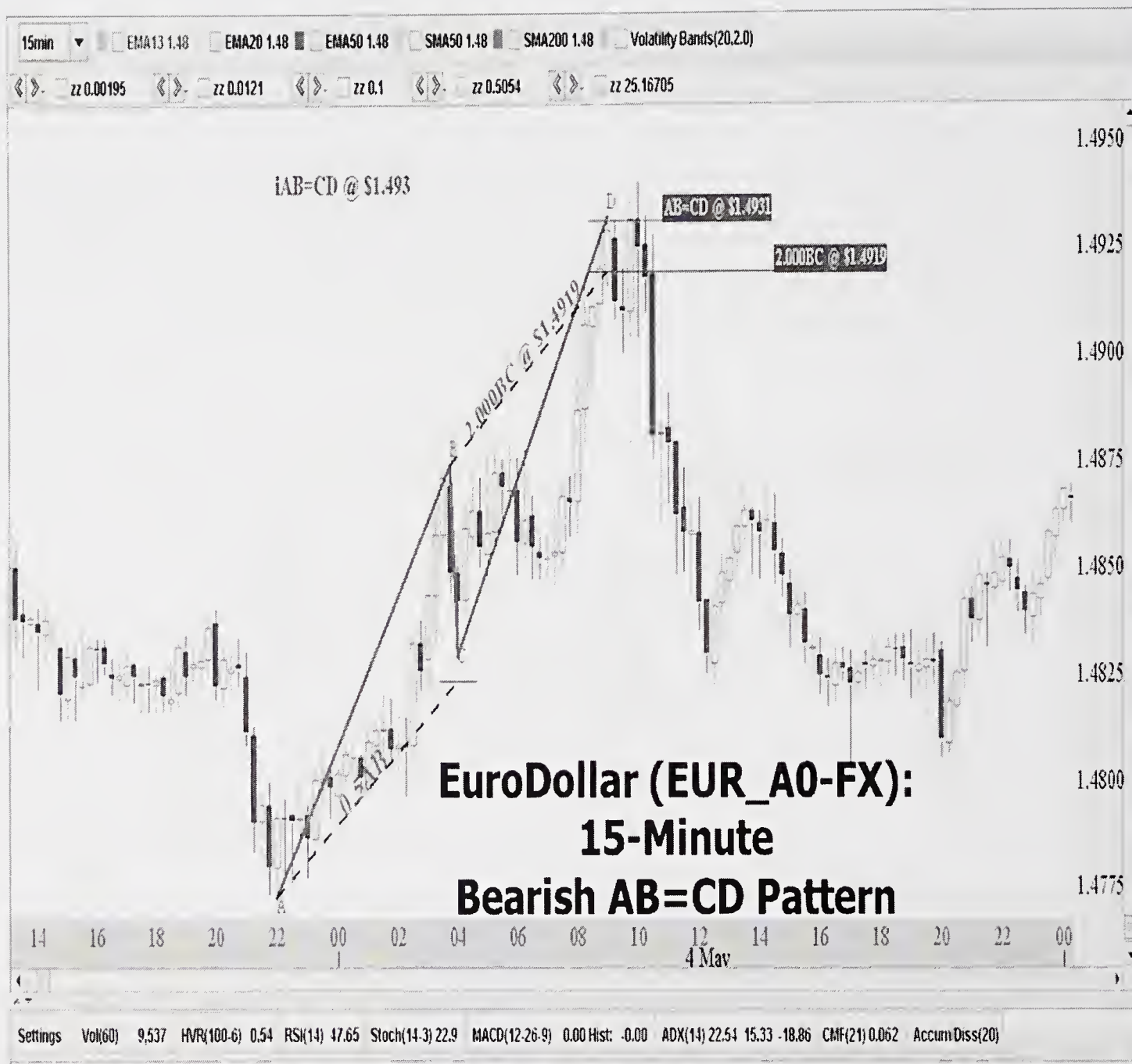
Harmonic Trading Volume 3: Reaction vs. Reversal

EuroDollar (EUR_A0-FX):
15-Minute
Bearish AB=CD Pattern

This is an ideal example of a divergent consolidation. This is a common phenomenon in many harmonic reversals that can be confusing, especially in the initial stages of the pattern completion. In fact, divergent reversals can lead to a more substantial move due to the failed retest that they encompass. The following chart of the price action in the potential reversal zone exemplifies this situation. The harmonic resistance defined the 1.4930 level as the top range that immediately capped the intraday rally. Within five price bars after the completion of the pattern, the reversal accelerated sharply.

EuroDollar (EUR_A0-FX): 15-Minute Bearish AB=CD Pattern Potential Reversal Zone (PRZ)
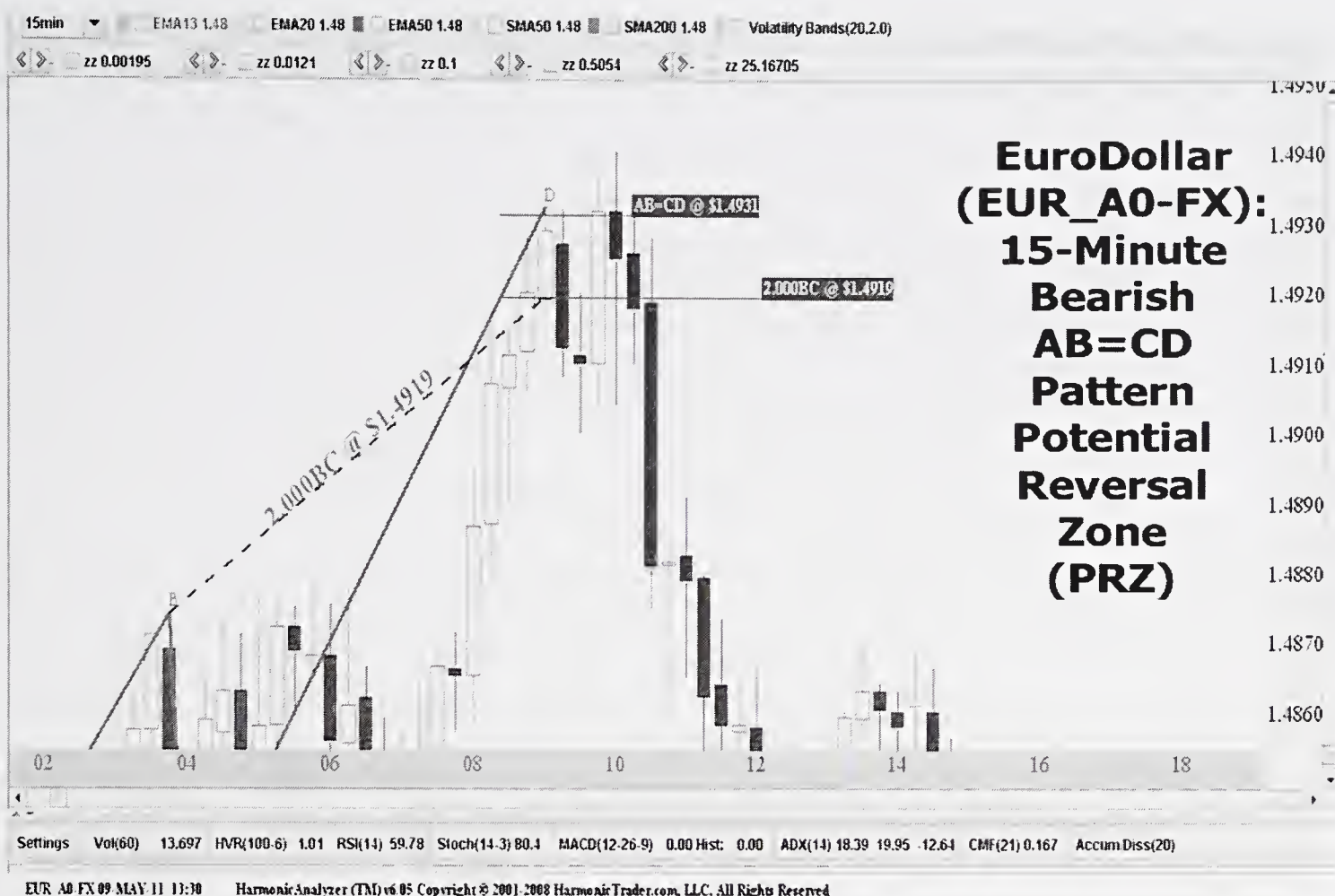
Type-I Reversal

One of the most profound advancements in my discoveries with harmonic patterns was not apparent to me until several years after the release of my second book. I had successfully outlined a system of harmonic patterns with precise rules but the execution parameters and categorizations lacked a thoroughness and clarity that the identification rules possessed. At first, I spent quite a bit of time monitoring common traits and repeating characteristics that were observable with the most significant harmonic patterns. Eventually, I recognized that harmonic patterns endured their own process beyond the point of completion. I realize there was an enormous difference in the potential for a profitable move if price action was completing the first time as opposed to a secondary retest. Furthermore, the initial pattern completion typically required several confirmation elements to reliably validate situations. The Type-I initial pattern completions frequently manifest a character in the price action that changes course aggressively from the Potential Reversal Zone (PRZ) was sharp and experience volatile countertrend behavior. Although these are excellent opportunities, they must be handled a bit more aggressively and automatically. In fact, the price reaction following the completion of the Terminal Price Bar typically reach for predetermined targets before retesting the entire pattern completion point.

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A Type-I completion is a unique event within Harmonic Trading. The first time that price action tests a distinct harmonic pattern is the most important consideration of the entire structure. The Terminal Price Bar is the basis for any execution of a harmonic pattern. The price action immediately following the Terminal Price Bar provides immediate and accurate insight to what might occur beyond completion point. When assessing the Potential Reversal Zone (PRZ) of the pattern in relation to the Terminal Price Bar, the most important aspect of the situation can be determined within a very small window relative to the total price being considered. Although some may argue that the weighting of certain data might be biased, especially since all price history must be considered, the individual data immediately following the completion point of any pattern will determine its validity.

The immediate completion of the pattern defines the Type-I reversal. That is, all price action will exhibit some type of reactive move at the completion of a valid harmonic pattern. This necessitates that harmonic patterns are measured properly. In addition, the ability to define the Terminal Price Bar is equally important, as it will determine the Permissible Execution Zone. In most cases, price action that violates the Potential Reversal Zone (PRZ) will negate the pattern signal. Ultimately, it is within this window of opportunity that determines success or failure.

Type-I Reversal Trade Management Considerations

The effectiveness of harmonic patterns can be quite impressive. A common experience of many new traders is to measure a harmonic pattern, execute at the completion point and experience a quick profitable reversal. Unfortunately, this move is frequently not sustained and the initial profit can be short-lived. The understanding of these types of reversals go a long way in optimizing the trade management of these situations, as well. A more aggressive execution and trade management strategy must be employed in these situations. In fact, a secondary test should be expected in most harmonic pattern situations before a larger reversal can take hold.

A Type-I reversal involves price action that is testing a Potential Reversal Zone the first time. After the reversal extreme is established, price action begins to initiate a counter-trend direction (T-Bar+2,3) without retesting Potential Reversal Zone (PRZ). Although there may be some consolidation after Terminal Bar has been established, the immediate and clear continuation must be demonstrated within 3 to 5 price bars no matter to provide those early signs of confirmation. This is one of the singular most important events that must occur to get any harmonic pattern reaction to manifest into a larger reversal. Since the Type-I reaction is typically an immediate pattern reversal, there are predetermined strategies and preferences that are required for each situation to establish the limits of the opportunity. Since these reversals are really quick and demonstrative after completing the pattern, they usually experience the narrow time window to enter the trade at the optimal level. The focus must be on the Terminal Price Bar to execute immediately thereafter, as long as Stop Loss and Automatic Profit Targets define trade parameters in advance.

*Harmonic Trading Volume 3: Reaction vs. Reversal*

I will be talking about various strategies later in this chapter but to know when to take profits aggressively versus when to allow more time for these situations to resolve themselves. In general, the Type-I reversal requires an aggressive approach with automatic profit objectives established at the predetermined ratio measurements of 38.2%&61.8% as measured by the pattern. Again, I will review this chapter regarding advanced trade management strategies but it is essential to emphasize that Type-I trades must aggressively close positions at predetermined profit target levels as an automatic strategy to capitalize most effectively on the nature that this pattern type encompasses.

Type-I Bullish Reversal
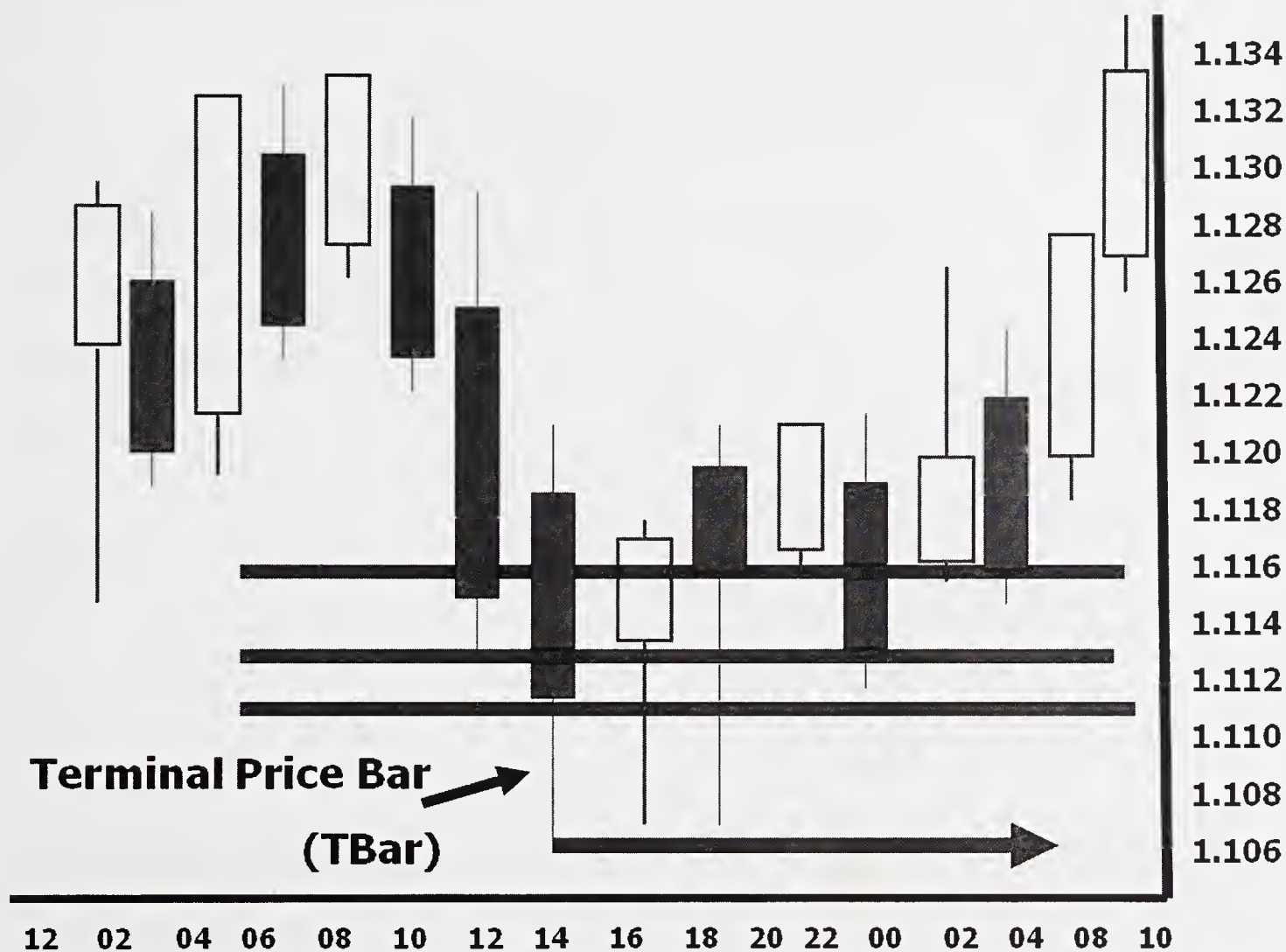
The Type -1 reversal requires a degree of preparation in order to capitalize on the situations. Sometimes, price action can quickly trade through the harmonic support area, reverse and not offer a great deal of time to get in on the position. I recommend setting automatic price alerts as the Potential Reversal Zone (PRZ) is being tested in order to stay on top of these situations. An interesting note about the analysis of Type-I

Harmonic Trading Volume 3: Reaction vs. Reversal

reversals relates to the significance of the immediate price action following the Terminal Price Bar. There are not too many situations where the first few ticks following the completion of a pattern are so significant relative to a much larger data set. The following chart of the AUD/USD exemplifies the Type-I reversal behavior.
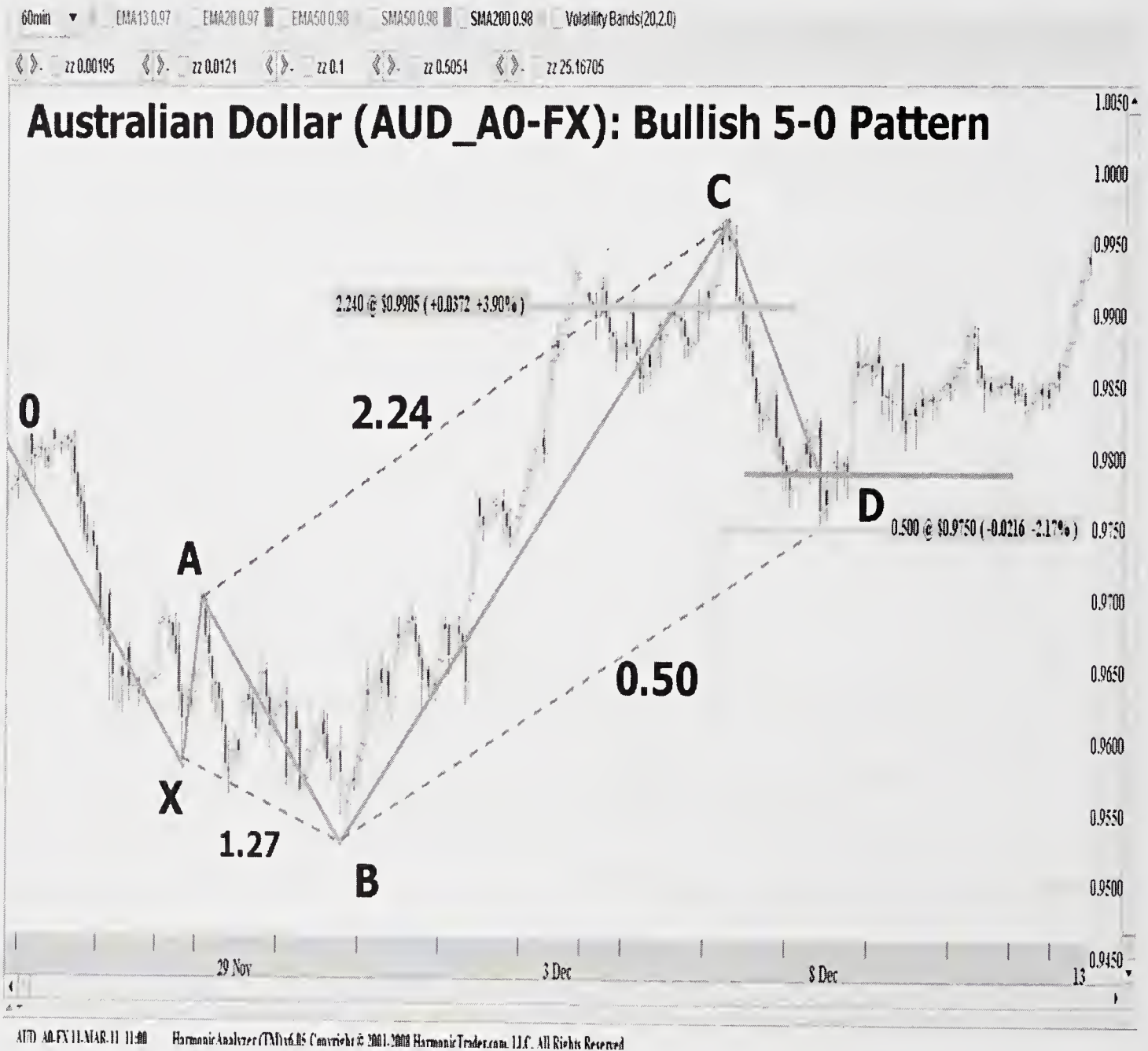
The following chart of the price action in the PRZ exemplifies the true nature of a Type-I bullish reversal. The price action reversed immediately after testing the low range of harmonic support. The 5-0 pattern reversed exactly at the 50% retracement at the 0.9750 level despite a final volatile sell-off. Regardless, the immediate stabilization marked the early price confirmation for the setup.
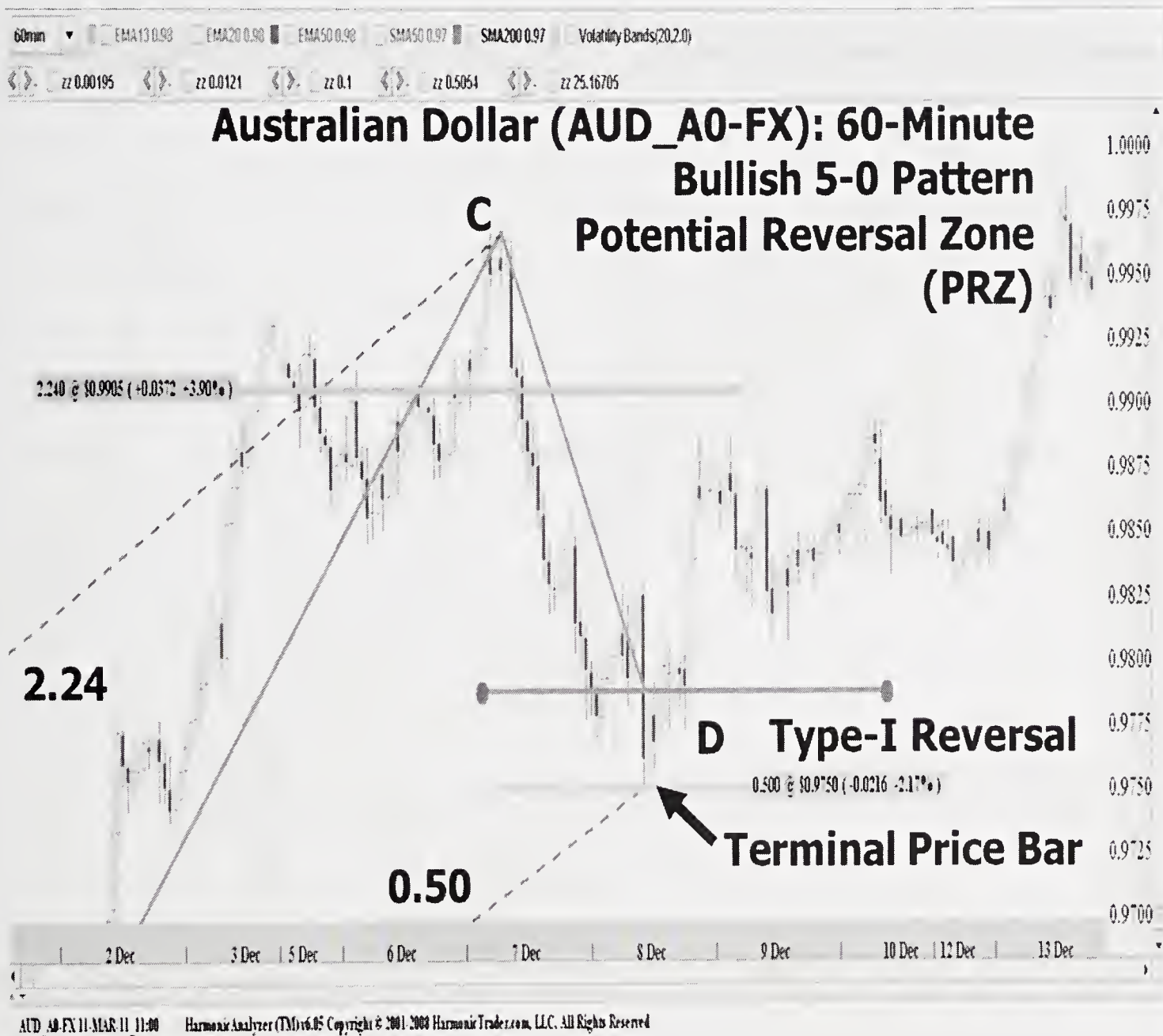
Type-I Bearish Reversal

The Type-I Bearish Reversal is defined by what happens after the Terminal Price Bars has been established. The key technical event that must occur is some type of individual resistance at the numbers defined by the pattern where each price bar fails to move higher above the Terminal Price Bar and begins to slowly roll over
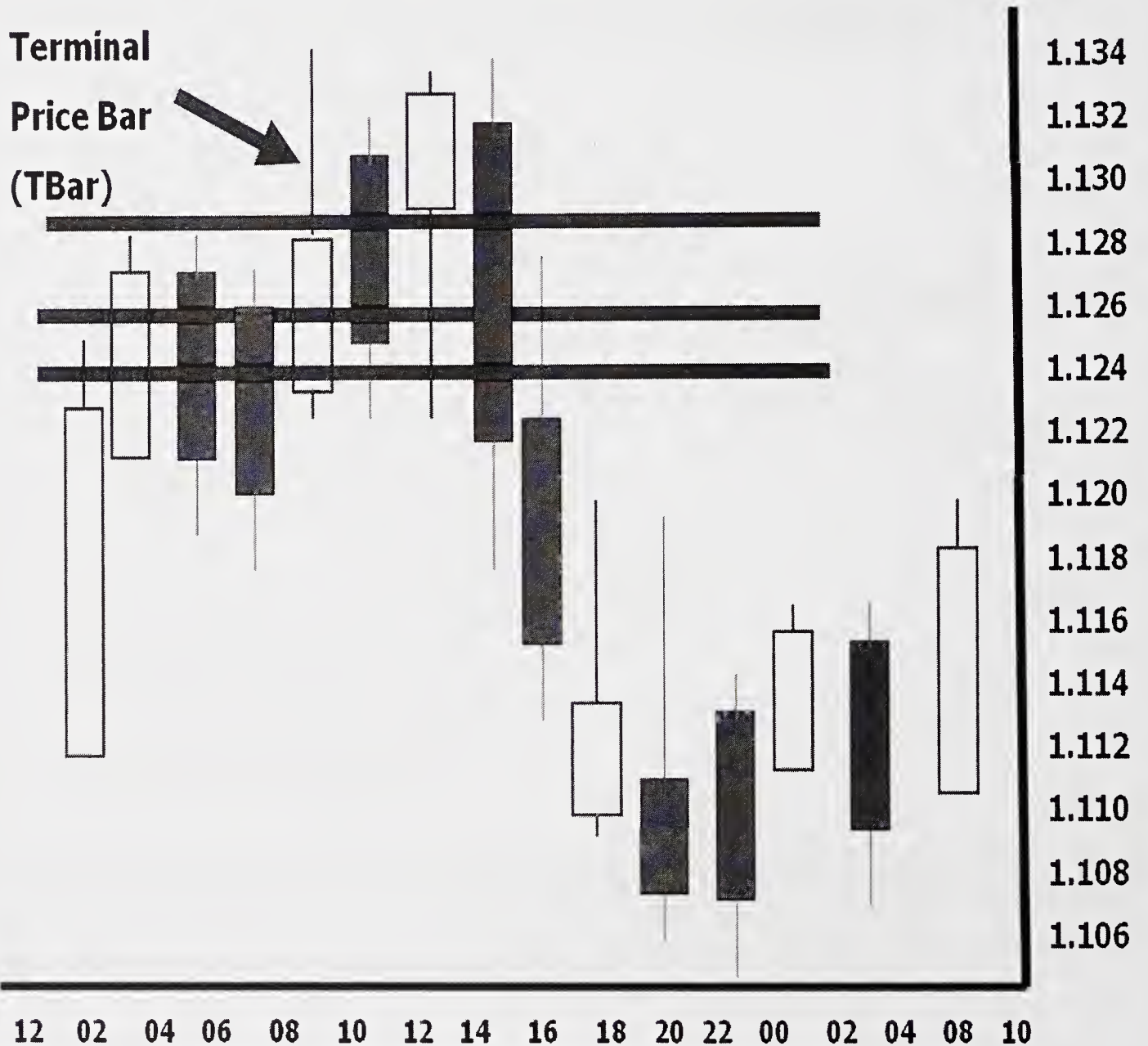
The following example of the British Pound/Japanese Yen on the 5-minute chart demonstrates the characteristics of a Type-I reversal. The price action stalled immediately after testing all of the numbers in the PRZ. This defined harmonic resistance in a tight area between 156.50 – 156.60 on the intraday chart.
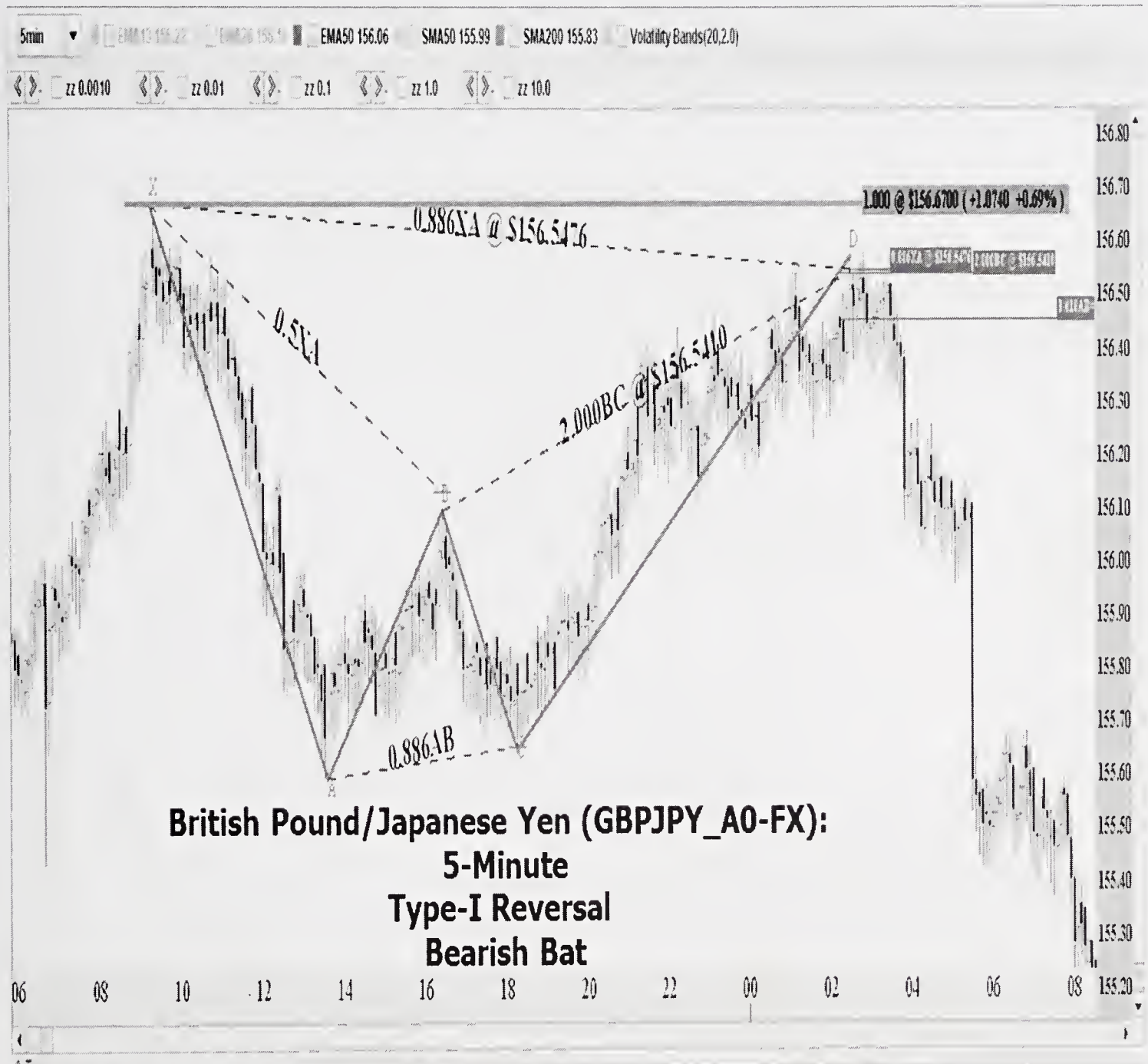
British Pound/Japanese Yen (GBPJPY_A0-FX):
5-Minute
Type-I Reversal
Bearish Bat

The price action in the Potential Reversal Zone possessed the ideal individual behavior to signal an early confirmation. These are the common characteristics of an immediate Type-I reversal. Sometimes, it can be advantageous to simply wait for an individual price bar confirmation following the completion of the pattern. Price action that materializes in the PRZ in the direction of the anticipated pattern can serve as one of the first signals that the opportunity is valid.
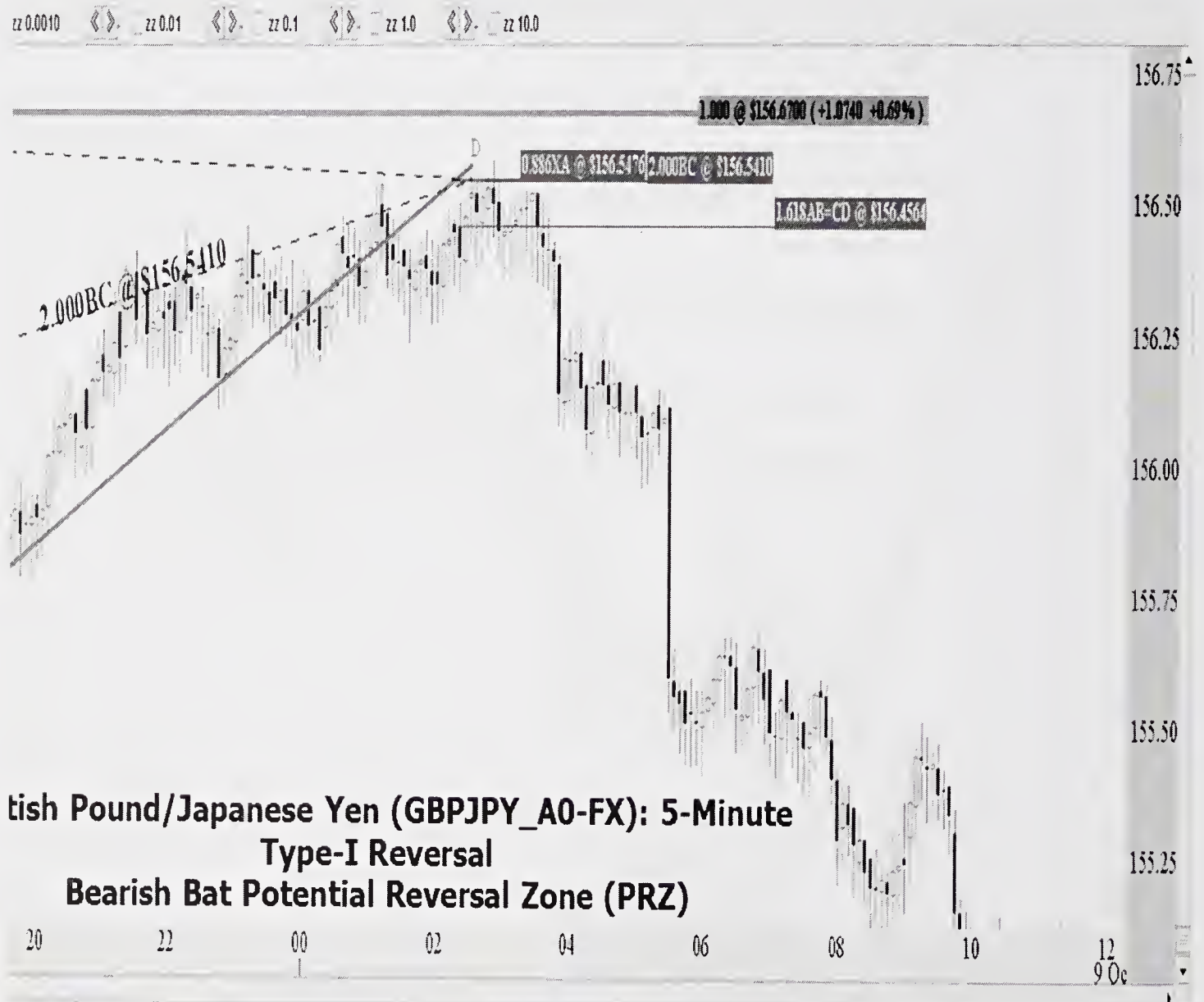
British Pound/Japanese Yen (GBPJPY_A0-FX): 5-Minute
Type-I Reversal
Bearish Bat Potential Reversal Zone (PRZ)

Type-II Reversal

The Type-II reversal is an entirely separate technical entity retests the PRZ. In doing so, the Type-II reversal establishes its own Terminal Price Bar. The same confirmation strategies are as well as the execution strategy of entering position after Terminal Price Bar has completed. The combination of a secondary smaller pattern that forms between the Type-I and Type-II completion points is typical. When these situations occur, the smaller pattern is typically firming the initial structural readings of the Type-I reversal.

Bullish Type-II Reversal

The Bullish Type-II reversal will typically unfold after the initial profit targets of the Type-I have been realized. Regardless of the Type-I reaction, the secondary test must focus on the exact point where the price action reenters the original reversal zone. Once price action tests this area, the execution is considered as a live trade opportunity.

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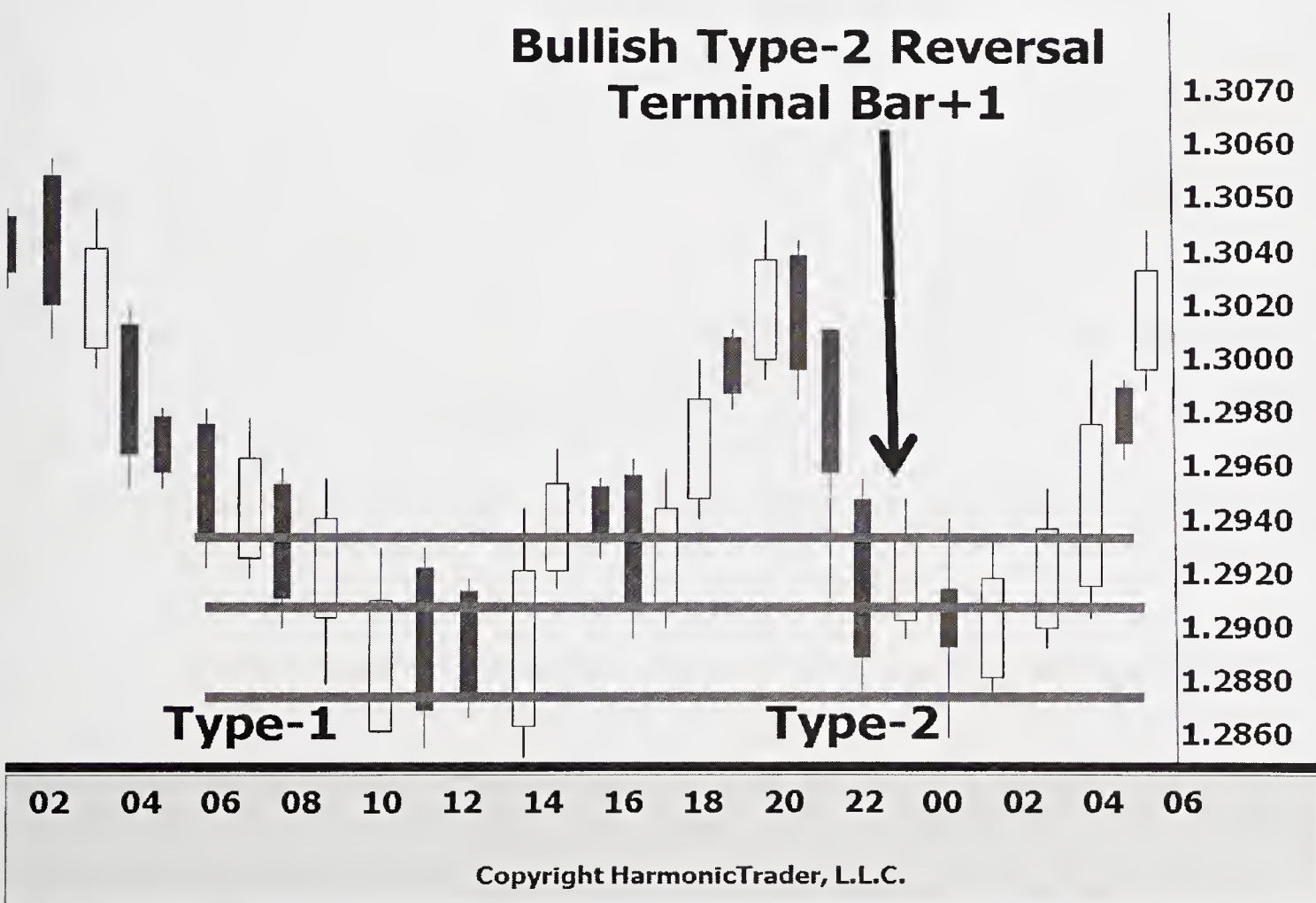
The following example of the Canadian Dollar/Japanese Yen shows the ideal scenario of the Type-I and Type-II harmonic reactive phenomenon. The expectations of the Type-I reversal are short-lived and managed with aggressive tactics. The Type-II reaction requires more time and will typically be the scenario that has the greatest potential for a larger reversal due to confirmation nature of the secondary test.

Canadian Dollar/Japanese Yen (CADJPY_A0-FX): 15-Minute Bullish Deep Crab Type-2 Reversal
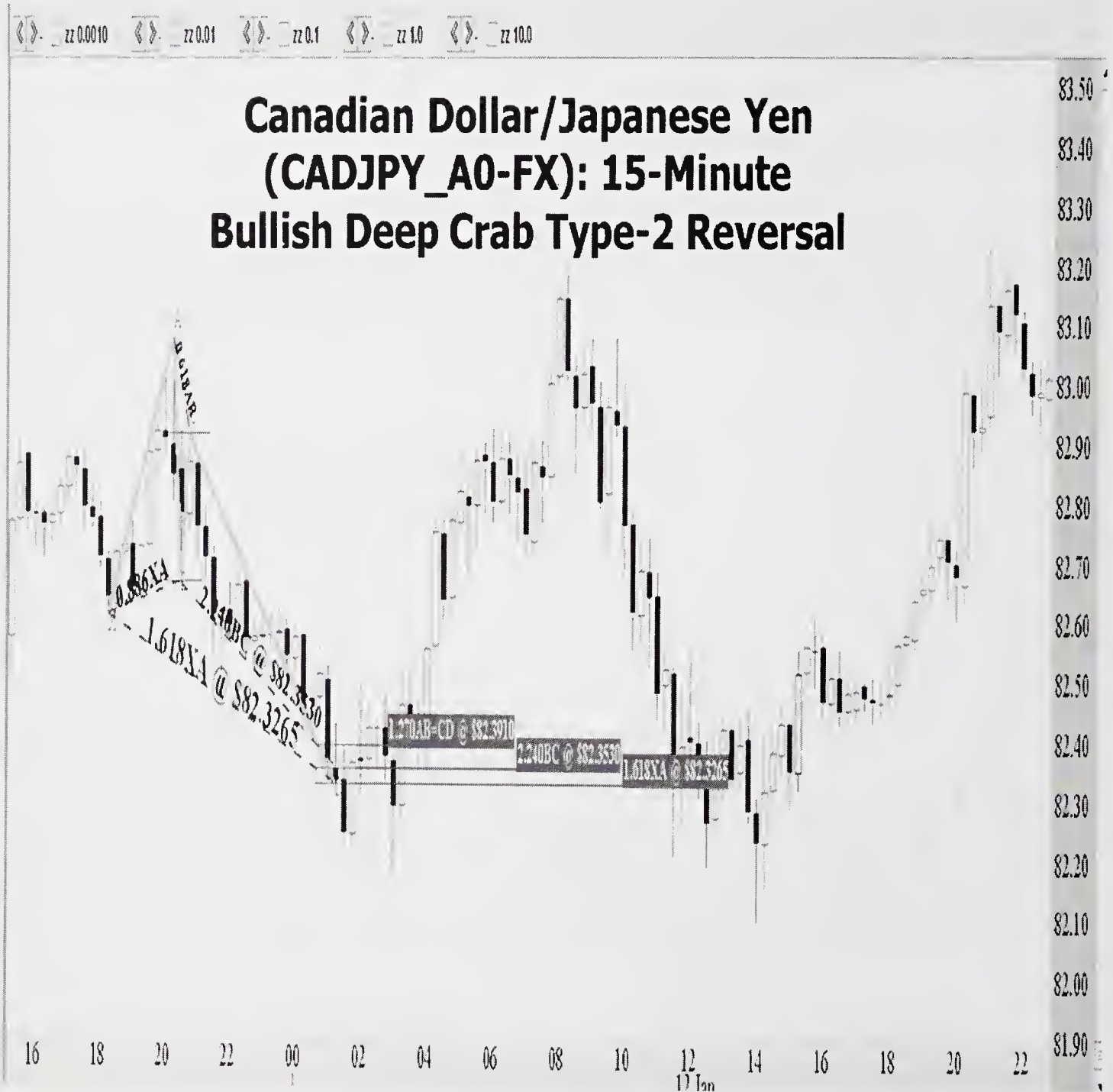
On the second retest of the original Potential Reversal Zone, the price action stabilized immediately at the harmonic support. After some consolidation, the reversal rallied sharply and continued well above the initial 38.2% & 61.8% profit objectives. It is important to note the primary uptrend was sustained as it surpassed these targets.

Canadian Dollar/Japanese Yen (CADJPY_A0-FX): 15-Minute
Bullish Deep Crab
Potential Reversal Zone (PRZ)
Type-2 Reversal

0.618 @ $82.7451 (+0.5321 +0.65%)

0.382 @ $82.5419 (+0.3289 +0.40%)

AB=CD @ $82.3910
2.240BC @ $82.3530
1.618XA @ $82.3265
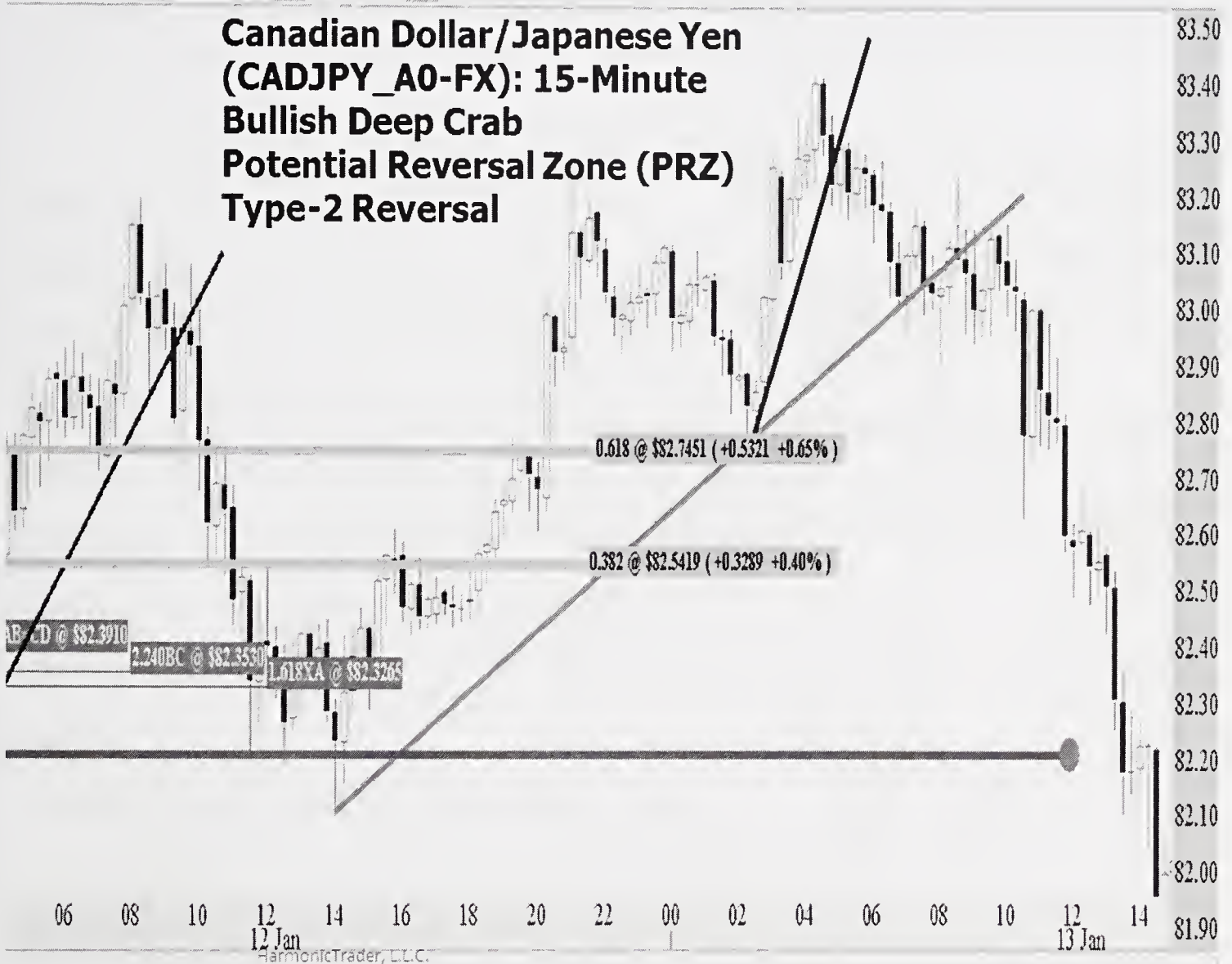
In Type-II situations, it is important to allow more consolidation as the reversal exhibits its continuation. Typically, the Type-II reversal will be managed by this primary trend, as the position is covered when there is a trendline violation. Although I always recommend that a portion of any position automatically be secured at a predetermined profit objective, the optimal management in this situation dictates that the position be held until the uptrend is violated.

Bearish Type-II Reversal

The Bearish Type-II reversals are frequently associated with a secondary test that slightly exceeds the initial peak. After the Type-I reaction has completed, the eventual retest will establish a "Type-II Terminal Price Bar" after testing all the numbers of the original Potential Reversal Zone. Once this occurs, the price action following this completion point should be demonstrative reversal trend direction.

Bearish Type-2 Reversal
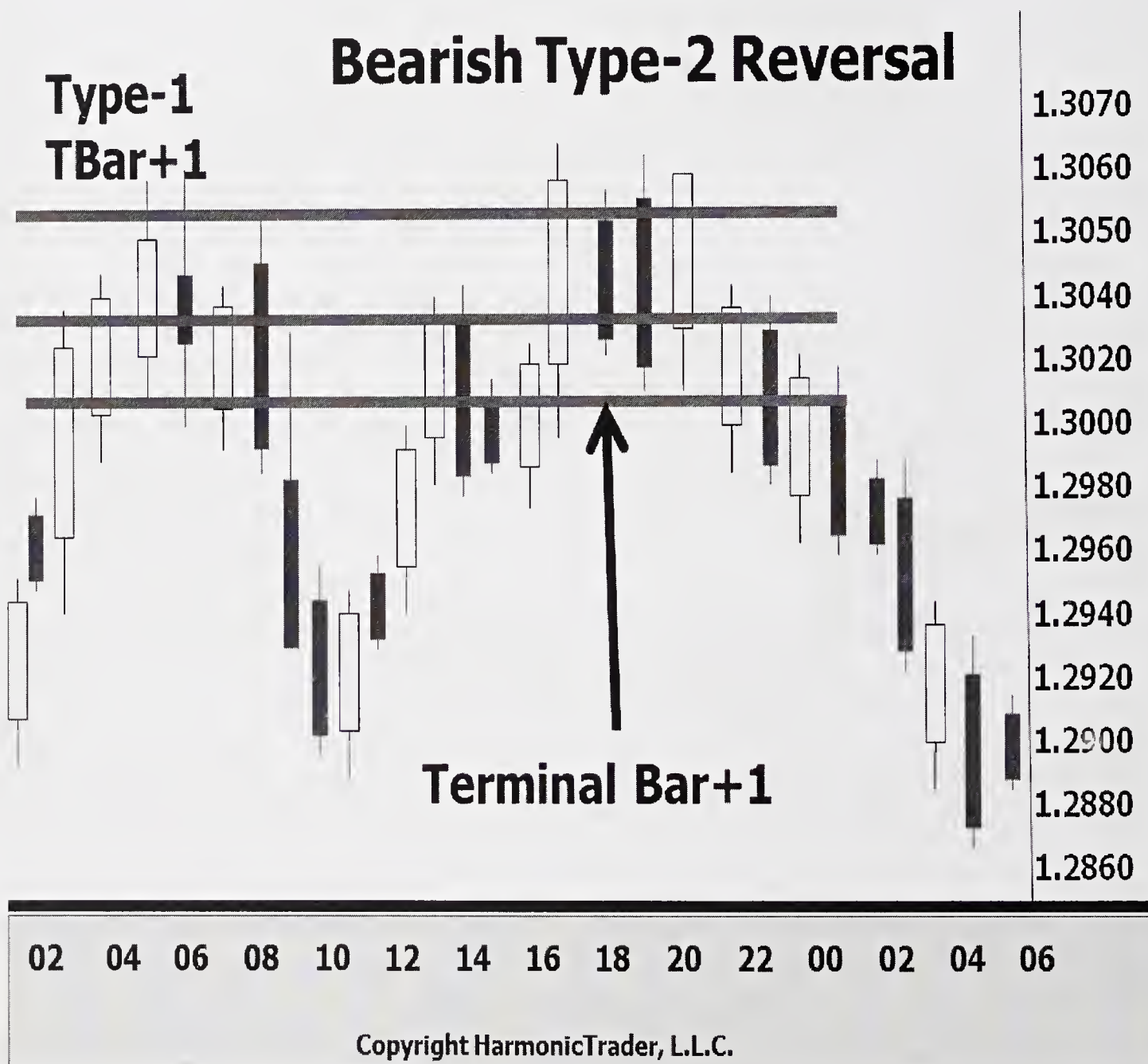
The following chart Swiss Franc/Japanese Yen demonstrates the Type-I /Type-II phenomenon. The Bearish Gartley on the 60-minute chart experienced reaction on the initial completion of pattern. After the initial reaction was complete, the secondary test reversed violently after reentering the original Potential Reversal Zone. These situations can be difficult due to the volatility but the Harmonic Trading plan defines these price objectives in advance while the recognition of reversal types facilitates decisions effectively even in the most reactive of environments.
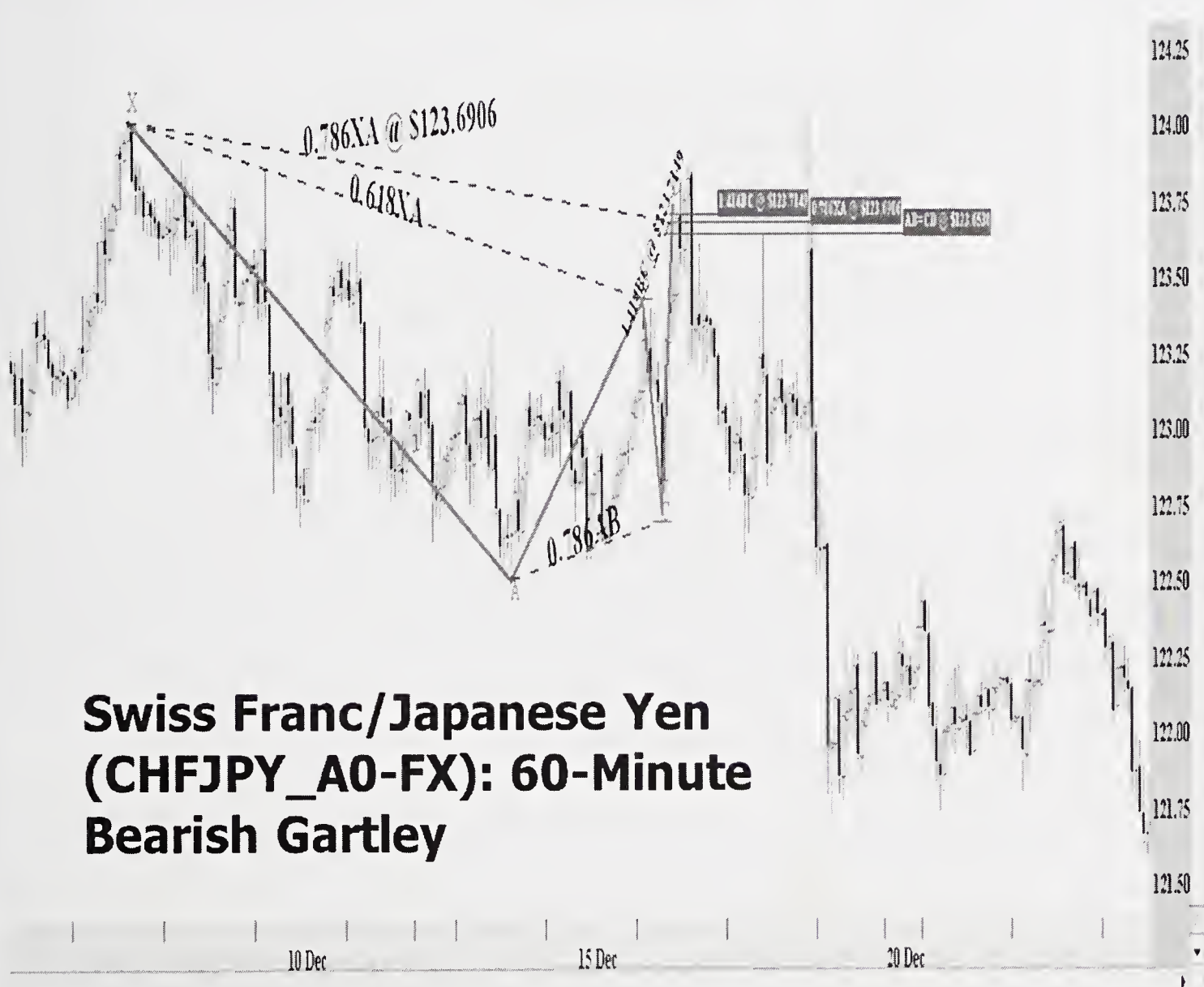
Swiss Franc/Japanese Yen (CHFJPY_A0-FX): 60-Minute Bearish Gartley

Swiss Franc vs. Japanese Yen (CHF/JPY): 15-Minute Bearish Gartley Type-2 Reversal

AB=CD @ $123.₅530

0.382 @ $123.3468 (-0.5172 -0.42%)

0.618 @ $123.0272 (-0.8368 -0.68%)

17 Dec   18 Dec   20 Dec   21 Dec   22 Dec
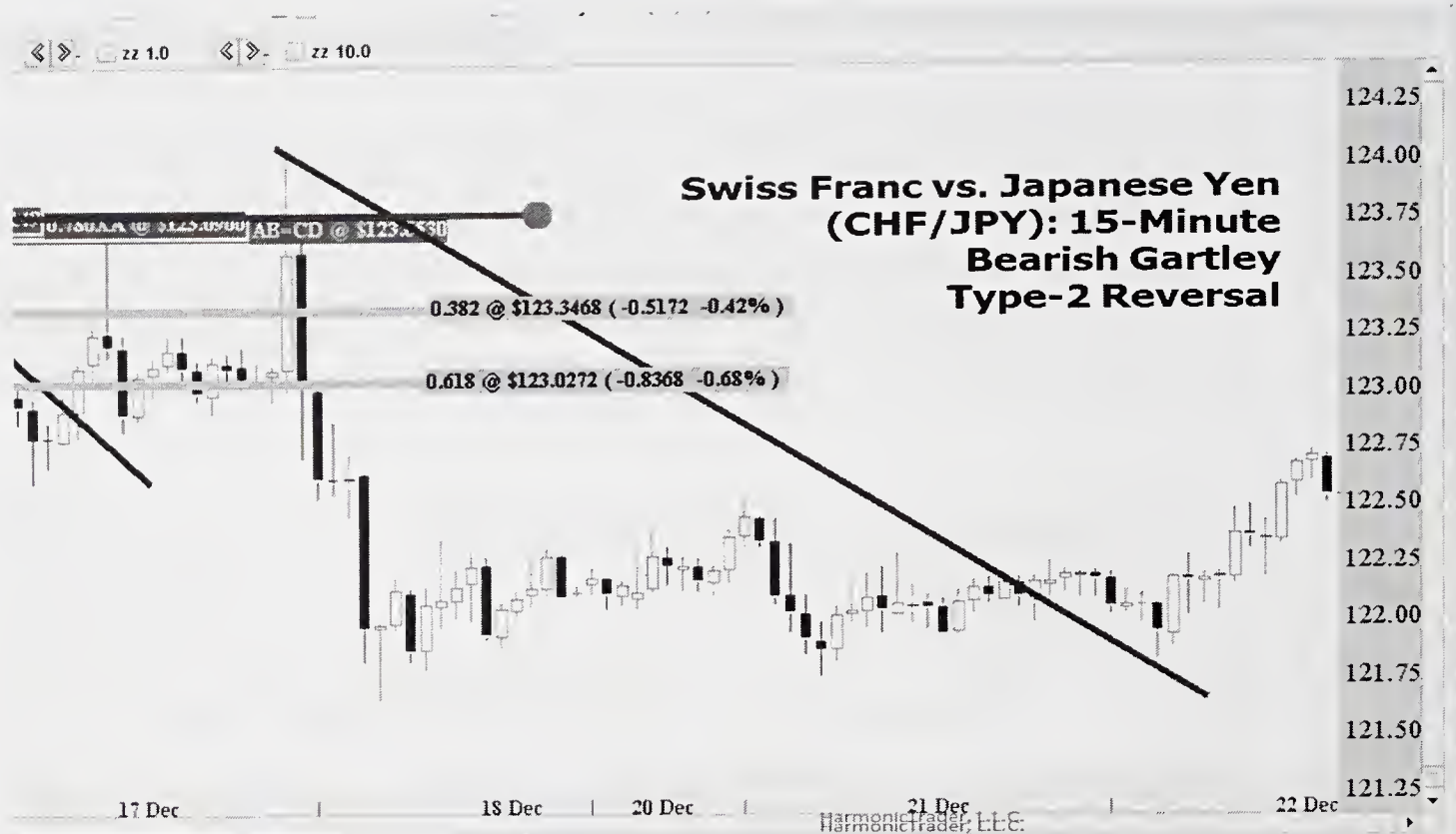
Harmonic Trading Reversal Types Conclusion

As I've outlined in this material, there are clear differences between immediate reversals and those that require consolidation. This distinction has created an effective means to quickly recognize those opportunities that will provide an immediate and clear reaction as opposed to those that will take longer to materialize. Furthermore, the basic understanding of the natural harmonic reaction most structures experience dictates the importance of categorizing whether the pattern is completing for the first time or a secondary retest of the established price level.

These are guidelines that took years of research and tinkering to truly define the consistent characteristics that facilitate the analysis of a reversal from a harmonic pattern. These are a few more examples of the types of measurements outside of the structural considerations that are essential part of converting patterns into profits. Although there will be some differences depending upon market and time interval, these strategies are uniform and apply to all situations that may be encountered. The most important take away from this material is that harmonic pattern reversals must provide demonstrative confirmation shortly after the completion of the measured levels to validate the opportunity. Although this window of execution can be truncated, the clear confirmation signals within the context of the reversal type provide the accurate insights required to make consistently effective decisions, especially in those trading environments that can be overwhelmingly confusing.

Chapter 5:
Advanced Indicator Analysis in Harmonic Trading

When I first released the pattern identification rules, I was exclusively committed to the study of price action. Other than looking at basic Volume readings, most of my research focused on the combination of price structures. Actually, this was more than enough material to research to be able to break down the various pattern categorizations. I was able to advance the methodology by distinguishing price action phenomenon and general expectations that were consistently observable after the completion of a pattern. As I continued to explore other perspectives on price action strategies, I would frequently come across individual traders who relied on indicators such as Stochastics, MACD, ADX and others. Knowing that I only needed to find those technical measures that provided signals at the completion of the pattern, I was able to quickly eliminate most technical indicators. They simply did not possess the inherent qualities to measure price behavior as it related to harmonic movements. I was aware of the Relative Strength Index for quite some time before buying Welles Wilder's book, *New Concepts in Technical Trading Systems*. Although this book was somewhat short and filled with mathematical equations, it was the foundation for modern technical indicators. In fact, Mr. Wilder is probably the forefather of technical indicators in general due to the number of strategies he released in that book. He has become known for other ideas including his Delta Cycle.

My interest in any type of measure that could provide insight of the unique zones of harmonic and support and resistance provided me a foundation of what variables to discover. The Relative Strength indicator seemed to most consistently provide me those signals. As I researched it further, I analyzed the individual components of the formula to understand how the indicator expresses the relative performance of an immediate average versus that of a trailing average of greater length. Simply stated, the indicator compares what is happening now versus what is happening in the past to define internal changes in price. It's ingenious concept. The formula identifies changing conditions that frequently precede major price moves. Once I understood its importance especially in relation harmonic patterns, I aggressively tinkered with structural identification and numeric classification. Much like the patterns, the indicator analysis evolved into a framework of expectations that facilitated decisions throughout the trading process. I was able to compare price movements with the relative degree of the indicator reading to more clearly ascertain the character of the market. For example,

the type of RSI readings defines the "environment" in which harmonic patterns complete. Such categorizations provided accurate and distinct expectations of probable future price action depending upon the indicator type. Although RSI readings are valid extreme triggers within ideal Permissible Execution Zones (PEZ), their analytical integration of the pattern defines the price level for anticipated reversal. The most important take away from all of this work was that harmonic pattern trade executions required clear indicator confirmation phenomenon to highlight the larger potential reversals from the minor reactions.

Relative Strength Index (RSI)

The Relative Strength Index (RSI) was devised as a means of calculating the change in momentum of price movement as it relates to a predetermined time period. The indicator does not compare the Relative Strength of two securities, but rather the internal strength of the price action of an individual issue. RSI is a price-following oscillator that ranges between 0 and 100 that typically peaks above 70 and bottoms below 30. The signal usually forms the readings before the underlying price action reverses.

Relative Strength Index (RSI) Formula

$$RSI = 100 - \{100/(1 + RSI)\}$$

$$\text{Relative Strength} = \frac{\text{Ave.\#ClosesUp}}{\text{Ave.\#ClosesDown}}$$

(#: Typically based upon a 14 period)

Coordinating Relative Strength with the Potential Reversal Zone

Harmonic patterns define the price level for an anticipated reversal but valid trade executions require a clear indicator reaction at an extreme area for the most effective means of confirmation. Ever since I initially presented these integrated strategies in *Harmonic Trading Volume 2*, the variables that define pattern opportunities have become more specific. Perhaps, a better word may be situational? Regardless, the advanced conditions that provide the most suitable environments for harmonic patterns are definable to a precise degree. As I discussed previously, the phenomenon of the price action as established by the harmonic pattern provides more reliable confirmation when distinct indicator readings confirm the structural signal. The key is to understand in advance which variables and measures must be compared and coordinated to unfold at the same time. Although these events occur simultaneously in the best confirmation situations, it is not common to experience a delay in price action especially in those situations where indicator signals early triggers of potential change trends. Regardless, there are a few standard comparisons that must be considered to realize these confirmation capabilities.

- **Coordinate Pattern Completion with an Extreme Indicator Reversal:** In these situations, we look for a reversal from the RSI extreme that matches up with the patterns Potential Reversal Zone. If there is a bullish pattern, the extreme indicator reversal from the 30 level should be realized as the price action is testing the harmonic support. If there is a bearish pattern, the extreme indicator reversal must rollover from the 70 level and decline as the price action is testing a bearish pattern.

- **Confirm Price Action:** Although unique structures and complex readings can define comprehensive market opportunities, there are many situations where the trend of the indicator can confirm the overall direction of price.

- **Differentiate Individual Indicator Readings at Extremes:** The type of indicator structure is important as well. These formations possess well-defined expectations that help to confirm pattern reversals and manage positions.

Two Types of RSI Extremes

The Relative Strength Index is an oscillator between zero and 100. Welles Wilder defined these limits in his book "new concepts of technical trading systems" 1978 and he specified that the nature of specific price movements that register readings into the extreme level would signal an impending change in trend. His overbought and oversold definitions are the standard for the indicator. In my own research, I actually respect these levels immensely and classify indicator readings as such only if these extremes are realized.

- ## Overbought ≥ 70:
  Price action that possesses an RSI reading at or above the 70 level.

- ## Oversold ≤ 30:
  Price action that possesses an RSI reading at or below the 50 level.

Expectations at Relative Strength Levels

In the same way that ratio measurements of price segments define certain expectations of what can happen, indicator readings possess similar interpretations that accurately define complex technical environments. Although singular indicator readings are not nearly as important as price measurements, the situations where clear integration confirms pattern scenarios is the best application of the indicator. In fact, the various expectations and indicator interpretations can be employed as a trading system unto itself.

Oversold Relative Strength Reading: 0-30 Range

The oversold range in the Relative Strength Index between 0 to 30 is an absolute level that was defined by Welles Wilder when he introduced the indicator. The most important characteristic of an extreme test of this area is to distinguish the type of reversal that occurs under the 30 limit. Due to the nature of the calculation, the indicator reading cannot exceed 0. I must emphasize that the definition of oversold is any indicator reading of 30 or below. Interestingly enough, I have found that even those readings that are actually less than 31 – where a reading of 30.65 for example,

can be a valid extreme reading. These are typically witnessed in impulsive formations but it is important to note that any reading of 30 does qualify but 31 does not.

Overbought Relative Strength Reading: 70-100 Range

The overbought range for the indicator is defined by a reading that tests at or above the 70 level and reverses from that extreme shortly thereafter. Depending upon the indicator type, the extreme test may require varying levels of time before confirming the reversal. These subtle differences are important in shaping expectations and defining confirmation types. The most important consideration is the continuation after the reversal is complete. It can be common for overbought RSI readings to register as price continues to climb. This underscores the expectation that the trigger is an early signal and must be confirmed with a reaction in price. Furthermore, these assessments do not require a great deal of room for error in terms of a stop loss to gauge whether or not the reading will generate a price move of significance. Again, this is yet another reason why integration with more complex price measurements provides a reliable trade opportunity.

Midpoint 50-Level

Price action at the 50-level can dictate a great deal regarding the state of the primary trend. One of the easiest ways to examine indicator readings in this area is to utilize the mid-level at the 50 level to gauge trend continuation. If price is clearly in a bullish trend, RSI should hold above the 50-level, as it fluctuates between the midpoint and the extreme 70-limit. This reflects a condition of a strong primary trend where pullbacks are normally brief pauses within the overall direction of the move. In distinct bearish trends, RSI should stay consistently below the mid-point 50-level. As price declines, it is common to observe Relative Strength readings that bounce between the 30 limit and the 50 limit.

Another important consideration that involves the midpoint 50 level is the determination of complex divergence and confirmation formations. These multi-segmented indicator readings are typically separated by a minimum test of the 50 level. Therefore, it is always essential to examine the prior reading and the type of formation in the extreme zone. If a prior extreme RSI reading possesses a complex formation, the action after the 50-level will eventually setup RSI BAMM Divergence.

The indicator midpoint line at the 50 level has been the primary differentiation of structures and complex scenarios. In fact, there are specific expectations and interpretations that are derived from this sequence of indicator readings that distinguish specific environmental conditions. As is the case with the RSI BAMM - a double extreme indicator reading that is separated by a midpoint of 50-limit will represent the most significant environmental opportunities. However, it's important to note that multiple indicator tests of an extreme area that are not separated by a test to the 50-midpoint

line represent a less substantial technical entity than those formations that adhere to the RSI BAMM rules.

Monitoring the indicator readings in the PRZ, the most profound observation of Relative Strength that reveals how price can accelerate depending upon the readings of the indicator. These observations are effective when assessing executions and analyzing management parameters. I have noticed that defined price segments – patterns or simple ratio measurements – that possess indicator readings that are confirming its direction experience varying rates of movement. For example, a bullish pattern that possesses a Potential Reversal Zone with a Relative Strength reading that is under the 30 will require some time to complete the reversal as well as establish progress to reach one of the minimum profit targets. It is possible to focus on the indicator reading as much as the price following the execution of a trade. Not only does the reversal need to overcome the price limits of the Potential Reversal Zone but the progress of the indicator reading can equally explain the likelihood of an initial reaction to turn into a larger reversal.

It is quite common for this bullish consolidation to take its time before the indicator reading can at least reach the midpoint line at the 50 level. However, I have noticed that once the Relative Strength reading can't exceed the 50 level, this is a trigger for price acceleration of the bullish reversal. Conversely, a bearish pattern that possesses a Relative Strength reading above 70 can require a period of time before the larger reversal incentives. Typically, the price action will complete the pattern and the indicator will reverse from the overbought level at 70 within a few bars of each other. Although initial harmonic pattern reaction typically provides favorable risk-to-reward opportunities, the larger profit potential of all trades is not realized until the indicator can exceed the midpoint at 50. For the bearish pattern, the indicator will trigger price acceleration when it declines under the 50-midpoint line. We will look at the strategies in detail when we review management of harmonic pattern opportunities. But, the important take away here is to remember that we must monitor indicator progress and be aware of this phenomenon at varying levels of the reading itself.

Extreme RSI 80/20

I have always experimented a great deal with Relative Strength and deconstructed the formula in numerous ways. I have tested various components to adjust time preferences, price calculations and implement harmonic modifiers that quantify the natural limits of the indicators readings. For quite some time, I've been aware of a singular distinction that occurs infrequently but is significant when present. It is quite common for RSI readings to test levels that are severe readings in the extreme zones. The indicator can establish important and relevant expectations when it triggers oversold readings below 20 and overbought readings above 80. These distinctions require a differentiation of indicator types. Depending upon the formation of a complex board impulsive structure, the general expectations of what will follow serve

as excellent guidelines to define the total technical picture. When an RSI reading exceeds the 80/20 level and forms a complex structure, the general expectation is for an eventual retest of that price level.

I have outlined a number of situations with the RSI BAMM strategy that is frequently associated with these types of situations. The minimum expectation following an extreme complex structure is that the initial price reaction will be short-lived and retrace back to the initial price level as it consolidates. Furthermore, the understanding of conditions promotes a realistic expectation for the trading opportunities between these extreme points. When these situations develop, the complex structure should be employed with limited expectations for a larger reversal on the first attempt. Simply stated, <u>a complex formation that tests under the deep oversold 20 limit or above deep overbought 80 level will require more time than usual to resolve such an extreme reading.</u> The broader understanding of when to expect consolidation and when to expect an immediate move improves with experience but the framework remains the same on every timeframe and in every market.

Twice the Distance in Half the Time...

One of the most helpful guidelines that I employ when monitoring price action, especially early reversal behavior following the execution of a trade is to gauge the progress of the indicator reading in relation to price. Since RSI can reliably be an early signal, the progress of price usually unfolds in a disconnected fashion until a thorough consolidation phase unfolds at the pattern's completion point. However, it is possible to assess the indicator progress relative to price movements and the predominant trend.

For example, a bearish price trend that moves from a 70 reading to a 50 reading will not be the same in magnitude as the price moves from 50 to 30. <u>This is a proprietary insight that I am sharing for the first time but it is important to monitor indicator readings and recognize this fact</u>. In fact, I have a saying for this phenomenon where definable RSI movements influence price and identify an excitable state of trend acceleration. When these situations develop, "price will go twice the distance in half the time" as the indicator accelerates into an extreme level. I have been experimenting with this concept for quite some time. The basic assumption is as follows:

- **Bearish Trends:** When price declines with an indicator reading that goes from the midpoint line at 50 to the oversold extreme under 30, <u>the bearish price trend will accelerate twice the price distance as it did from 70 to 50 in approximately half the time</u>.

- **Bullish Trends:** When price increases with an indicator reading that goes from the midpoint line at 50 to the overbought extreme above 70, <u>the bullish price trend will accelerate twice the distance as it did from 30 to 50 in approximately half the time</u>.

Of course, these are general rules that will possess varying combinations. However, these expectations are reliable guidelines and help to monitor the price action especially in the execution of harmonic pattern opportunities. Clearly, the magnitude of the price movement is not the same at each RSI reading. But, price does exhibit different behavior relevant to the trend when RSI readings correlate. This is one of the most reliable RSI assessments that helps monitor these strategies related to price behavior and gauge the extent of profit potential for any reversal. We will take a look at detailed trade management strategies later in the material but expectations such as these go a long way in defining what is possible within any market environment.

Most significantly, the strategies that explain distinct RSI phenomenon are reliable assessments even when patterns do not exist. This is where the selectivity to patiently wait for those overwhelming opportunities and the discipline to not attempt to trade those situations are less than ideal serves the trader's best interests in the long run. This may be difficult because there will be plenty of observational phenomenon that adheres to these concepts. Regardless, the goal is to identify those situations that possess overwhelming evidence of highly likely opportunity that fulfill the anticipated analysis.

Two Types of RSI Structures

I initially presented this information in Harmonic Trading *Volume 2*, which was an important advancement of simple indicator structural differentiation. Whether harmonic ratios are included or not, the *Volume 2* material was the first book that distinguished technical readings in terms of their pattern structure. There are other phenomena that I have mentioned over the years where price patterns and indicator patterns can confirm each other. However, there are two general classes of indicator structures that test the extreme levels – impulsive and complex – that are excellent indicators of price character. It is important for either one of these RSI readings to test extreme Oversold (30 and below) or Overbought (70 and above) to serve as an early signal of an impending change in price direction. The key requires that Harmonic Traders simultaneously analyze the RSI extreme test with price action in the Potential Reversal Zone (PRZ). Also, it is important to denote the *RSI Trigger Bar*. This is price bar that marks the exact point where the indicator reversal from the extreme area is confirmed. Each structural type possesses its own expectations but their greatest analytical strength comes when they are combined in multiple readings to distinguish unique technical environments.
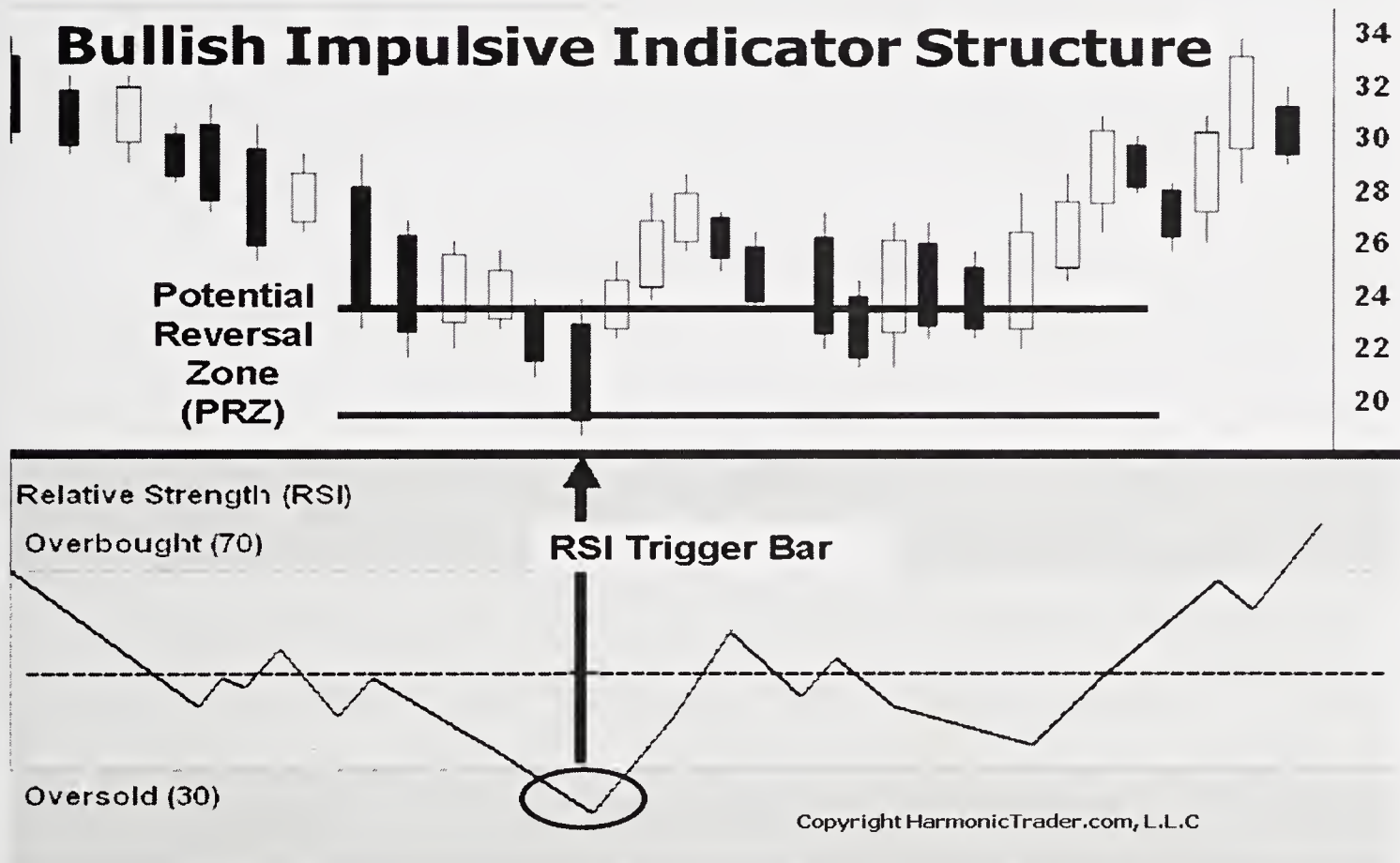
Impulsive Indicator Structures

An impulsive indicator structure reflects price action that is experiencing a brief test of the extreme area that typically reverses quickly without any consolidating price action. The nature of the impulsive indicator structure forms a /\ or \/ in the extreme
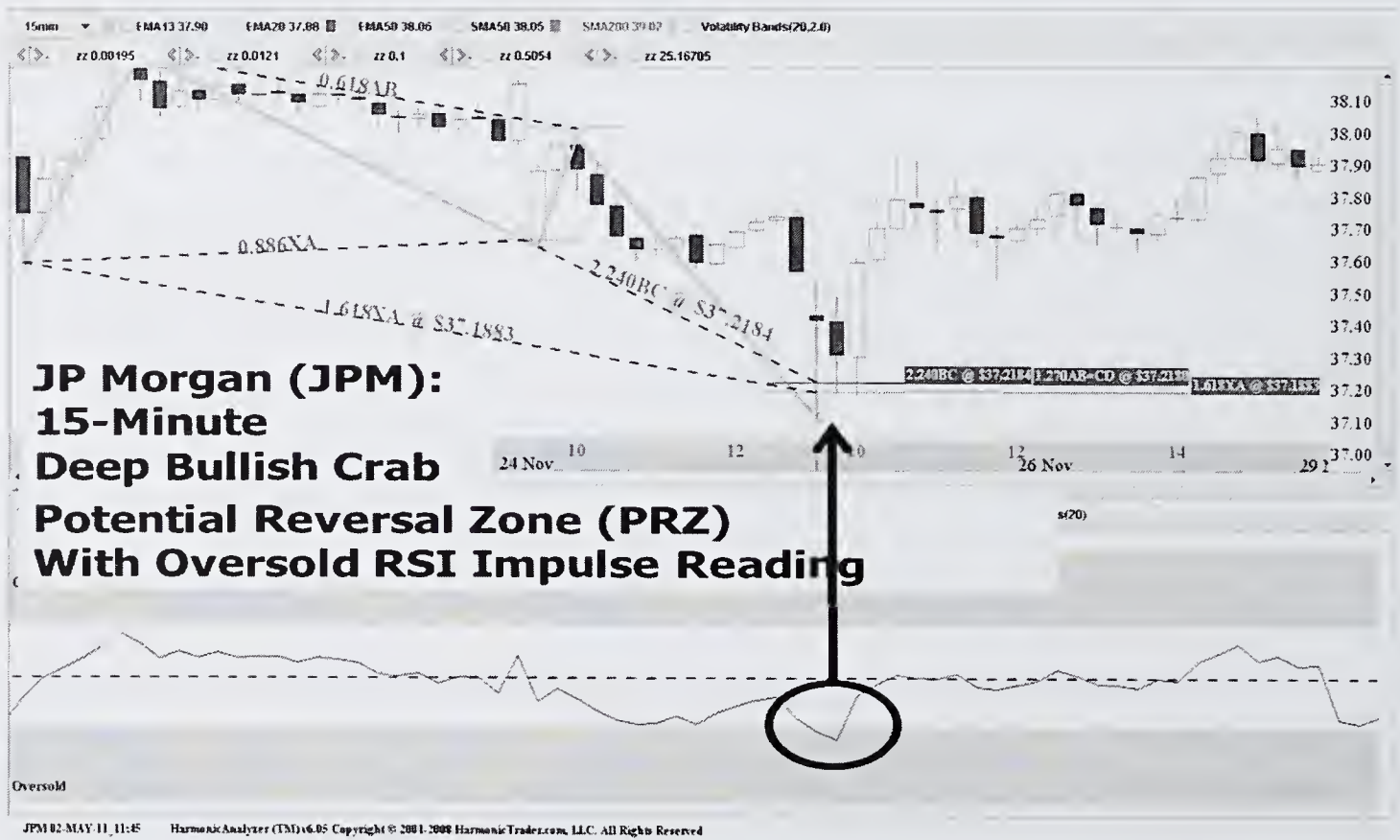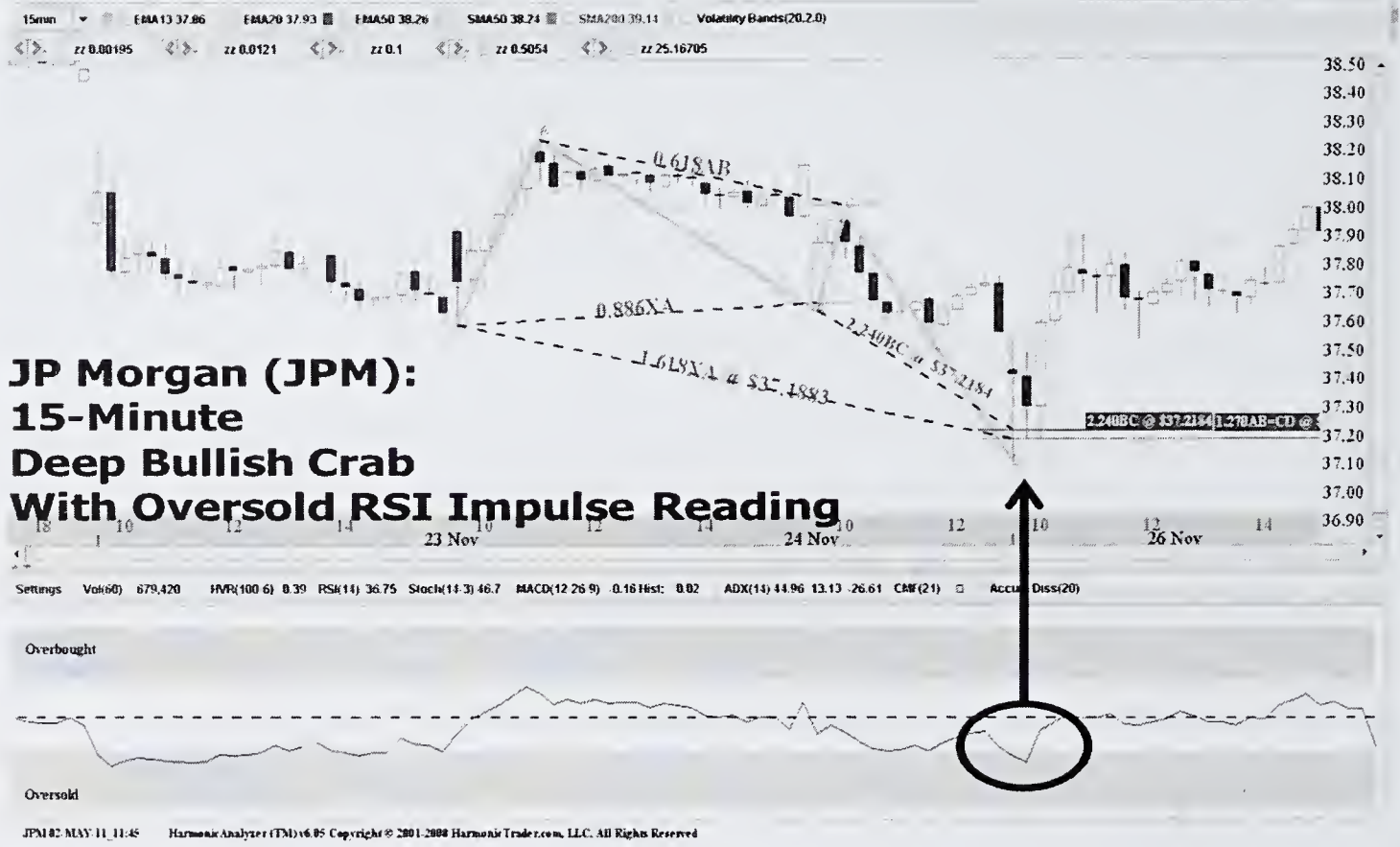
area. The clear confirmation occurs when the RSI reading reverses from the extreme zone. Although the impulsive indicator can express more than one test of the extreme, the best situations occur when there is coordination with price measurements. Again, this will typically be an early signal but provide a reliable indication of a change in price action. RSI readings usually reverse from the extreme area within 1-3 price bars of the initial test. The general indicator reversal is the critical factor that serves as the essential trigger to validate the execution of a potential trade opportunity.

Bullish Impulsive Indicator Structures

An impulsive bullish indicator reading will typically test the extreme area under 30 and reverse immediately thereafter. It is quite common for these type of extreme tests to nominally exceed the minimum level at 30 to register an oversold signal and reverse sharply. Although deeper RSI readings may still possess an impulsive structure, most of these readings will not exceed the 30 minimum level much.

Bullish Impulsive Indicator Structure

The following 15-minute chart of J.P. Morgan shows a distinct Deep Bullish Crab pattern with an impulsive RSI extreme test of the oversold limit that reversed immediately after completing the pattern. The indicator started to rally on the next bar and showed early progress before the price accelerated. These are the exact type of situations that must be coordinated to identify significant reversals in advance.

Harmonic Trading Volume 3: Reaction vs. Reversal

JP Morgan (JPM):
15-Minute
Deep Bullish Crab
With Oversold RSI Impulse Reading

JP Morgan (JPM):
15-Minute
Deep Bullish Crab
Potential Reversal Zone (PRZ)
With Oversold RSI Impulse Reading

*Harmonic Trading Volume 3: Reaction vs. Reversal*

Bearish Impulsive Indicator Structure

The bearish impulsive indicator structure will typically be a quick test of the overbought limit above 70. This will be frequently associated with sharp price action that demonstratively reverses after testing the extreme limit. Impulsive readings can be early but do provide some of the early technical signs required to gauge how far a particular rally has moved in a defined trend. A single indicator structure unto itself does not represent an actionable opportunity. However, in association with other price phenomenon or combinations of other readings, a more dynamic harmonic condition can be identified.

Bearish Impulse Indicator Structure in Potential Reversal Zone (PRZ)
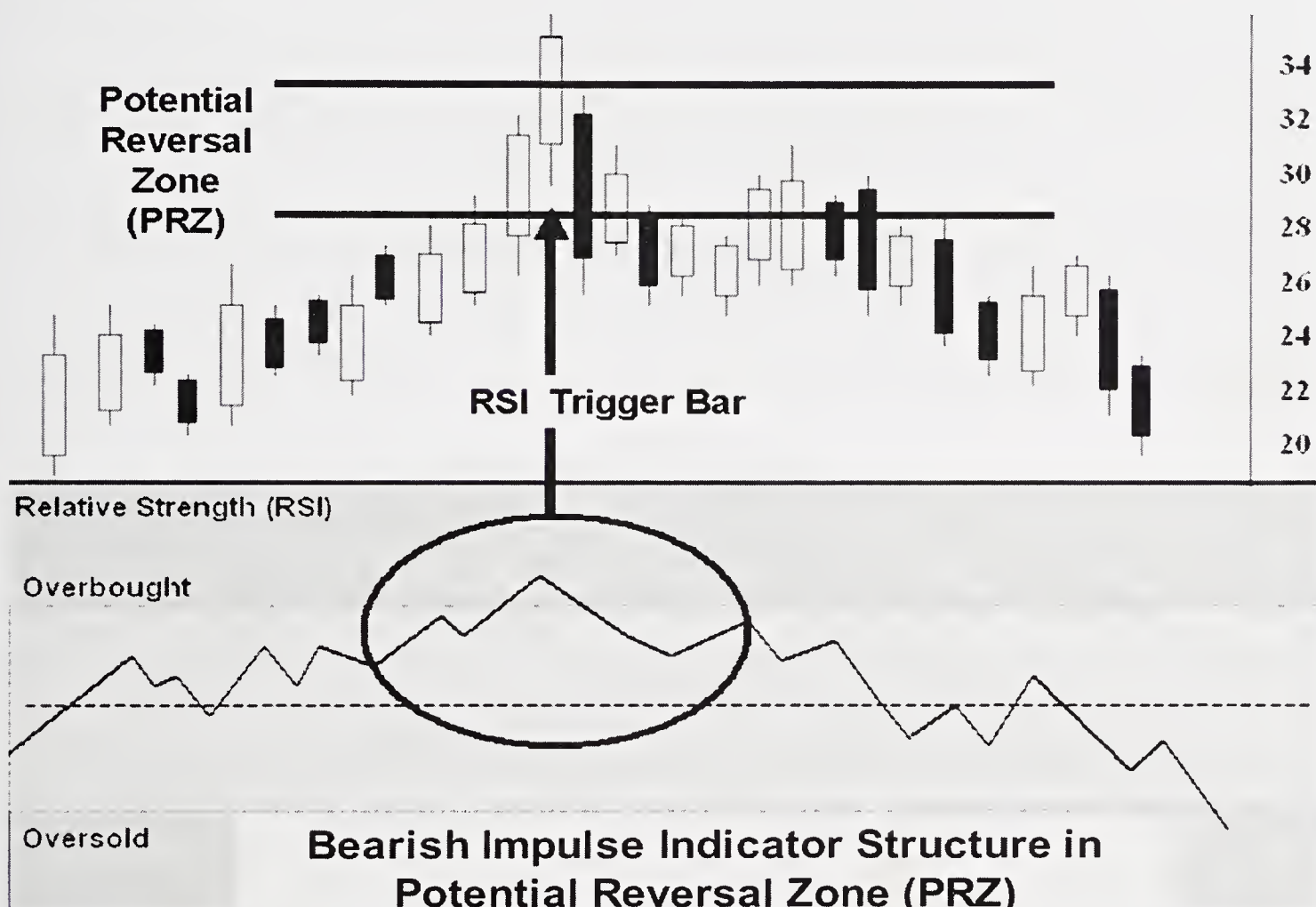
The following 5-minute chart in the continuous Gold contract shows a distinct Bearish Crab pattern with an impulsive RSI reading. As the price action was testing the harmonic resistance, the indicator reading reversed just above the 70-limit. The chart of the price action in the Potential Reversal Zone clearly shows how the indicator signaled the impending reversal as the price stalled after completing the Terminal Price Bar. These are critical and vital early signals of a valid pattern at hand. With experience, this coordination becomes easier and provides the insights necessary to know when a larger reversal will develop from an immediate Harmonic reaction.

Harmonic Trading Volume 3: Reaction vs. Reversal

Gold Continuous Contract (GC_#F): 5-Minute Bearish Crab with Impulsive Indicator Structure
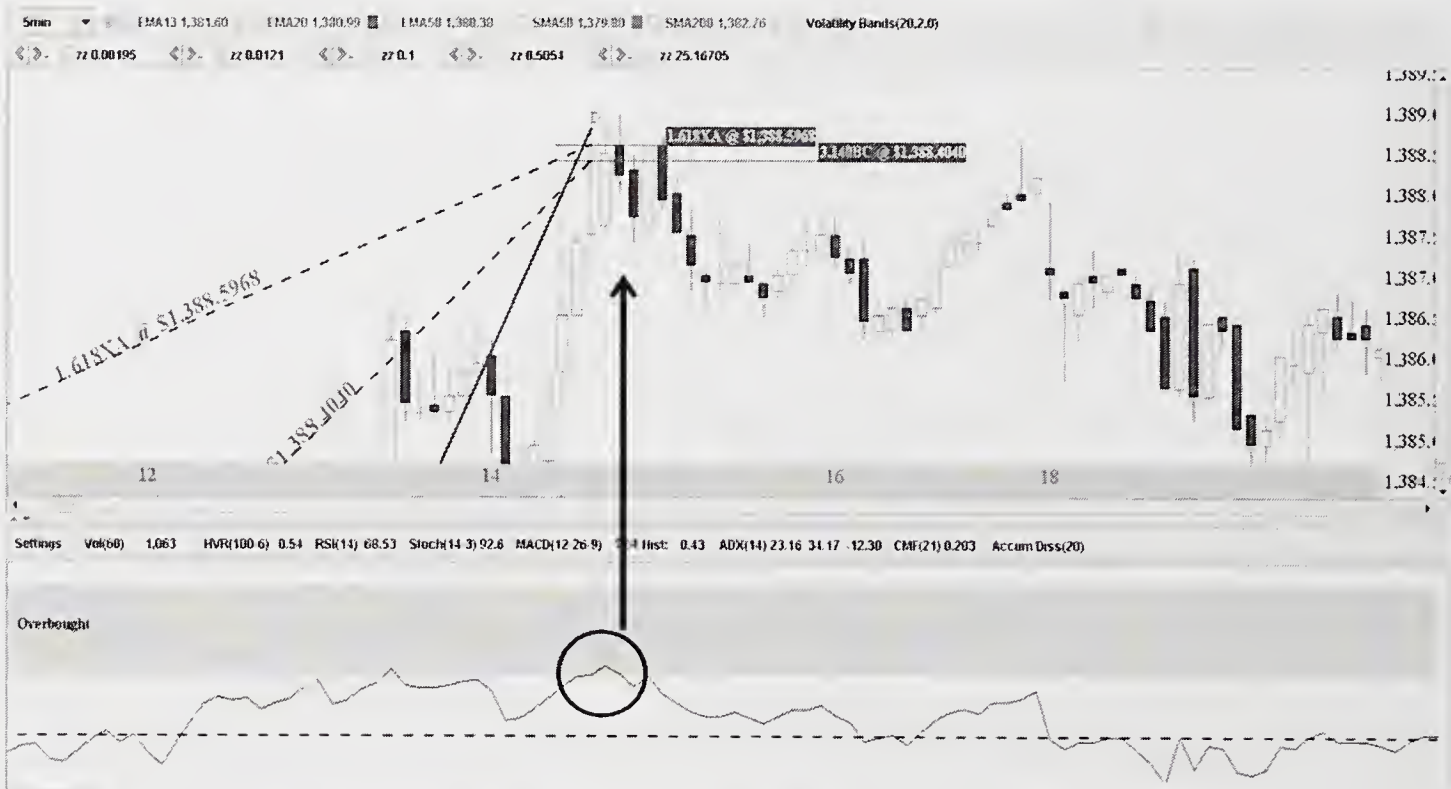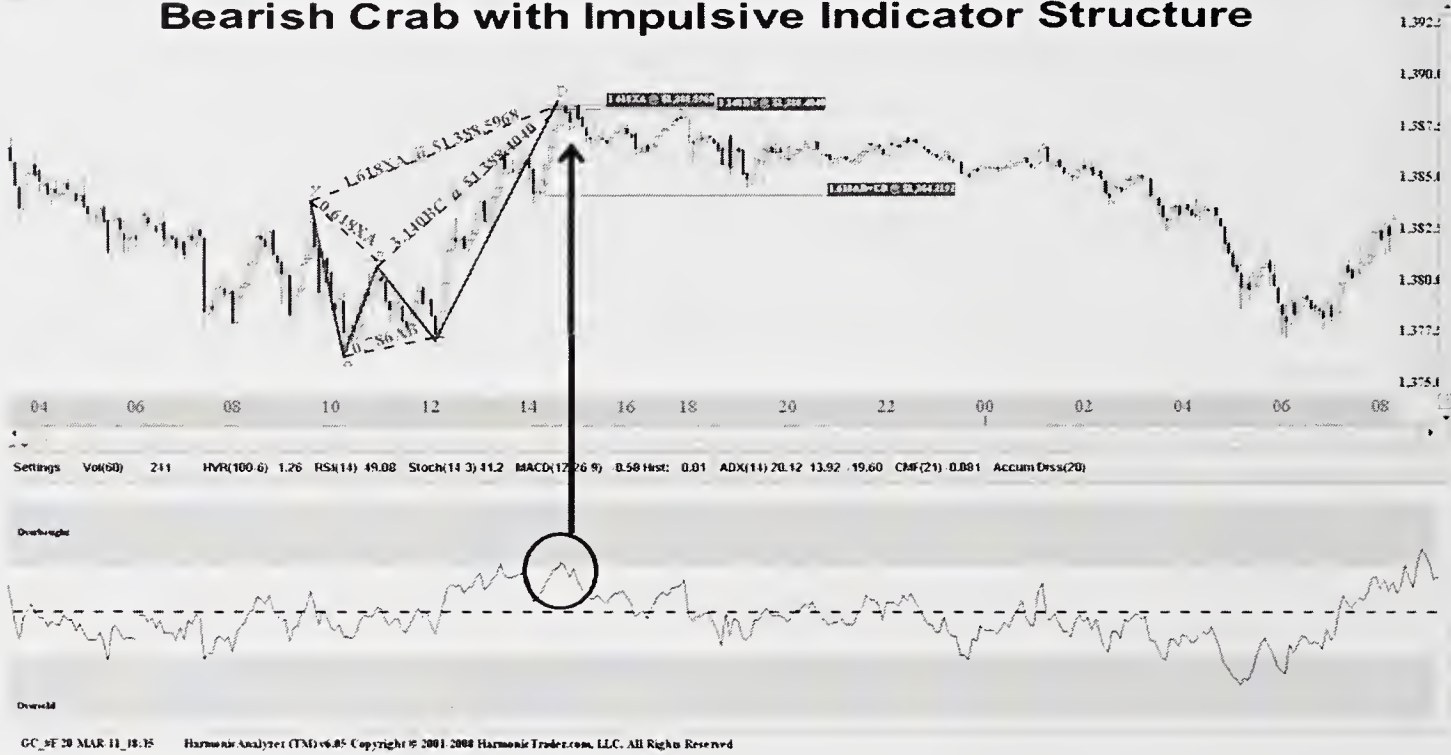
Gold Continuous Contract (GC_#F): 5-Minute Bearish Crab Potential Reversal Zone (PRZ) with Impulsive Indicator Structure
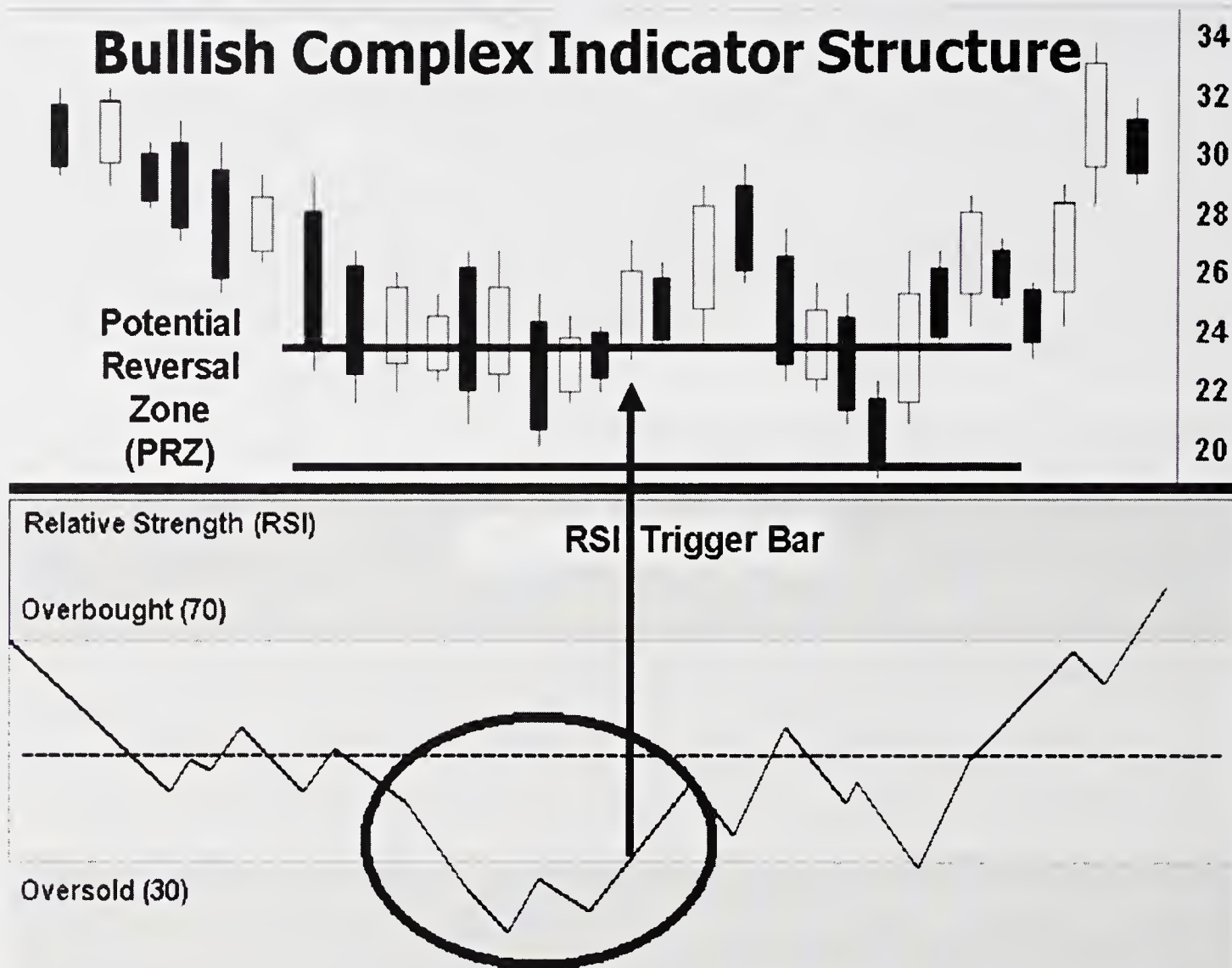
Complex Structures

Complex structures are those indicator readings that form an M-formation in the overbought extreme and a W-formation in the oversold zone. It is important to note that the midpoint of the structures must form in the extreme zone. Otherwise, those double impulsive readings are indicating a different expectation. Complex structures usually require more time before they are established and reverse. Also, it is important to monitor the exact price level of the trigger bar that defines the area where the indicator reverses from the extreme area.

Expectations of Complex Structures

Complex structures possess a defined expectation that typically requires a retest of the initial formation. As I will outline when we talk about RSI BAMM, the complex structure is a valid confirmation signal with harmonic patterns but requires a different perspective. In most cases, the RSI reading will reverse from the extreme zone, react to the midpoint line at the 50 level at a minimum before experiencing a retest of the initial indicator trigger. Although this does not happen in every case, this general expectation does establish the proper bias and possibilities within the context of these environmental situations. If we understand that complex structures are likely to be retested, any corresponding price movement from this confirmation signal should possess a finite potential.
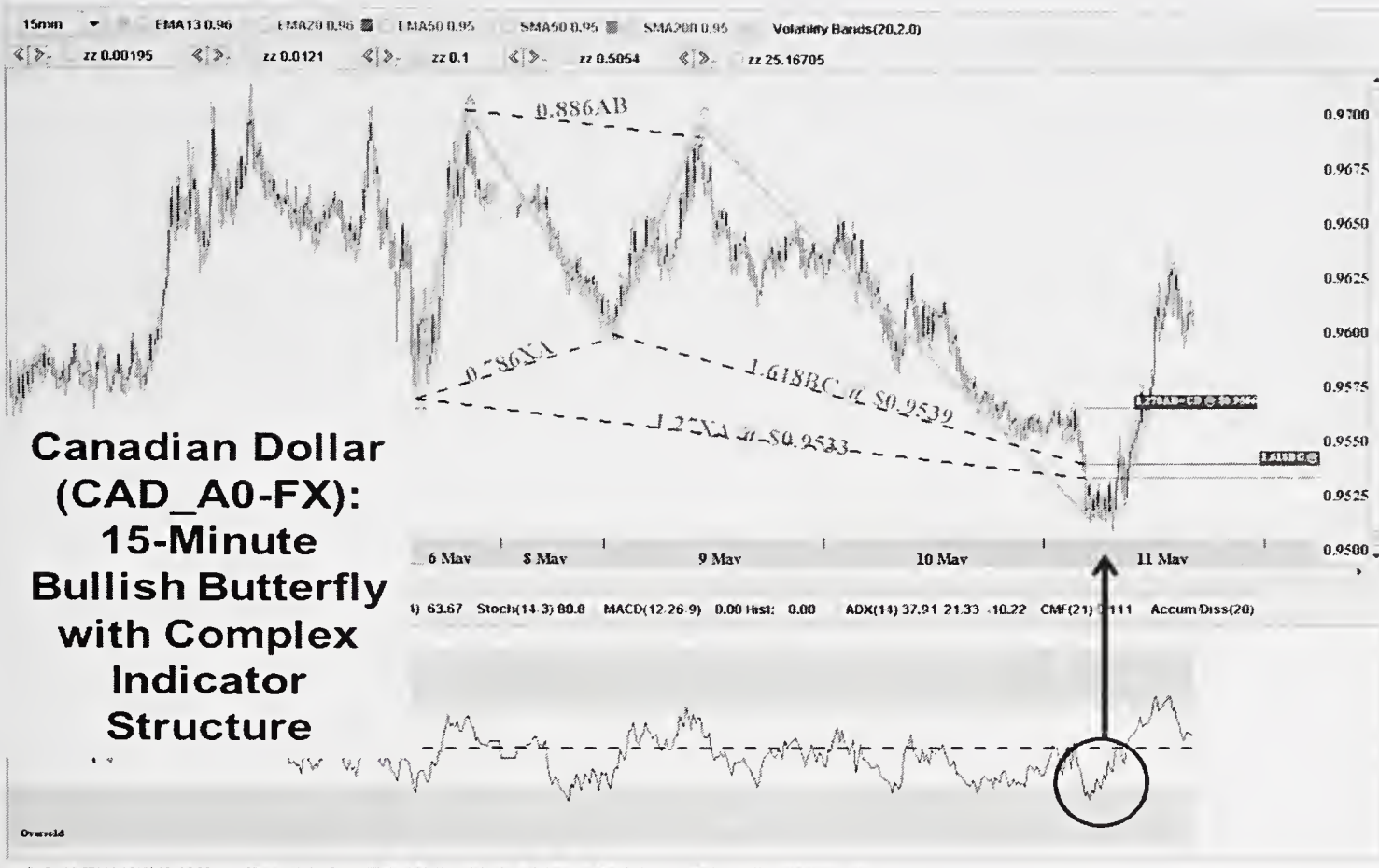
Bullish Complex Structures

The bullish complex RSI structure is a W formation that possesses all points under the 30 limit. In these situations, the price action will take more time to stabilize. The indicator will likely reverse early before the price confirms the new direction. This is the challenge with complex structures but can be confirmed through coordinating the exact price level for the indicator trigger. It is also important to remember that complex structures will eventually be retested. Therefore, any reaction that experiences a reversal out of the extreme oversold 30 level will likely experience indicator resistance once it exceeds the midpoint line at the 50 level. In the most ideal cases, a complex structure will reverse from the extreme, tests the overbought level at 70 and finally retest the original bullish signal. We will look at some combinations of the structures but the simple awareness of these expectations helps to facilitate decisions throughout the trading process.
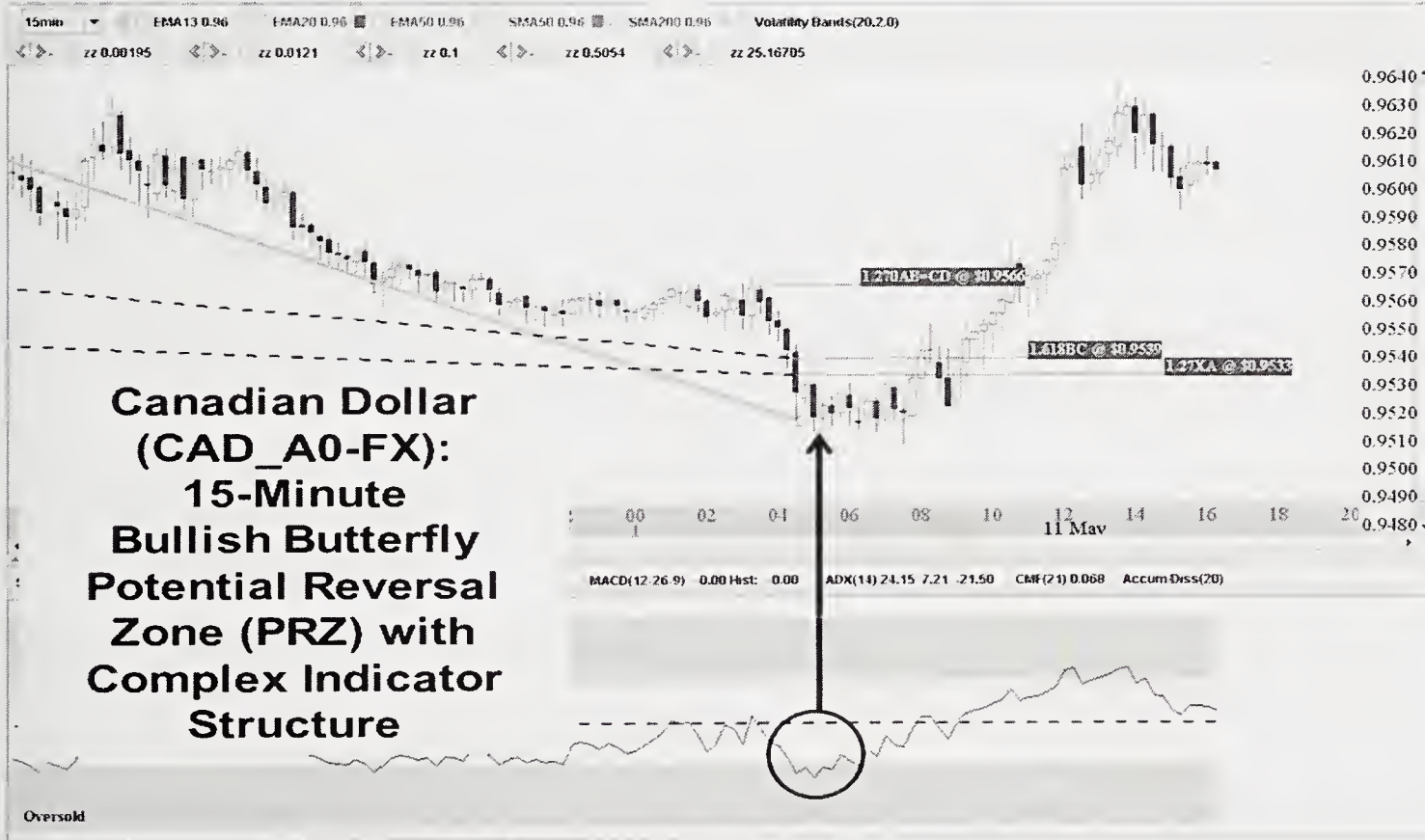
Bullish Complex Indicator Structure

Potential Reversal Zone (PRZ)

Relative Strength (RSI)

RSI Trigger Bar

Overbought (70)

Oversold (30)

The following chart of the Canadian Dollar shows a distinct Bullish Butterfly pattern with a complex structure at the RSI oversold extreme. Is important to note how the final selloff into the harmonic support zone exceeded the area slightly while the indicator stabilized. In the trade execution material, we will look at how to handle these situations precisely but the coordination of the price action and the indicator in the Potential Reversal Zone defined the exact area for the opportunity.

The interesting aspect of this example was how the complex structure identified the RSI Trigger Bar which was slightly below the Potential Reversal Zone. Although the price exceeded the ideal harmonic support, the formation of the complex indicator reading signaled that this reversal would require more time at a minimum. The assessment of price as the indicator stabilizes is the key consideration in confirming the execution. Not to mention, the management of the trade is facilitated effectively by monitoring the progress of the indicator as it moves out of the extreme.

Canadian Dollar (CAD_A0-FX): 15-Minute Bullish Butterfly with Complex Indicator Structure

Canadian Dollar (CAD_A0-FX): 15-Minute Bullish Butterfly Potential Reversal Zone (PRZ) with Complex Indicator Structure

*Harmonic Trading Volume 3: Reaction vs. Reversal*

The second chart shows the price action in the Potential Reversal Zone in the 0.9530 area with the distinct W structure that reversed three bars after the exact pattern completion point. As the indicator started to turn up, the price stabilized at 0.9520 just below the bottom range of the harmonic support. The RSI trigger bar provided the additional confirmation just below the ideal price measures for the optimal entry in the trade. The other interesting aspect is how the indicator provided the early signal of impending price reversal. In particular, this example demonstrated the acceleration in the reversal phenomenon as the RSI indicator rallied above the 50-midpoint line. This is an excellent way to monitor the progress of the consolidation within the entire PRZ.

Bearish Complex Structures
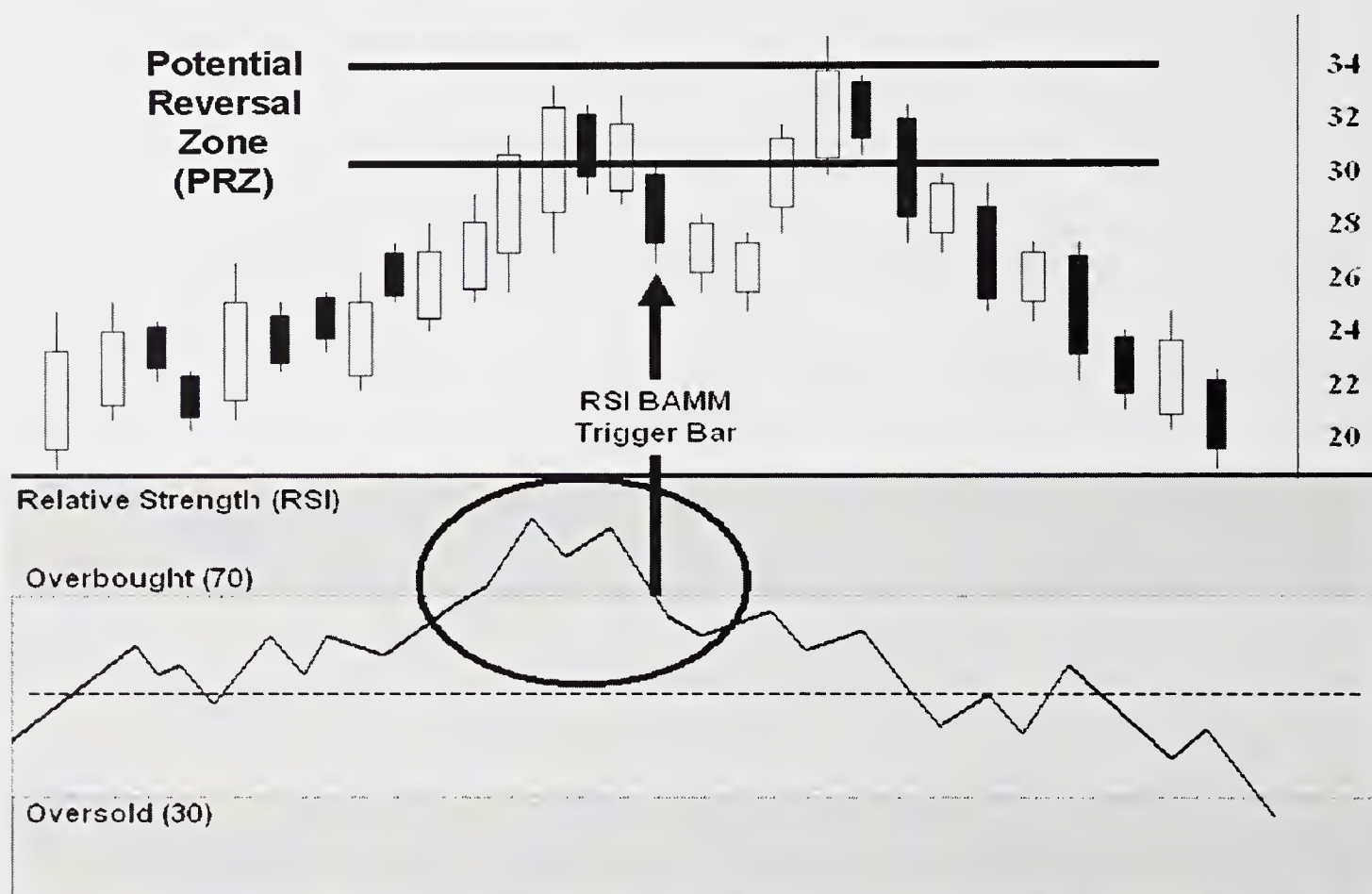
Bearish complex structures are excellent early signs of a change in trend. Although the indicator reading forms an M-type structure in the extreme overbought zone, the strength of the price action to penetrate the higher extremes and form a complex reading signals a strong move at hand. In fact, the formation of a complex structure typically signals that the predominant trend will continue until the indicator can clearly reverse from the extreme. The RSI Trigger Bar is the price bar that marks the exact reversal from the zone and it serves as a potential trigger point for the acceleration of a reversal. The exact peak of the RSI Trigger Bar serves as the price

level resistance established by the reversal in the indicator. This is a concept that I first outlined in *Harmonic Trading Volume 2,* and I have incorporated it with patterns to optimize executions and manage reversals more effectively. The following chart of the S&P 500 shows an excellent example of a complex structure defining an early confirmation before the completion of the Alternate Bearish Bat pattern.
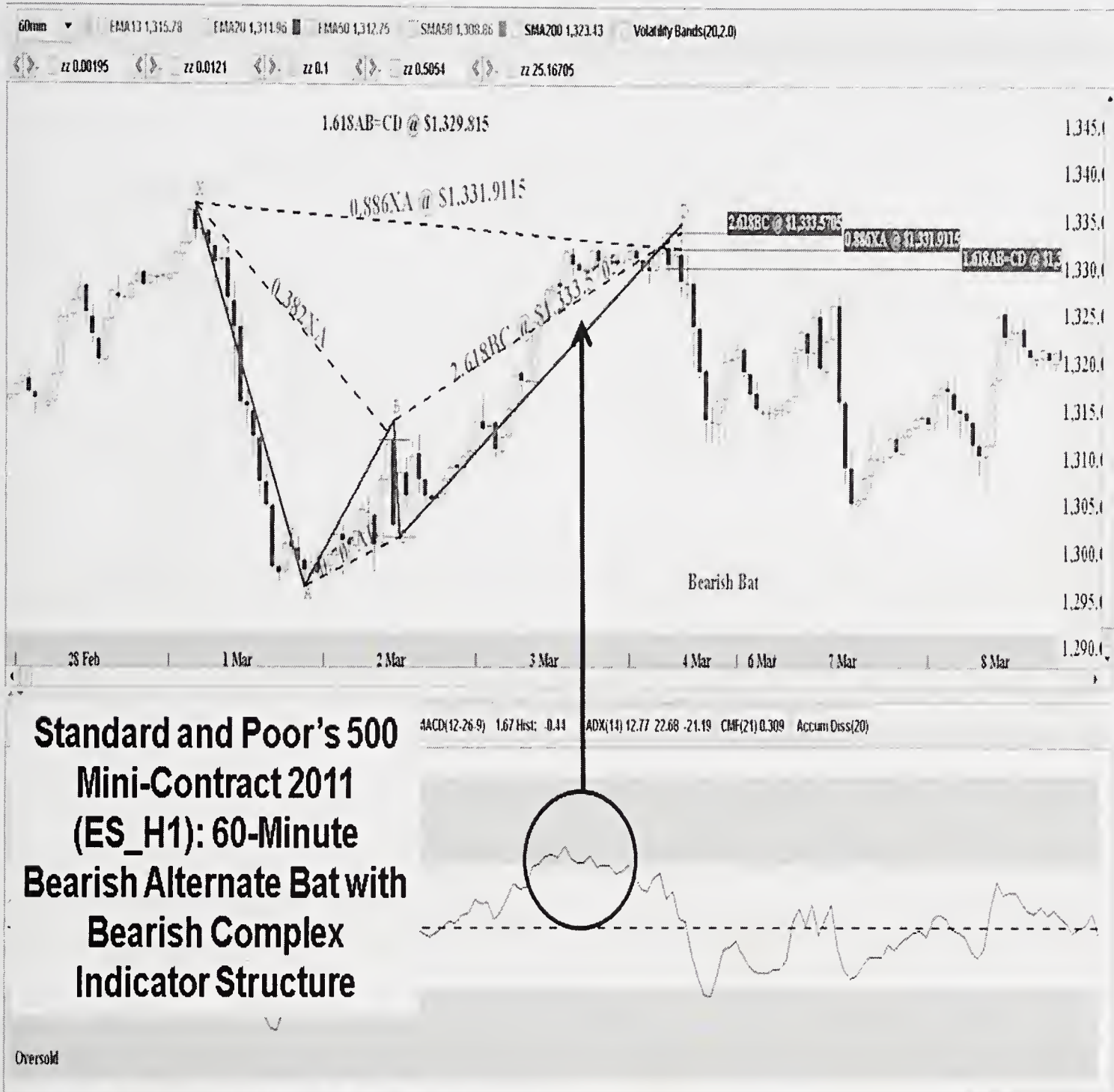
This chart of the price action in the Potential Reversal Zone shows the indicator reversal before the exact completion of the pattern. The harmonic resistance defined the 1333.57 area for the short of the position. Interestingly enough, the complex

Harmonic Trading Volume 3: Reaction vs. Reversal

structure provided an early confirmation with the trigger bar clearly signaling that the area just above 1330 was an excellent resistance zone. Again, it is critical to observe the progress of the indicator as it moves out of the extreme zone. In this case, the RSI reversal was demonstrative well before the pattern even completed and the downtrend progress accelerated dramatically once the indicator violated the midpoint 50 – level.

Standard and Poor's 500   Mini-Contract 2011 (ES_H1): 60-Minute Bearish Alternate Bat Potential Reversal Zone (PRZ) with Bearish Complex Indicator Structure

It is important to note that this phenomenon occurs in all markets and on any timeframe. Throughout this book I feature a variety of charts that look at harmonic situations in currencies, stocks, indices but all markets possess this phenomenon. The strategies can be applied but I advise only the most liquid markets be considered for valid opportunities to minimize risk. Furthermore, this phenomenon as the prior example demonstrated occurs repeatedly in all markets. This was a clear opportunity and these are the type of correlations to be identifying as potential opportunities. The most important consideration is that the proper indicator expectation with a precisely

Harmonic Trading Volume 3: Reaction vs. Reversal

measured pattern does provide those special opportunities with a greater potential for a large reversal than a mere reaction.

RSI Breakout

As I have discussed various interpretations of Relative Strength in relation to price, one basic concept that all traders should master is a simple coordination of the indicator trend and the price trend.
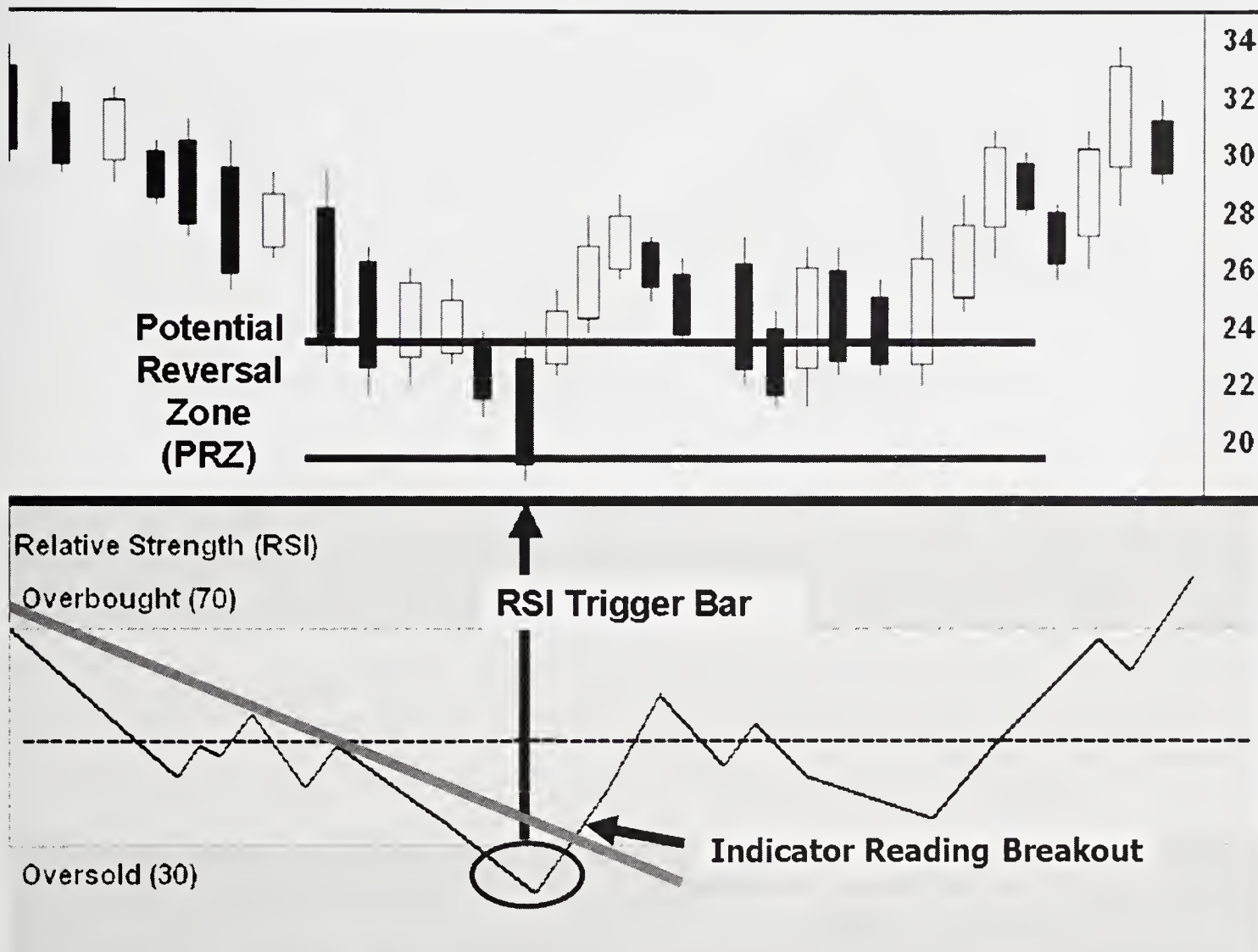
It is possible to not only monitor extreme reversals but it is advantageous to also define where these changes occur and delineate the area where price confirmation can be anticipated. In combination with harmonic patterns, these trendline assessments are effective in defining limits relative to the Potential Reversal Zone. Furthermore, these observations help to define the early stages of reversals before they are completely relaxed.

In the following example of the S&P 500, the continuous contract on the 15-minute chart exemplified the correlation of price and relative strength. Clearly, the indicator stabilized and broke out of its downtrend before it was realized in price. These types of early indications are effective in confirming distinct trend reversals such as this. Although the larger confirmation is not official until the downtrend is violated, these strategies effectively coordinate multiple measures to define clear opportunities.

Standard and Poor's 500 Index Continuous Mini-Contract (ES_#F): 15-Minute Price/RSI Breakout

Harmonic Trading Volume 3: Reaction vs. Reversal
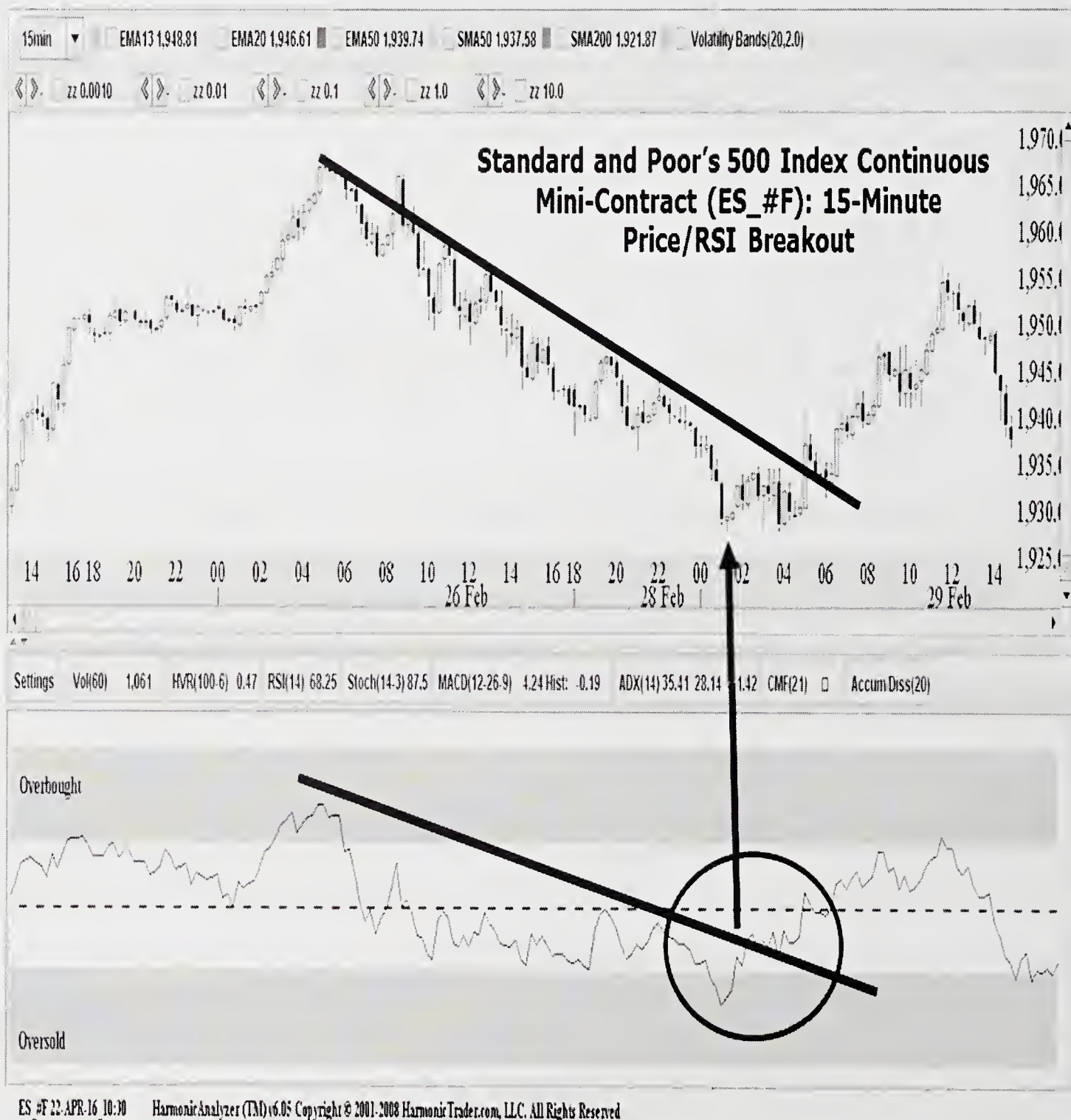
RSI Breakdown

There are multiple ways to monitor indicator progress but the identification of the primary trend is most meaningful when compared to the dominant direction price. These observations help to define various price segments as well as establish categories of different technical situations. When we monitor the uptrend in the indicator reading Relative Strength, the most ideal situations manifest an extreme reading above 70 level at the completion of a harmonic pattern opportunity. The breakdown in the indicator is typically an early signal but it is frequently confirming a more substantial reversal in the price action shortly thereafter.
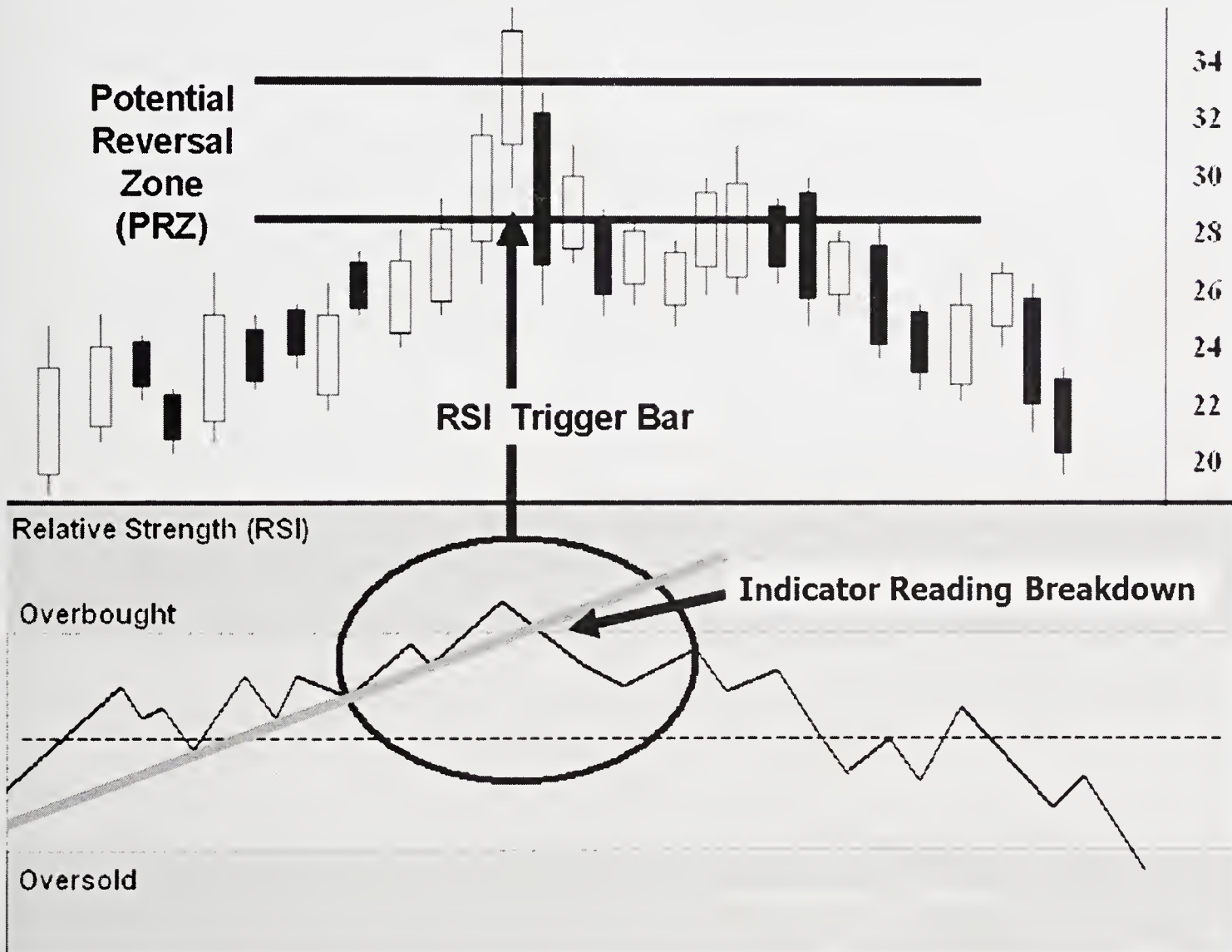
The assessments regarding the breakdown in the indicator are generally the same for both impulsive and complex types. Although impulsive situations can provide sharp reactions when both price and indicator trends are violated simultaneously, the most important identifier will be the trigger bar that denotes when the indicator reading declines below 70 level to confirm the extreme reversal. Again, these interpretations become easier with experience but the early violation in the indicator is a reliable trigger signal of impending change in the predominant trend. The following daily chart of the NASDAQ 100 index exemplifies the relationship between price and RSI. When RSI breaks down, it is typical for price to follow. This is the most effective coordination to best confirm trend violations in the Relative Strength Index.

Trigger Bar

The concept of the Trigger Bar is derived from the philosophy that all information required to define trade opportunities can be analyzed from the price action history. To that aim, I have analyzed many strategies and examined individual price bars for specific price movements that confirm the larger signal indicators can provide. For example, a dramatic selloff that possesses an enormous Volume spike typically can signal a state of exhaustion where all of the sellers have exited the market. In this case, the only immediate reaction is an automatic mechanism of that phenomenon. Therefore, the price bar that triggered the Volume surge would represent a significant price level that must be considered in one's current analysis. This is a general example but exemplifies how to examine individual price bars that cause a demonstrative change in behavior.

RSI BAMM

One of the biggest breakthroughs for me personally was the RSI BAMM strategy that exemplifies what a market mechanism truly is. The combination of price measurements and indicator assessments provided a consistent framework to identify a larger market condition. Although this phenomenon requires multiple elements, it clearly defines how these trading cycles can be quantified and categorized to discover unique situations for the harmonic pattern reversals. I have been employing Relative Strength with harmonic patterns for over 15 years. Initially, I was resistant to the inclusion of other technical measures. I was purely focused on harmonic pattern structures. Inevitably, I noticed other relationships with certain indicators that did provide further insight into the validity of the pattern, especially as it tested the Potential Reversal Zone (PRZ). As I discussed in my *Volume 2*, I quickly realized that Relative Strength yielded the most reliable technical information.

It is important to review the RSI BAMM. The acronym stands for Relative Strength Index Bat Action Magnet Move. This was a concept that I first presented in *Harmonic Trading Volume 2.* The concept outlined situations where price action reacts in an automatic fashion to certain situations and exhibits particular character in complex yet definable harmonic environments. I have made significant gains since its inception. I outlined the "magnet effect" of harmonic patterns in my previous books but I would like to underscore its importance in this material. Many of the new discoveries and harmonic pattern optimizations were derived from the foundation of these interpretations.

Although the entire RSI BAMM methodology is complex, the essence of the strategy is simple. It seeks to employ a relevant technical measure that possesses clear divergence/confirmation properties in the same area as a completing pattern. When

multiple conditions simultaneously, the projected future price action is very likely. At a minimum, these situations provide reactive moves that may be short-lived but are still profitable. Relative Strength has been an important filter that effectively defines the patterns that are completing in extreme area of the reliable indicator. The multiple formations of that indicator helped define unique and complex situations that are even more effective.

RSI BAMM Review

- Introduced in *Harmonic Trading Volume Two*, RSI BAMM advances the basics of Wilder's definition to differentiate the most significant multiple indicator formations with harmonic measurements.
- RSI structural reading differentiation – Complex vs. Impulsive – establishes "environmental" factors that distinguish harmonic pattern opportunities.
- The key technical event occurs when harmonic patterns complete within the limits of a complex extreme reading followed by an impulse RSI test.
- The combination of indicator types can form specific confirmation and divergence.

BAMM Types

The complex indicator formations all possess common elements. Each of the BAMM types are represented by two distinct extreme test separated by a minimum reaction to the midpoint line at the 50 level.

- **Simple Confirmation**
- **Complex Confirmation**
- **Simple Divergence**
- **Complex Divergence**

Importance of 50-Midpoint in RSI BAMM

The RSI BAMM midpoint is extremely important in the categorization of the oscillator readings within the RSI index. Traditionally, RSI and oscillating indicator between zero and 100 that employs a 70-limit defined in overbought situation and the 30 level as an oversold condition. RSI is an extremely effective indicator but does produce excessive readings that can distort the picture. One of the most important discoveries within the categorization of RSI indicator readings presented in *Volume Two* was the importance of the 50-level as some type of qualifier between two other extreme readings. It is common to have two readings in a RSI extreme that can signal important turning points. When the situations happen simultaneously patterns, the probability is overwhelming. But, the key is to distinguish when those extreme indicator readings actually trigger an individual reading. There are situations where the indicator reading can test the extreme level multiple times before any substantial price change would occur.

One clear differences that I noticed was when two extreme readings formed with their middle consolidation area having tested the 50-midpoint level at a minimum. As I began to experiment with different RSI structural reading formations, I started to only look at these situations where the first reversal from the extreme area reached the 50-midpoint level before retesting a second time. In this scenario, the extreme area forms a double RSI pattern. I strongly encourage Harmonic Traders to investigate these differences and respect the importance of the midpoint. There are other applications for the midpoint that help to define other situations in trade management. For these purposes, the assessment of extreme RSI tests must include the midpoint 50-line requirement before the secondary test to validate the scenario. These are extraordinary technical conditions that can be found on a variety of timeframes and frequently confirm primary patterns.

RSI BAMM Simple Confirmation

The RSI BAMM Simple Confirmation formation possesses two impulsive indicator readings that are separated by a minimum test to the midpoint line at the 50-level. The requirement that each test is separated by a minimum reaction to the midpoint line at 50 is essential in differentiating nominal multiple tests of an extreme area as opposed to two distinct and material indicator readings. Although the other RSI BAMM combinations are defined by the nature of the structure, these formations are excellent confirmation signals, especially when they materialize at the completion point of an individual pattern.

RSI BAMM Bullish Simple Confirmation

As the price action declines and the RSI indicator readings enters the oversold zone, the impulsive indicator reading will typically establish a short-term low. As the indicator reacts up to and in most cases above the 50-midpoint line, the secondary retest is initiated when the price and indicator rollover to confirm the initial price level.
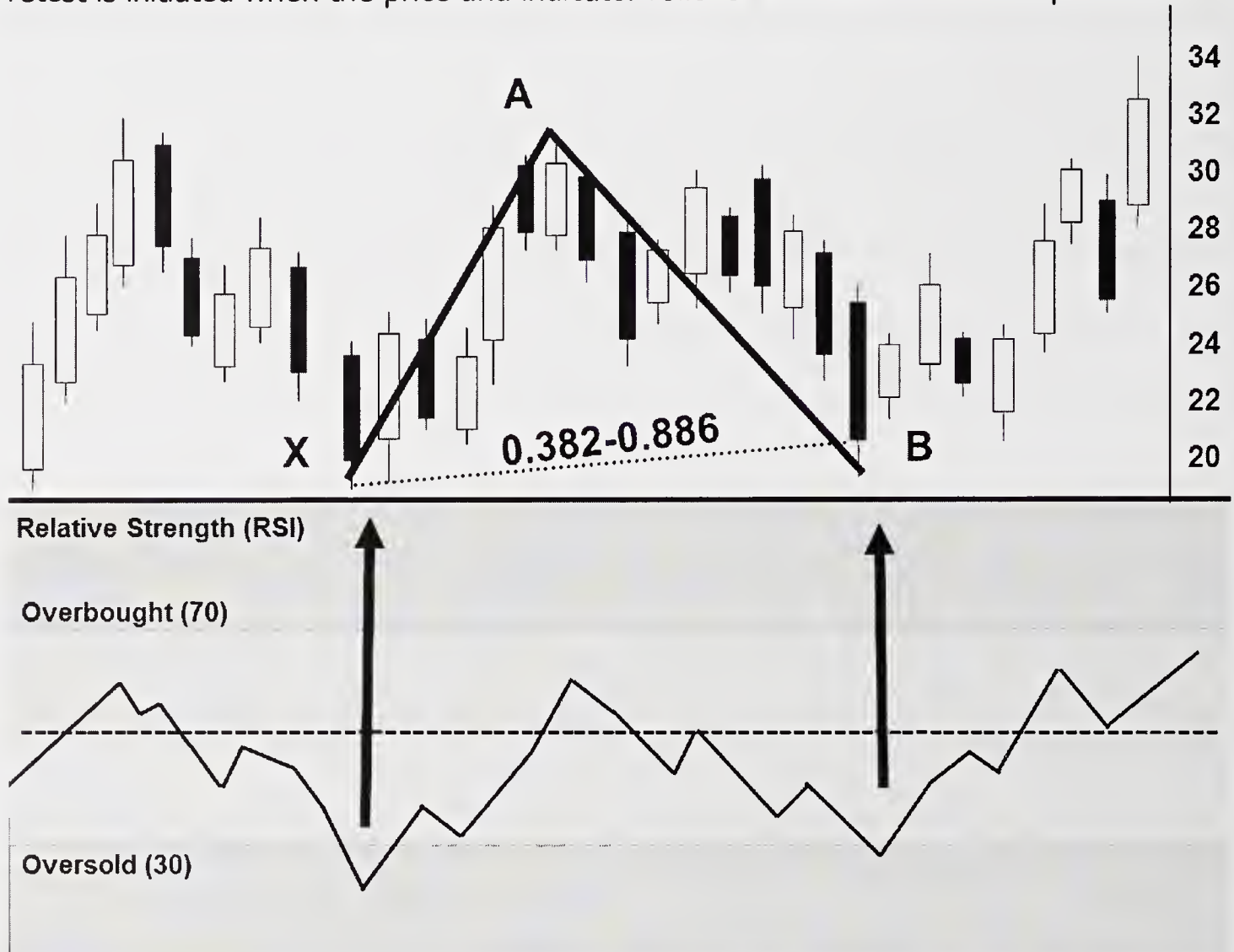
After the initial extreme bullish test, the corresponding retest will typically retrace to a bullish retracement. This is important because the nature of this type of confirmation coordinates two distinct RSI readings that have successive extreme readings separated by a minimum test of the 50-line. In this case, the price retracement and the rising indicator readings define the environmental condition where the harmonic support has been confirmed and the reversal is strengthening.

The following chart shows an ideal RSI BAMM Simple Bullish Confirmation in the New Zealand Dollar that reversed at a 61.8% retracement. The most important aspect of these two formations is the minimum retest back to the midpoint line at the 50 level. The initial impulsive reading defined support at the 0.6760 level. After a period of consolidation, the indicator retested the oversold extreme with another impulsive reading that reversed slightly above the initial reversal.
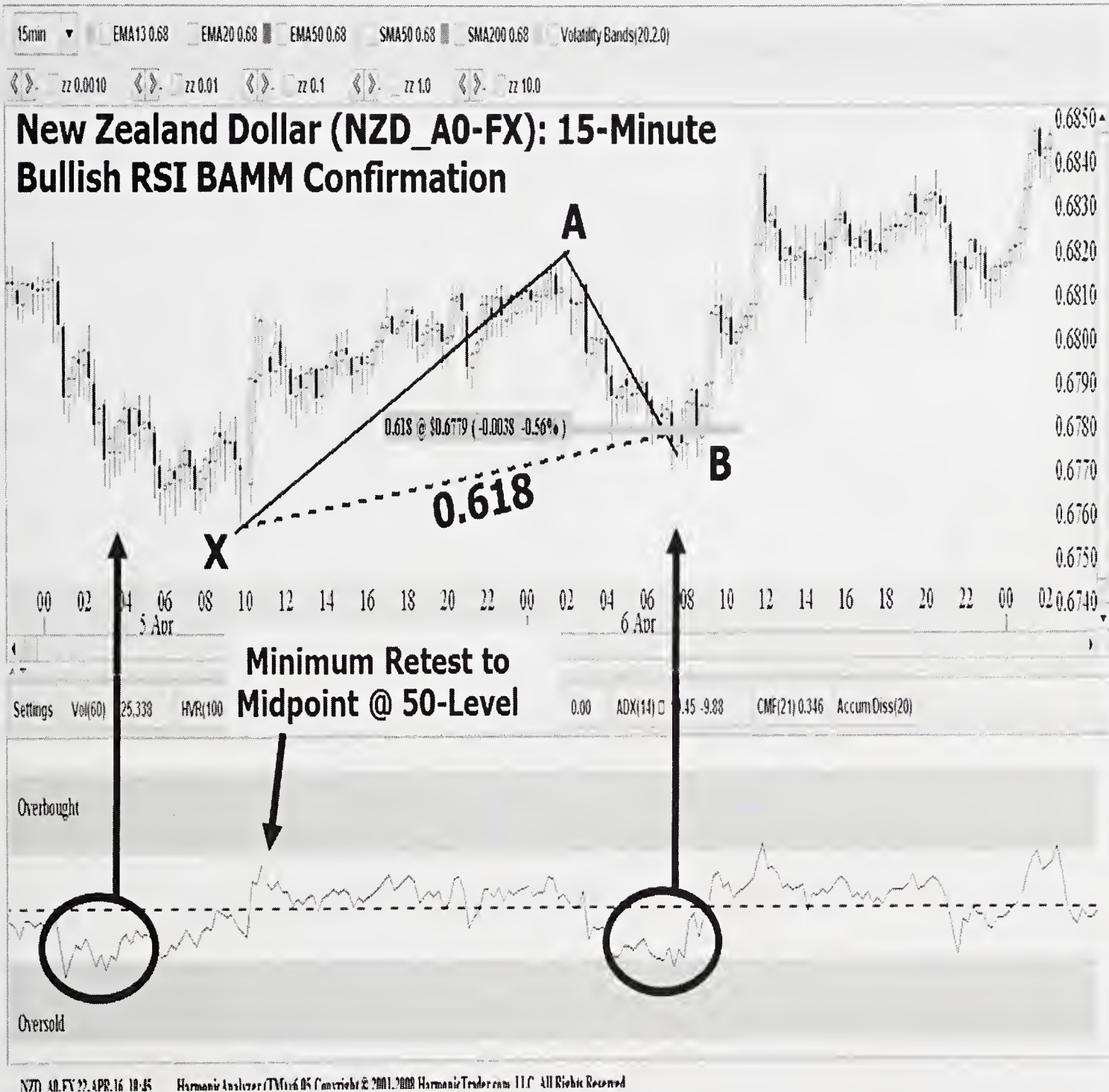
RSI BAMM Bearish Simple Confirmation

The Bearish RSI BAMM Simple Confirmation is comprised of two extreme indicator tests that are successively lower as overall trend continues lower at an important retracement. Although these situations frequently possess distinct patterns that help to confirm the continuation price level, the key technical event is triggered by the secondary reversal from the overbought extreme.

0.382-0.886

X

B

A

Price at B pt. Reverses
below prior high.

Relative Strength (RSI)

Confirmation

Overbought (70)

RSI retests Oversold
area but reverses below
prior extreme reading.

Oversold (30)

Harmonic Trading Volume 3: Reaction vs. Reversal
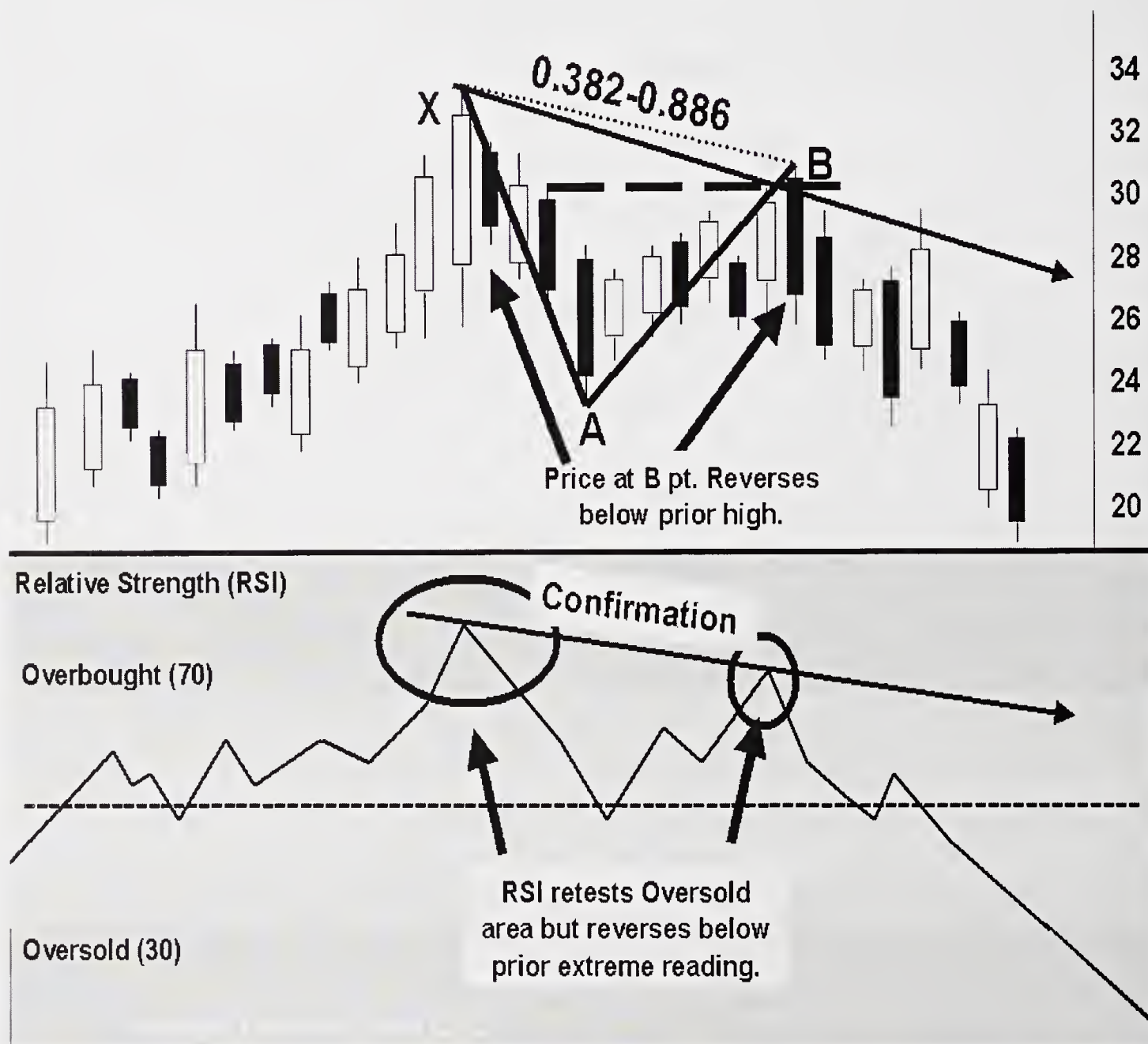
The following chart of Boeing possesses a clear harmonic pattern that was confirmed by the Bearish Simple RSI BAMM Confirmation. The overwhelmingly distinct successive impulsive readings identified important environmental characteristic of the harmonic resistance established by the Bearish Bat pattern. These relationships unfolded over the course of several months and the daily reversal unfolded following the completion of the pattern. I want to point out that this example demonstrates that these techniques work on any timeframe and in any market.

RSI BAMM Complex Confirmation

The RSI BAMM Complex Confirmation includes a complex RSI indicator structure as the initial reading. This begins the process where an immediate reaction to the midpoint line at the 50 level must be realized before a final retest of the RSI extreme is realized. That final retest must be an impulsive reading. This is the definition of the complex formation. This situation is unique because the secondary retest of the impulsive indicator reading confirms what the more substantial complex formation is indicating.

RSI BAMM Bullish Complex Confirmation

The RSI BAMM Bullish Complex Confirmation situations possess successively higher RSI readings where the secondary retest reverses at an important price retracement. There are many times where a simple AB=CD structure or complex pattern can confirm this area.

Harmonic Trading Volume 3: Reaction vs. Reversal
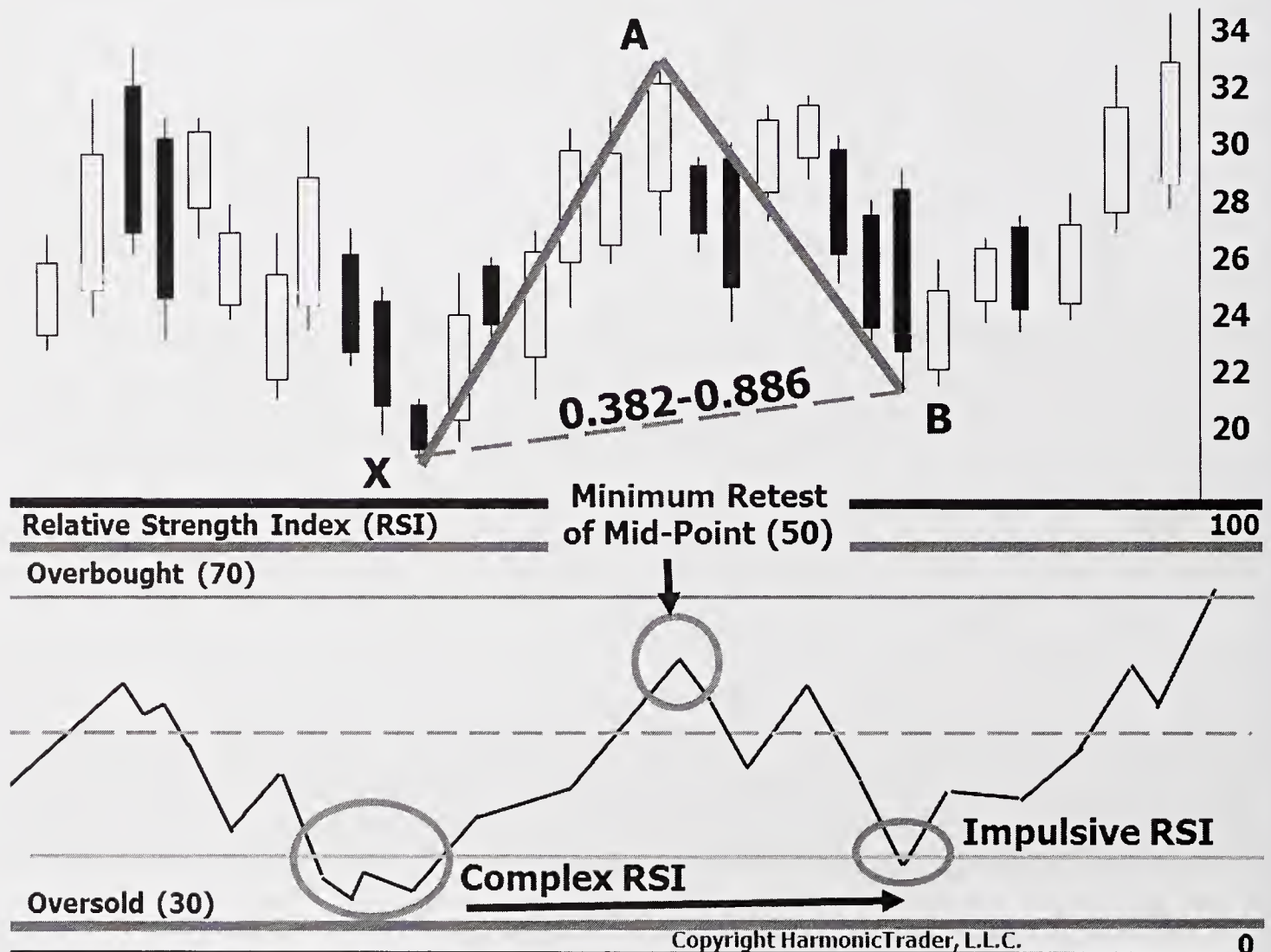
In this example, the British Pound formed an ideal RSI BAMM Complex Confirmation at an important 61.8% retracement. In this case, the initial complex reading stabilized close to the 1.41 level. After an extended consolidation phase where the indicator reading satisfied the retest of the midpoint at the 50-level, the price action retraced the initial rally. The secondary test of the indicator reading formed an impulsive structure that quickly reversed from the oversold extreme. In fact, is important to note how the indicator reading itself established a clear uptrend following this confirmation and provided an early signal of the trend strength well before the price was realized. This type of awareness can help clarify those situations where harmonic measures are more important and yield a larger reversal than a nominal reaction.

British Pound (GBP_A0-FX): 15-Minute
Bullish RSI BAMM Complex Confirmation

0.618 @ $1.4147 (-0.0095 -0.66%)

0.618

Minimum Retest to Midpoint @ 50-Level

GBP_A0-FX 22-APR-16_10:30   Harmonic Analyzer (TM) v6.05 Copyright © 2001-2008 HarmonicTrader.com, LLC. All Rights Reserved

Harmonic Trading Volume 3: Reaction vs. Reversal
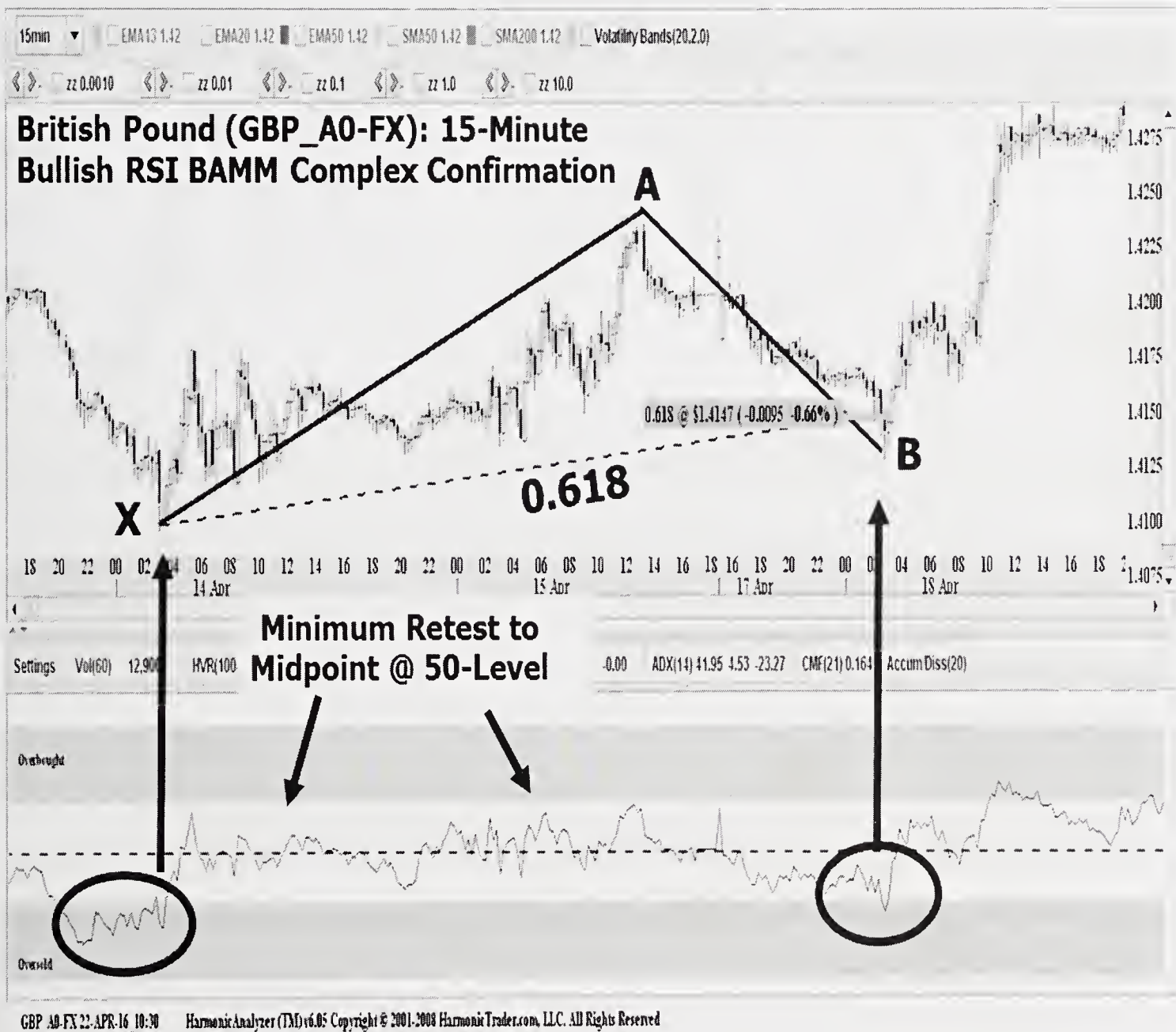
RSI BAMM Bearish Complex Confirmation

RSI BAMM Bearish Complex Confirmation situations possess two successive declining RSI extreme reversals where a key price retracement defines the resistance for the secondary test. Retracement patterns that materialize on the secondary test of this RSI formation provide some of the best confirmation situations.
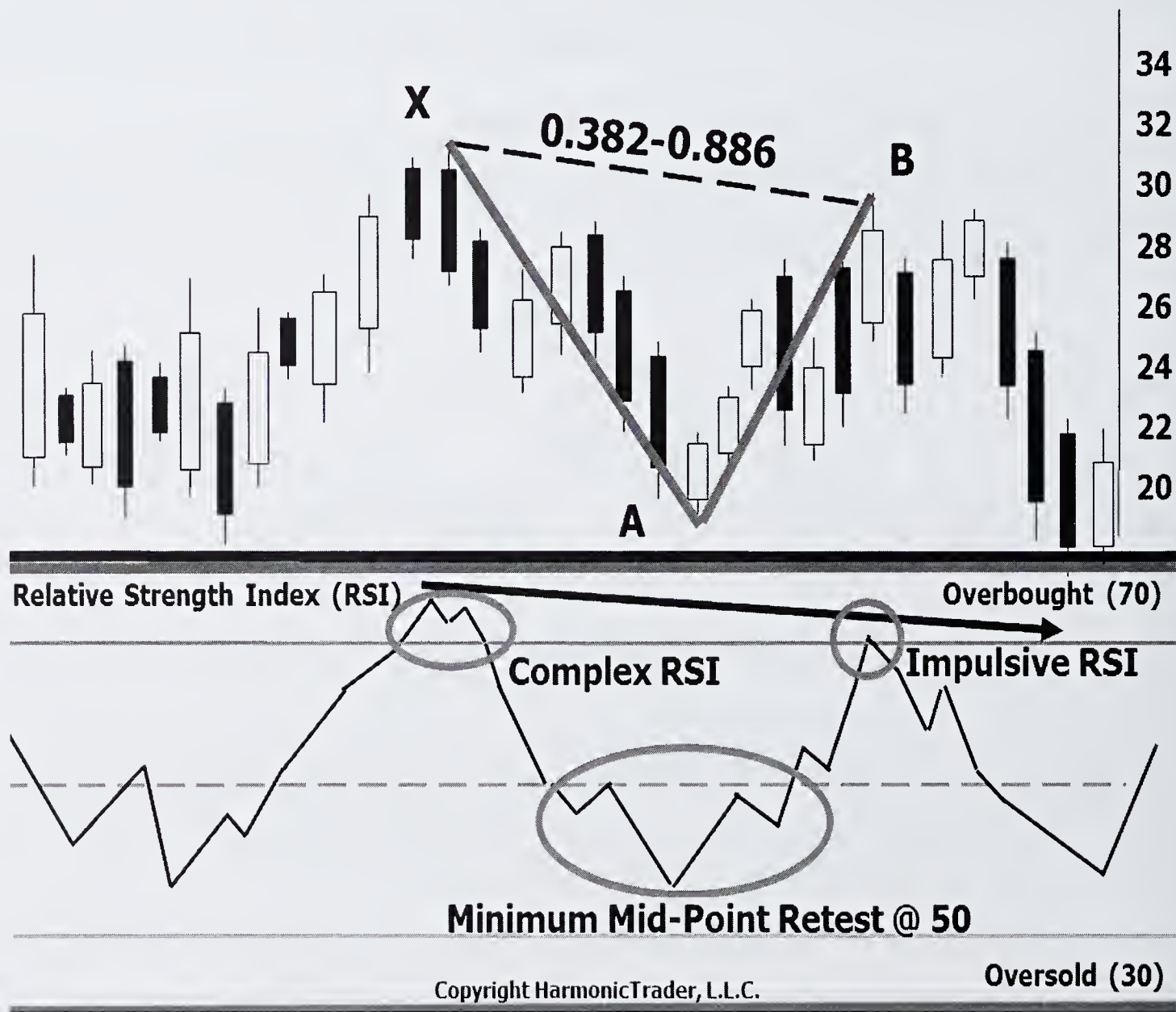
The following 15-minute chart of continuous contract in the Standard & Poor's 500 E-mini possesses a clear bearish complex RSI BAMM confirmation. The Bearish 5-0 structure was confirmed in the ideal fashion as the second indicator reading reversed

from the extreme overbought area below the prior complex structure. In fact, the complex structure that marked the peak registered a reading at 75 while the secondary retest briefly hit the 70 level then sharply reversed thereafter. Again, it is important to notice the immediate price response following the completion of the pattern. The indicator led the way as it broke down indicating weakness ahead.

Standard and Poor's 500 Index Continuous Mini-Contract (ES_#F): 15-Minute Bearish 5-0

Bearish RSI BAMM Complex Confirmation
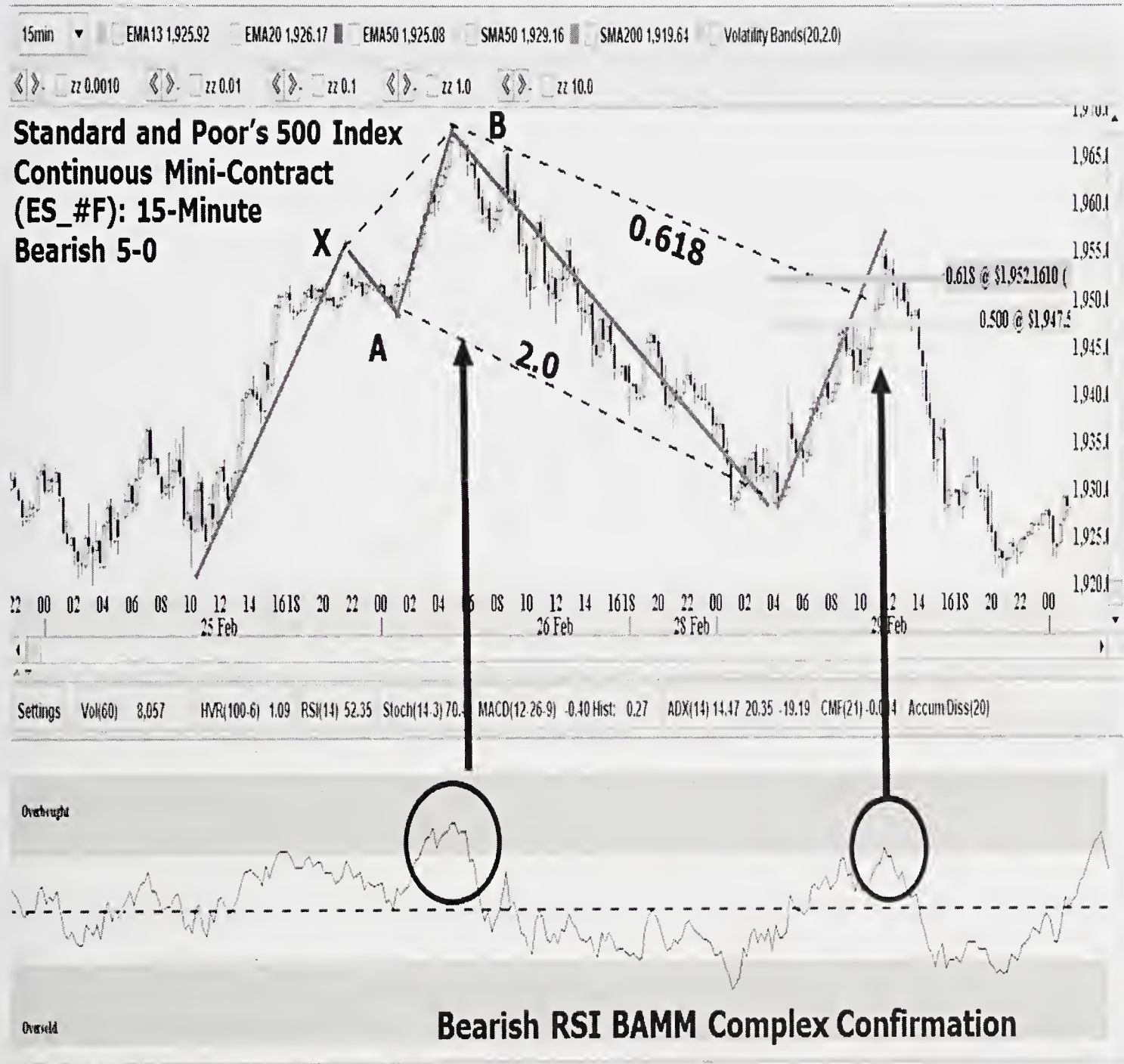
ES_#F 22-APR-16 10:10   Harmonic Analyzer (TM) v6.05 Copyright © 2001-2008 HarmonicTrader.com, LLC. All Rights Reserved

RSI BAMM Bullish Simple Divergence

One of the most powerful price action mechanisms the market exhibits is the phenomenon of divergence. This occurs when an indicator reading reverses from an extreme level while the price continues in a final phase of the predominant trend. The indicator divergence marks an early but critical insight into the strength of the predominant trend to continue. When divergence situations materialize, the targeted price levels for the reversal are defined precisely and require limited risk parameters. In combination with harmonic patterns, these represent some of the most precise opportunities.
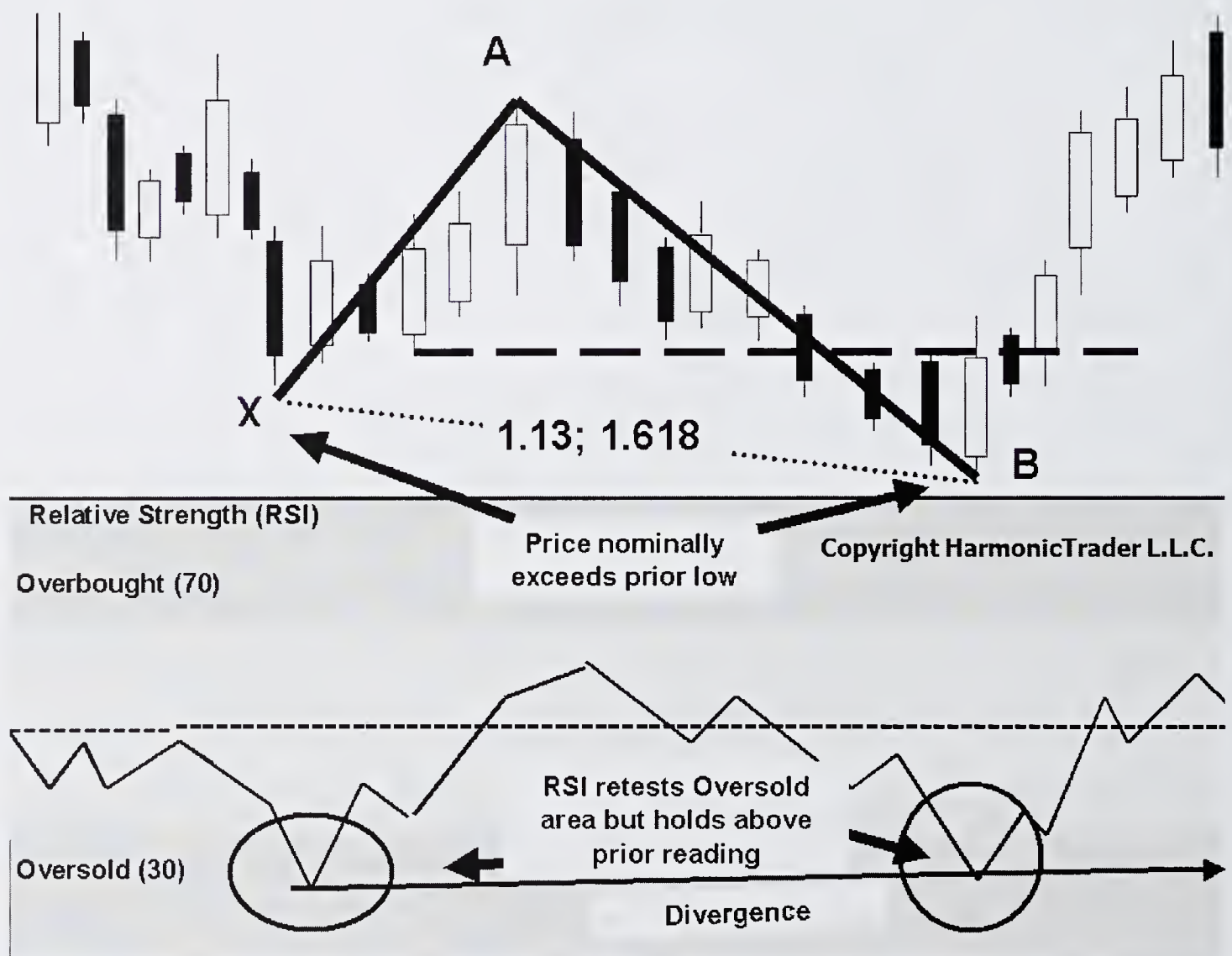
I initially outlined this concept in *Harmonic Trading Volume 2* and presented detailed strategies that help refine this phenomenon. Although the basic requirements are the same as all other types, the key difference in this variation is the projection of

the price reversal. Typically, the price will reverse within a pattern that possesses a 1.13-1.618% expansion range as an RSI impulse structure rallies sharply after testing the Oversold level (<30). These formations are found in extension patterns. The following daily chart of the Standard & Poor's 500 Index shows a fantastic RSI BAMM Bullish Divergence. The index formed two successive impulsive indicator readings over the course of several months. The price action exceeded the initial low to the 1.13 extension while the indicator reading reversed from the oversold extreme and a slightly higher level. The minimum retest in the indicator reading to the midpoint at the 50-level was the deciding factor that distinguished these two tests as a potentially powerful harmonic support zone.
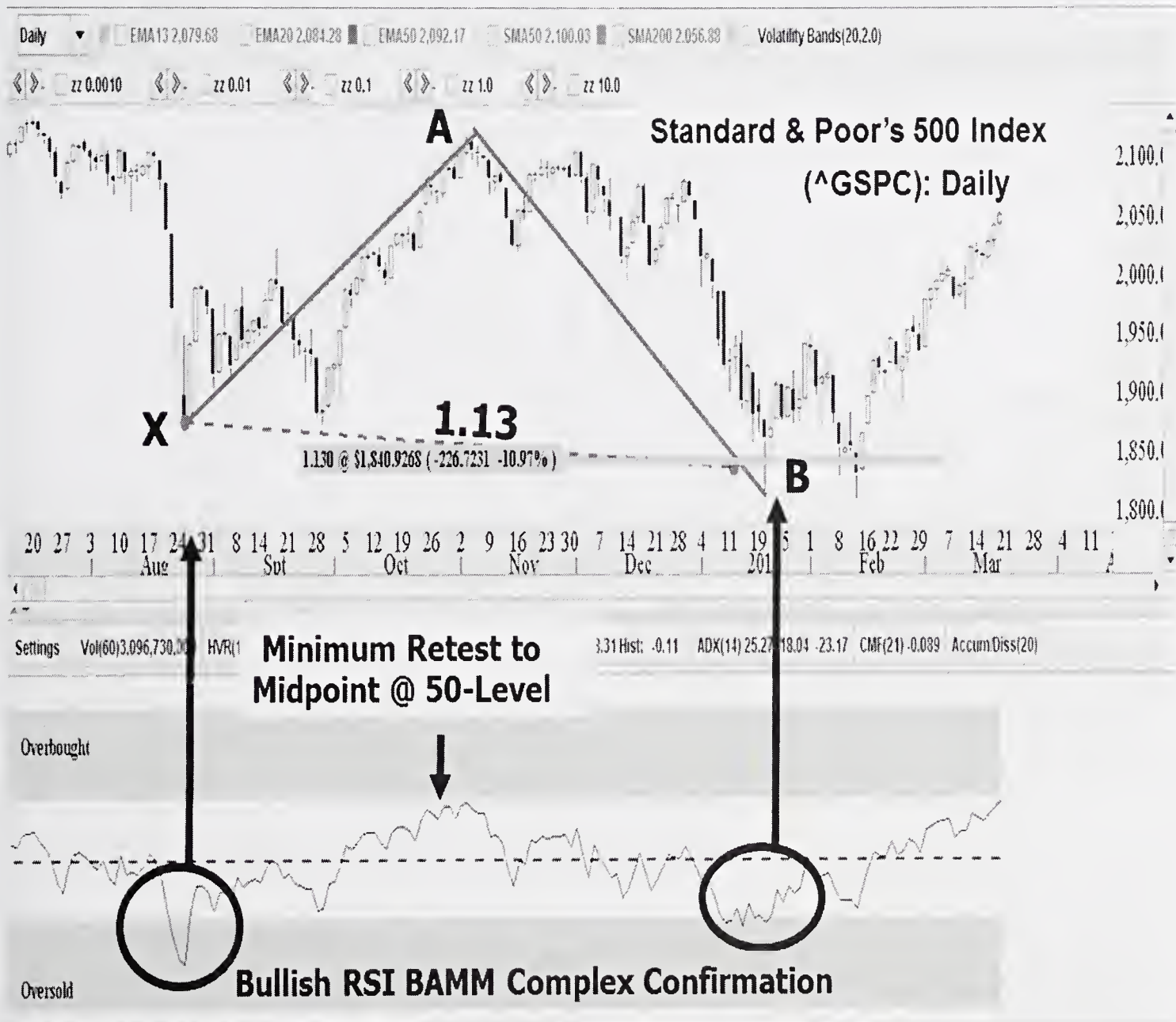
Harmonic Trading Volume 3: Reaction vs. Reversal

RSI BAMM Bearish Simple Divergence

Bearish Simple Divergence triggers are frequently signals that materialize after a long extended trend. It is quite common for two distinct extreme impulsive indicator tests that are separated by a minimum retest of the 50 mid-line provide clear confirmation of a change in trend well before it is recognized in price. These double tests are significant, especially at the completion of a harmonic pattern. They are to be considered more substantial than a singular impulsive test and they represent an important technical level within the trend.

Harmonic Trading
Bearish Divergence

1.13-1.618

X

B

A

Price at B pt.
nominally exceeds
prior high.

NOTE: Minimum 50-level between the
complex and impulsive.

Relative Strength (RSI)

Overbought (70)

Oversold (30)

RSI retests Oversold
area but holds above
prior reading

Harmonic Trading Volume 3: Reaction vs. Reversal
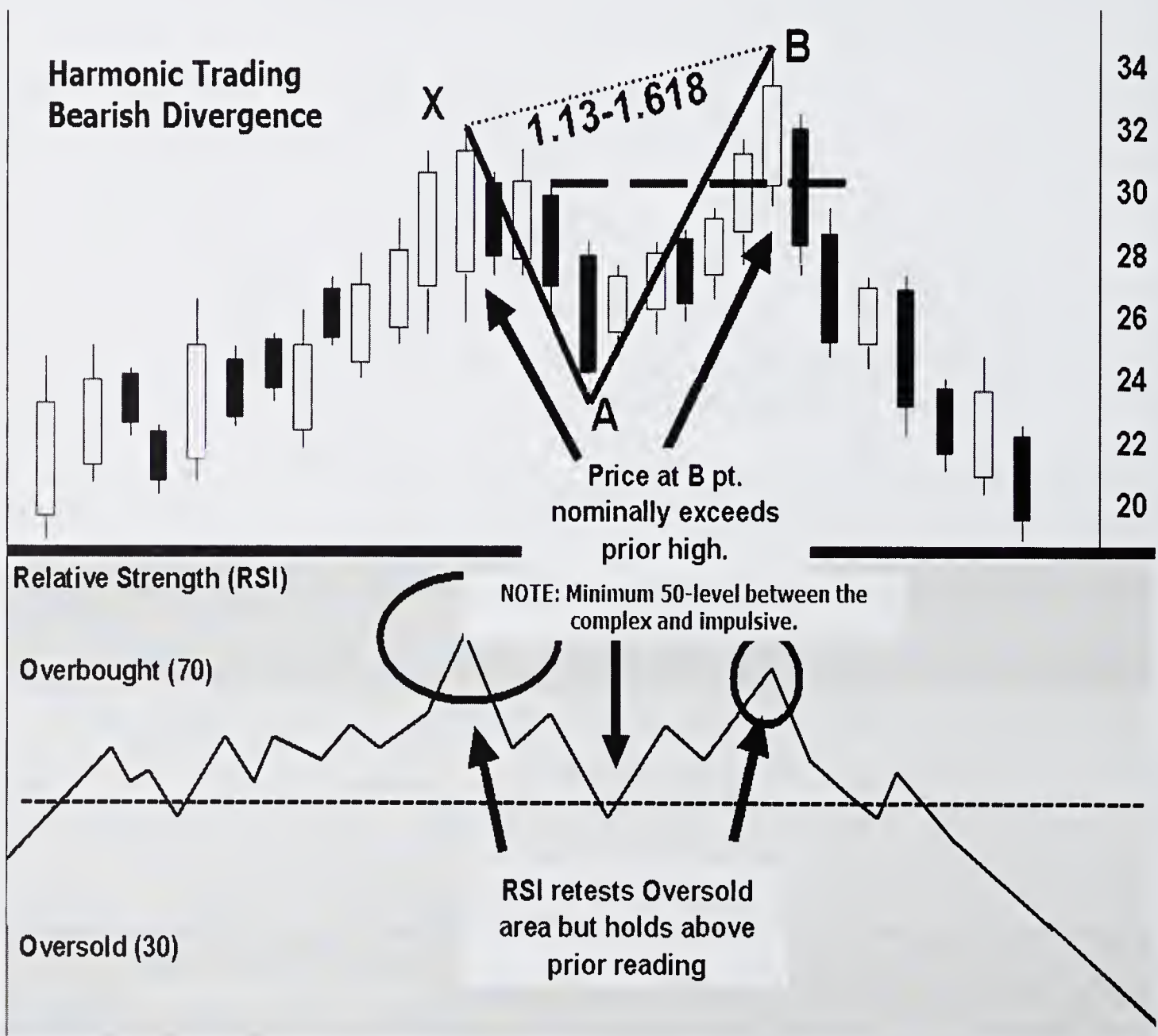
The following chart of the continuous contract in Crude Oil exemplifies what an ideal RSI BAMM Simple Divergence should look like. The indicator formed two successively lower tests at the oversold extreme while the price action rallied to a 1.618 extension. As the indicator reading became weaker, the price to a nominal new high that was inherently flawed. These situations present some of the best reversal opportunities as the price extends into an area where the environmental weakness defines a larger reversal at hand.
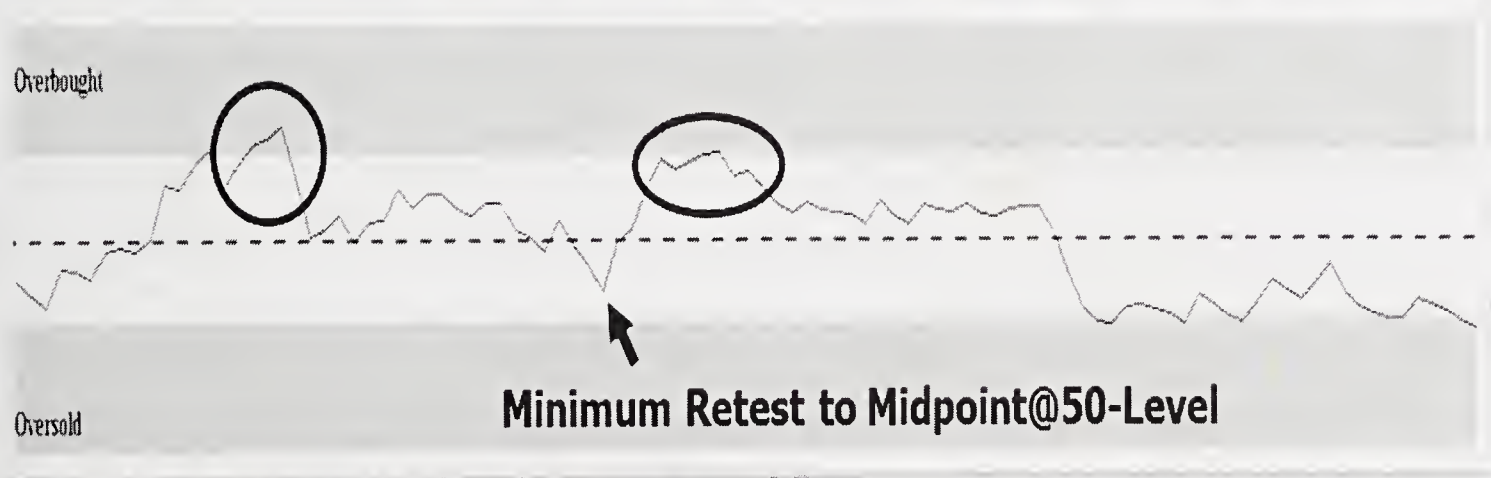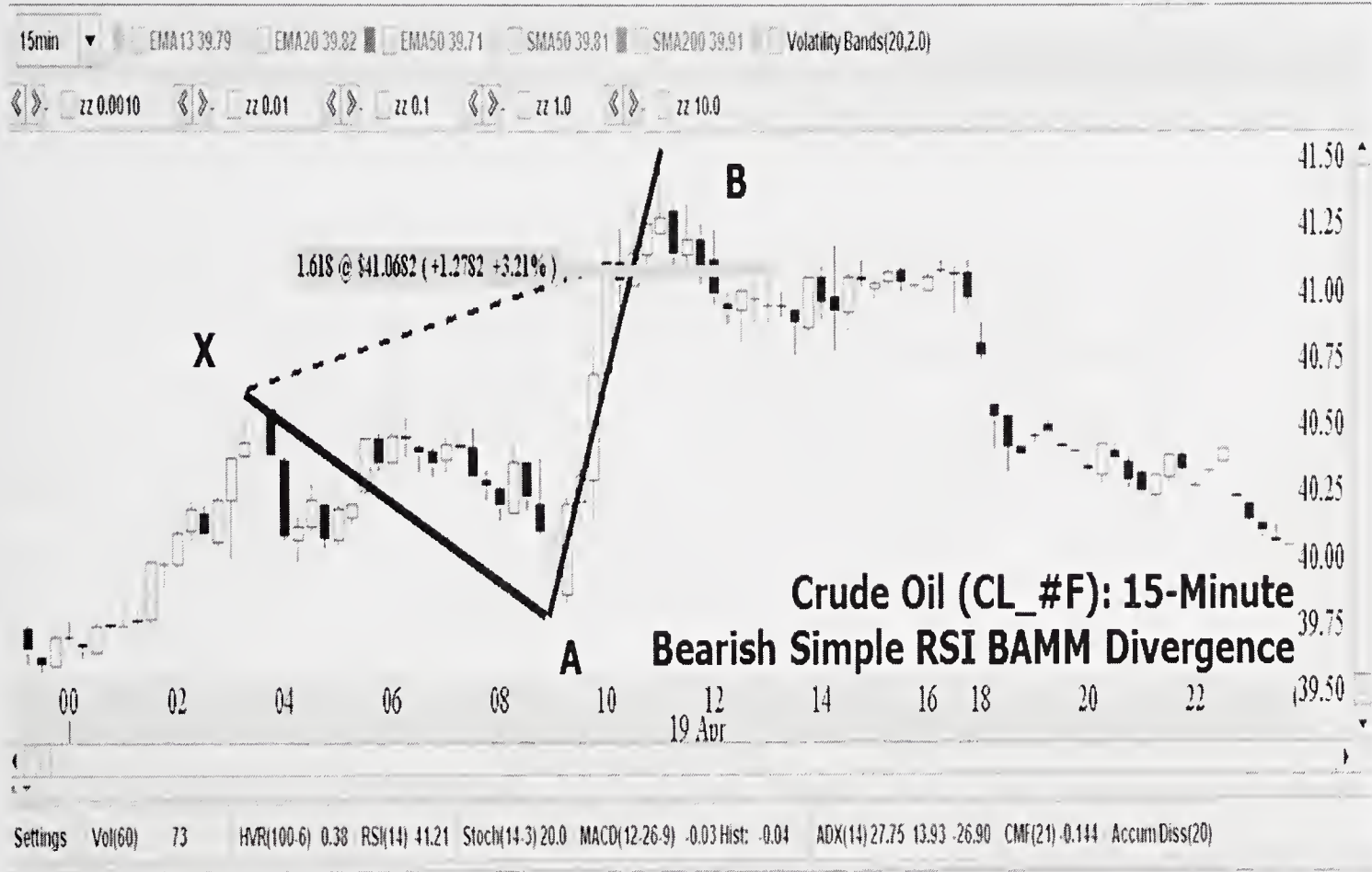
Crude Oil (CL_#F): 15-Minute
Bearish Simple RSI BAMM Divergence

Minimum Retest to Midpoint@50-Level

RSI BAMM Bullish Complex Divergence

The RSI BAMM Complex Divergence is the most advanced model to describe an environmental condition within the Harmonic Trading approach. It is the primary situation that I outlined in my *Volume 2* book and it is a methodology that I continue to refine to this day. In fact, I have discovered enormous relationships examining market action through this framework. It is led me to other discoveries and it as enabled me to define market environments in unprecedented fashion. This one market mechanism has been the impetus for an entire body of advanced work that defines harmonics in the financial markets unlike ever before.
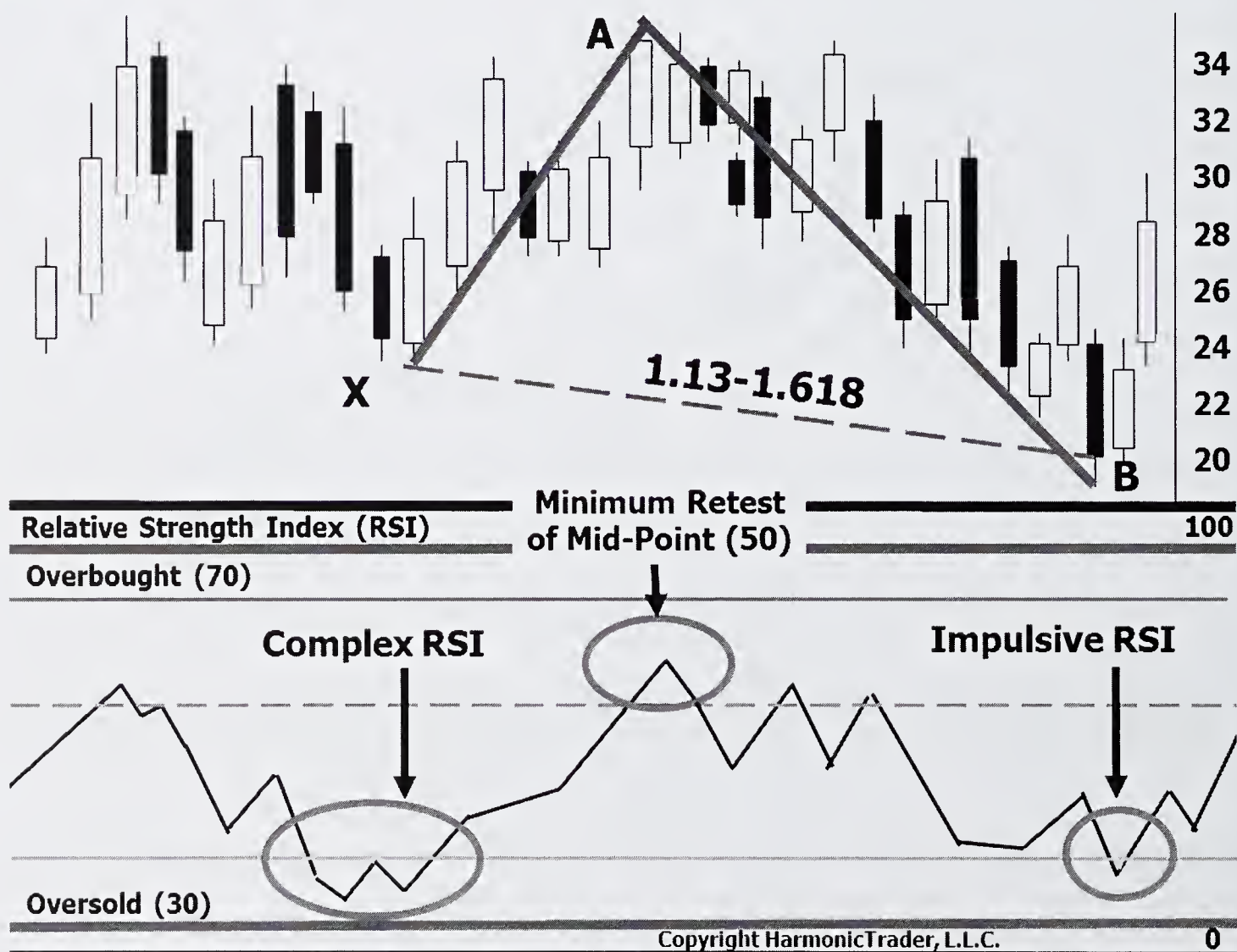
After a bullish complex indicator reading has materialized and the minimum retest of the 50 level has been satisfied, the eventual retest of the oversold extreme must possess an impulsive formation. As the RSI retests the oversold extreme but reverses at a slightly higher level than the initial complex structure, price action will decline to a nominal new low. Again, this is one of the most powerful technical

Harmonic Trading Volume 3: Reaction vs. Reversal

situations the market can provide. The last decline is weak where the sellers are exiting positions at prices that are near the termination point of the trend. These conditions possess some of the strongest market elements that create phenomenal price moves. The RSI BAMM approach accurately defines where the price will terminate by assessing either the 1.13 or 1.618 projections. Although the completion of the entire RSI formation may be an early signal at times, it's coordination with a clear harmonic pattern is the best application of these conditions.

The following intraday chart in the Dow Jones Industrial Emini futures continuous contract shows an excellent example of a Bullish Complex RSI BAMM Divergence situation. The Bullish Shark identified excellent harmonic support and the impulsive indicator reading retested the initial complex structure. The secondary test reversed above the initial reading while the price slipped below the initial low.
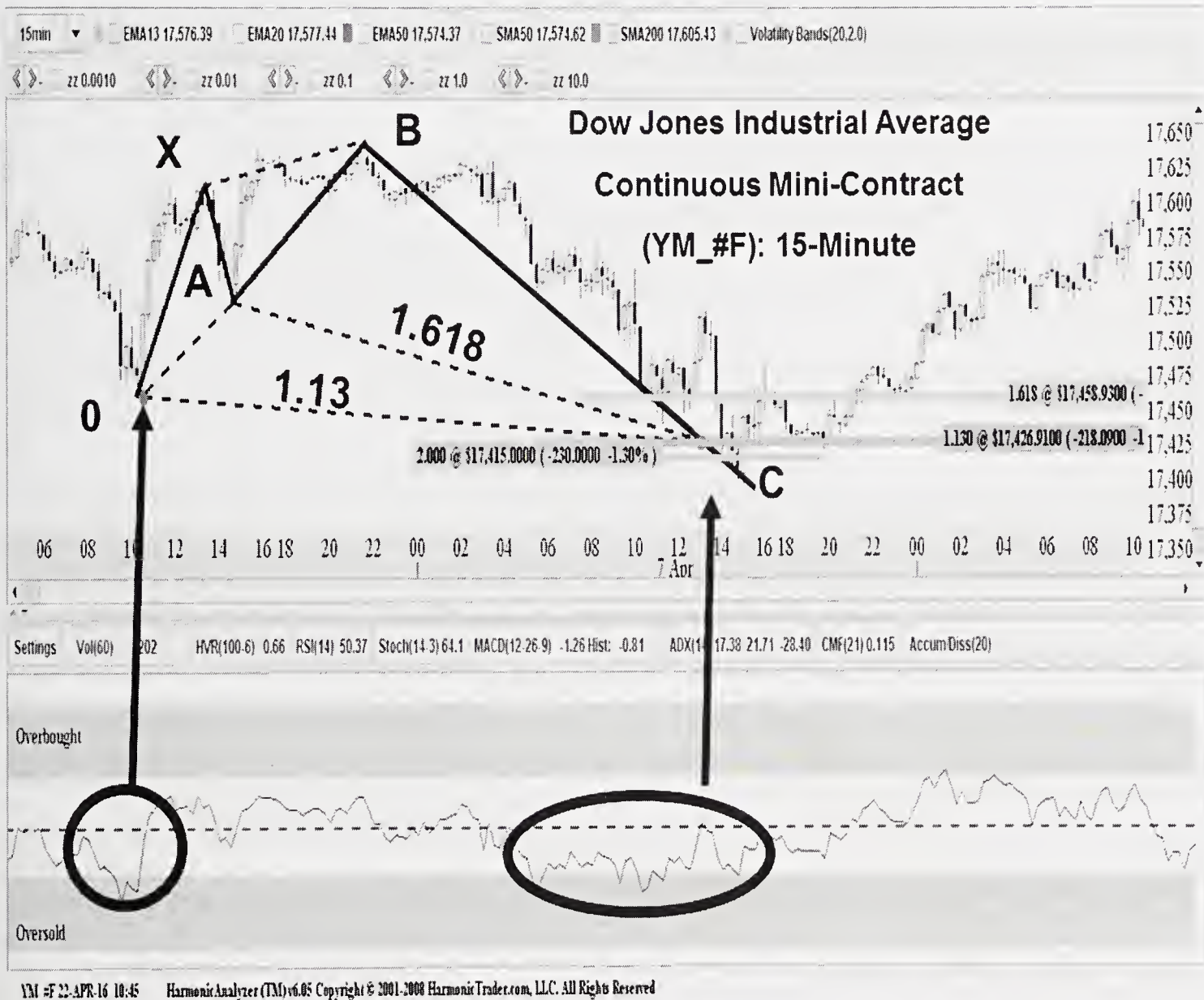
RSI BAMM Bearish Complex Divergence

The RSI BAMM Complex Divergence is a powerful combination of a complex formation followed by a distinct impulsive retest that is separated by reaction to the midpoint line at the 50 level. As the successive RSI extreme reversals are decreasing, price rallies to nominal new high but it is inevitably doomed due to the weakening internal strength as manifested by the indicator. These are fantastic trading opportunities and I recommend that all Harmonic Traders study this illustration and single out these opportunities as particularly significant.
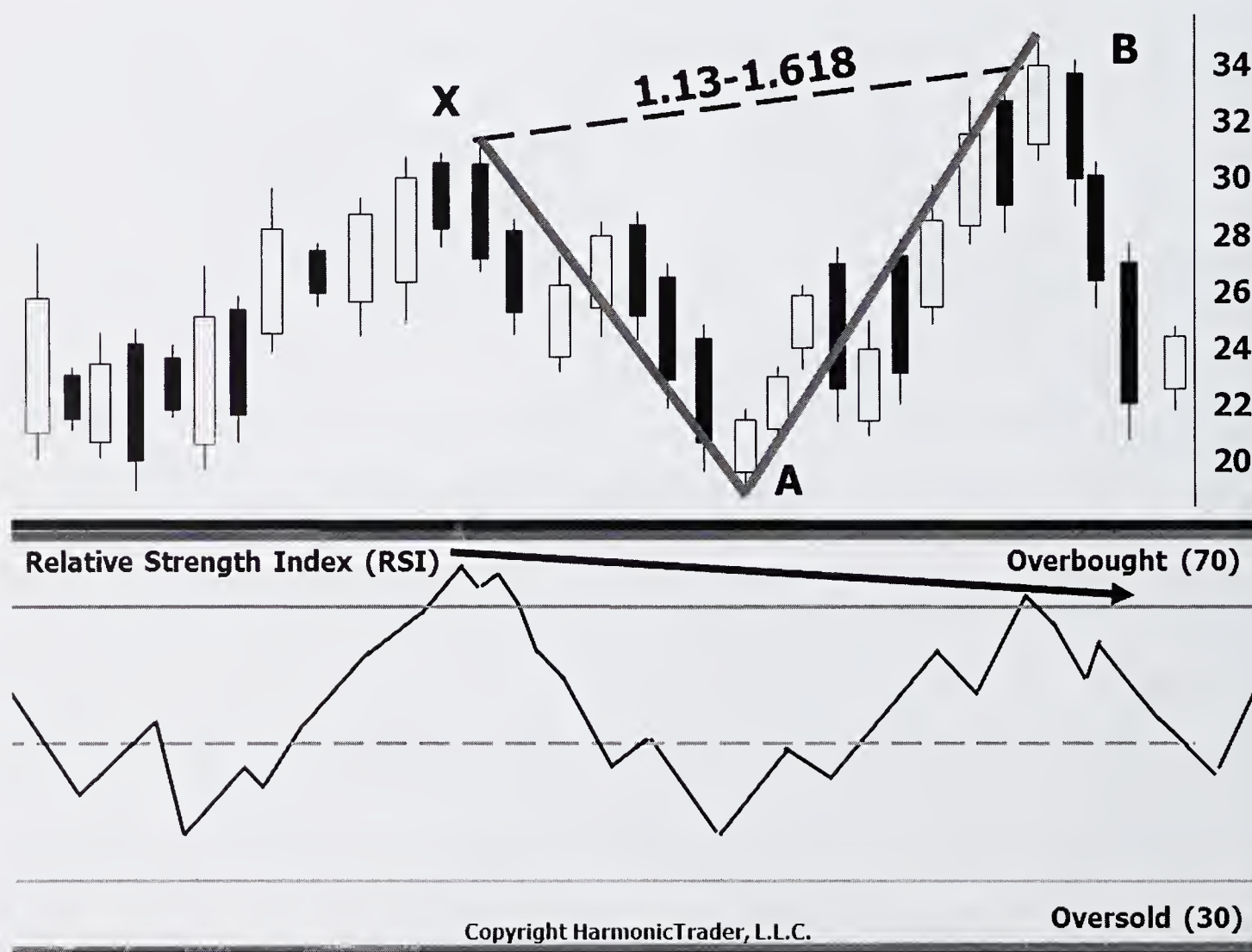
RSI BAMM Bearish Complex Divergence

The following example of a Bearish Complex RSI BAMM Divergence in the Standard & Poor's 500 index continuous Emini contract exemplifies all the conditions of this situation. The initial complex reading reversed from the overbought extreme. The minimum retest to the midpoint line at the 50-level preceded the final impulsive overbought extreme reading.

Standard and Poor's 500 Index Continuous Mini-Contract (ES_#F): 60-Minute Bearish Complex RSI BAMM Divergence

Minimum Retest to Midpoint@50-Level
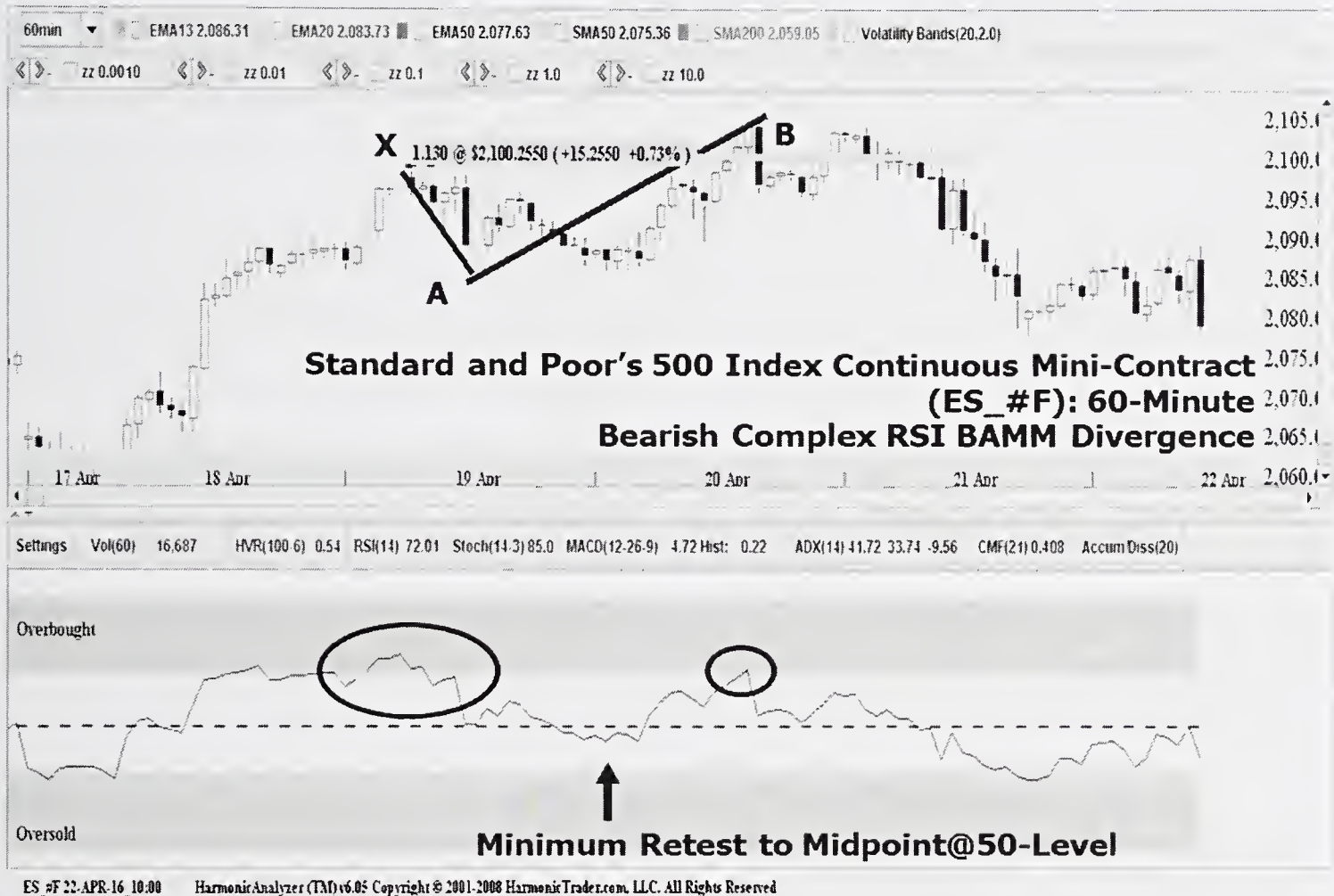
The price action rallied to nominal new high while the indicator reversed from a reading that was lower than the prior extreme. The indicator reversed demonstratively following the secondary retest and indicated weakness at hand. These situations are excellent defining those rallies that are inherently doomed and become failed breakouts providing a greater potential for a large reversal.

RSI and The Defined Trading Realm

The importance of the action of preparation of all three steps of the process instills the proper expectations that guide trading decisions from start to finish. As I previously discussed, the measurement strategies within each step create the Defined Trading Realm where we can identify what is possible and eliminate the improbable.

Harmonic Trading Volume 3: Reaction vs. Reversal

When we can reduce our variables to a few possibilities, trading decisions are immensely facilitated. The simplicity of the task of identification, execution and management comes from a complete understanding of all expectations as defined by the proper measurements of price structures on multiple timeframes. The comparative analysis of a properly defined pattern that possesses clear confirmation traits with qualifying signals on multiple timeframes provides the greatest conditions for an anticipated reversal. In the same way that a poker player understands which hands have the best probabilities, the trader must know the precise conditions that favor the greatest chance of success.

With respect to the Relative Strength Index and environmental indicator analysis, these advanced measurements and considerations integrate with harmonic patterns to define the complex market environment. These complex variables coalesce to define a more accurate picture. In fact, the combination of these two measurement perspectives creates situations where individual segments of these larger market mechanisms can be broken down to define reactive but extremely accurate trading opportunities. Furthermore, they can provide greater insight regarding probable future price direction. When we understand what a market must do to terminate a trend or change character, those variables must be manifested in the price action to confirm what is expected.

Anchoring Techniques

Utilizing such expectations, it is possible to clearly identify the smaller phenomenon within these market definitions. There are many situations that present themselves in the combination of patterns and indicator readings that define unique integrative opportunities outlining expectations even more clearly. For example, I frequently utilize structural signals from a larger timeframe and look to trade the reaction of price reaction as a short-term opportunity. In one instance, a pattern that forms on a daily chart may not yield a significant reaction, especially if that pattern is in the midst of a well-established primary trend. However, in most cases, the natural harmonic reaction phenomenon will define short-term pausing opportunities where the longer-term levels are dictating the immediate trend. After gaining experience with these expectations, the larger relationships become clear especially the various combinations and categorization of indicator readings. By no means do I feel that the RSI BAMM methodology is as straightforward as the pattern identification rules however, we can define appropriate environmental factors that shape what is possible within the realm of any particular harmonic structure.

Advanced RSI BAMM

As most know, the RSI BAMM defines complex and impulsive readings that combine to define important divergence/ confirmation technical situations. It is common

for clear indicator readings to develop and confirm larger structural signals that harmonic patterns define. For this reason, when the analysis of both confirm the opportunity, these situations provide even clear parameters for the opportunity. After examining a few examples, these unique situations will be fairly clear. These strategies are more situational – type opportunities that require a recognition of a few more factors than simple pattern rules but the general expectations for each measurement does provide an advanced framework within which to analyze harmonic structures.

Advanced Bullish RSI BAMM AB=CD

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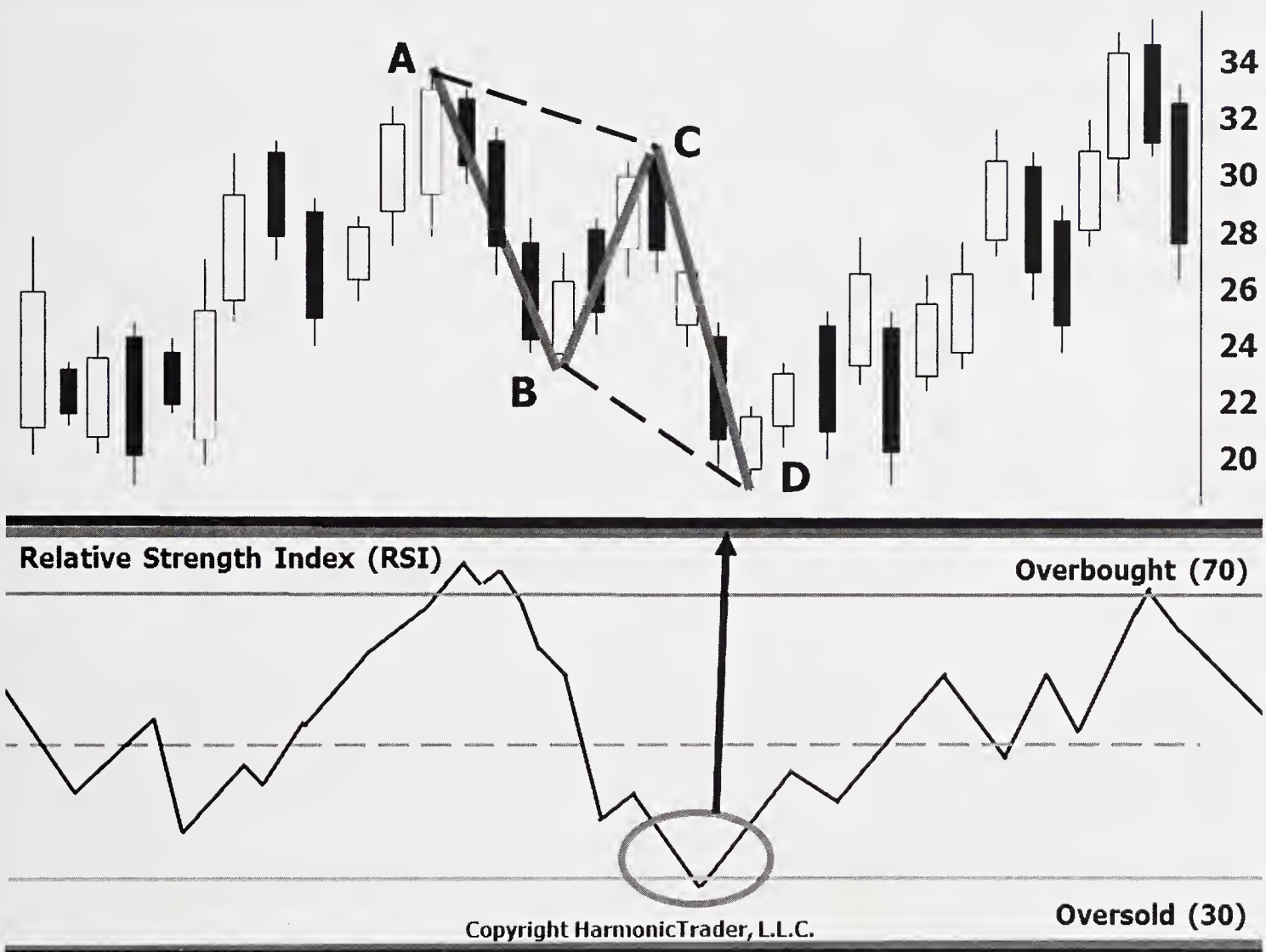
Complex RSI structures possess limited expectations following the completion of the reversal from the extreme area. As was outlined earlier in this chapter, complex formations typically experience a short-lived reaction that eventually experiences a retest of the initial price level. Although the minimum expectation of all complex reversals is an eventual retest of the midpoint line at 50, there are interesting pattern relationships that frequently form to complement exactly when this retest phenomenon begins.

Harmonic Trading Volume 3: Reaction vs. Reversal

At a minimum, the retest of the complex structure is not considered until the midpoint line has been tested and the indicator reading trend line has been violated. One of the most profound reactive opportunities within the arsenal of harmonic situations occurs when complex structures are followed by distinct AB=CD patterns. The AB=CD structure establishes a minimum price formation that complements the retest to the 50-midpoint line. It is important to note that these minimum objectives – the AB=CD pattern and the minimum test to the 50-midpoint line in the RSI reading – serve as the trigger point for this possibility. It is typical for price action to exceed these levels. Therefore, it is important to coordinate both the break out in the indicator after it has tested the 50-line and the completion of the pattern structure relative to its own breakout in price.

MSFT 01-APR-16   HarmonicAnalyzer (TM) v6.05 Copyright © 2001-2008 HarmonicTrader.com, LLC. All Rights Reserved
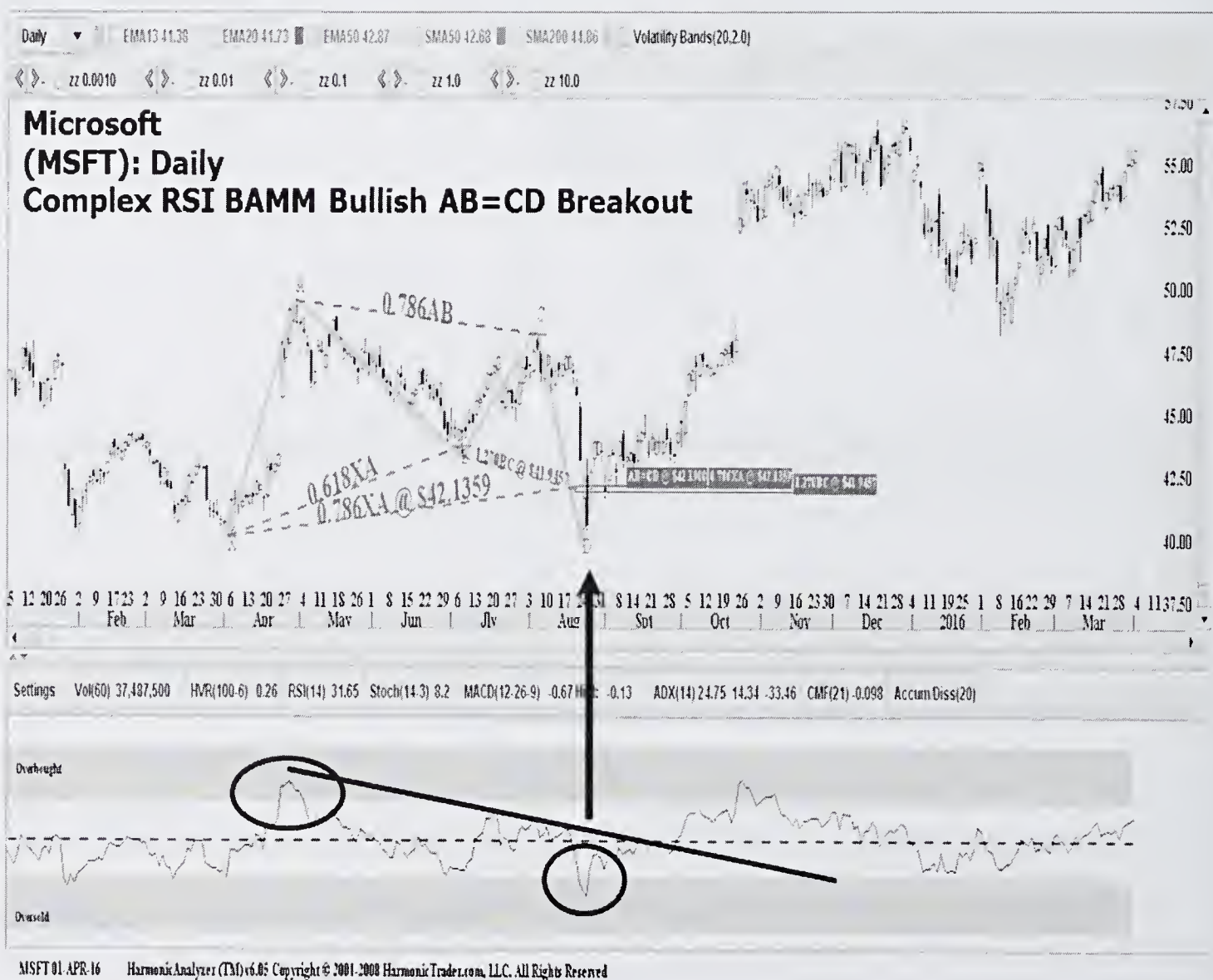
The following daily chart in Microsoft exemplifies this phenomenon. In fact, the situation possessed more than just a Bullish AB=CD. The Bullish Gartley pattern that developed within the RSI BAMM complex set up was quite distinct and realized a sharp reversal. After the complex structure was established, the indicator reading reversed all

the way back to the oversold level as the price action formed a distinct AB=CD. When patterns such as these materialize in between important extreme readings, the probability for a significant reversal is certainly greater with defined profit targets in both the price and indicator reading. These are exceptional opportunities but are the type of situations that require integration of multiple elements to define the most prolific market environments.

Bearish RSI BAMM AB=CD

After the complex RSI reading stabilizes under the 30 level, the corresponding breakout and price reaction will form a distinct AB=CD structure off the low. These can be difficult situations to foresee an opportunity especially when the previous decline has been quite severe.

Harmonic Trading Volume 3: Reaction vs. Reversal
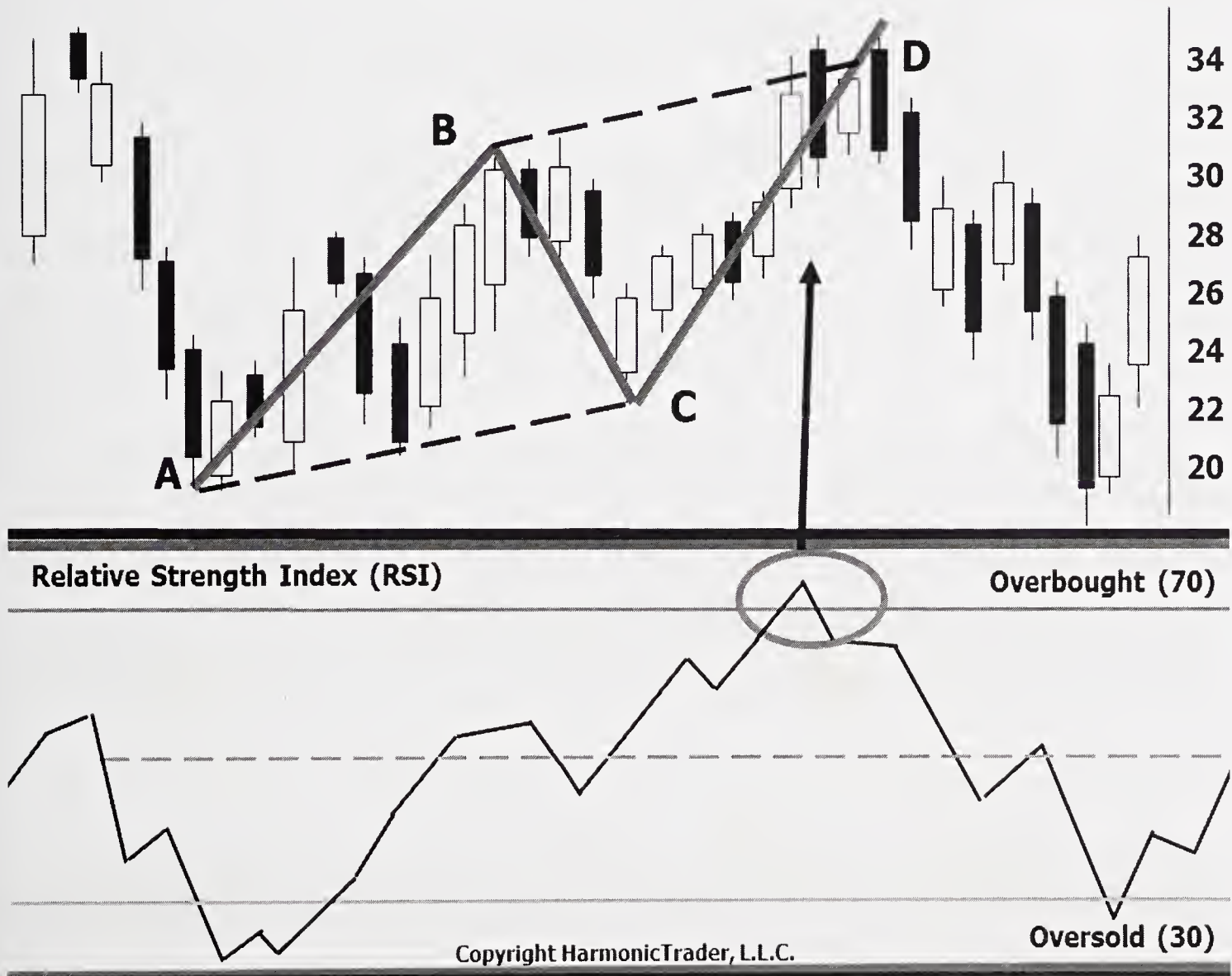
Regardless, the eventual retest of the complex RSI indicator in combination with the minimum Bearish AB=CD pattern defined an important limit for the reaction. Again, it is important to understand that the minimum retest limits are often exceeded. In fact, it is quite common for the corresponding reaction of the indicator to test the other extreme. The key factor is where the pattern structure completes. This will pinpoint the minimum price level and help confirm when the indicator begins to roll over. The following chart of the Euro/British Pound showed a slightly different type of AB=CD structure that was smaller but distinct. In comparison with the RSI reading, the complex formation reversed from the oversold extreme and tested the midpoint line at the 50-level before beginning the eventual retest.

Euro/British Pound (EURGBP_A0-FX): 15-Minute
Bearish AB=CD@RSI Complex Retest

Minimum Retest to Mid-Point @ 50-Level

EURGBP_A0-FX 22-APR-16_10:30   Harmonic Analyzer (TM) v6.05 Copyright © 2001-2008 HarmonicTrader.com, LLC. All Rights Reserved
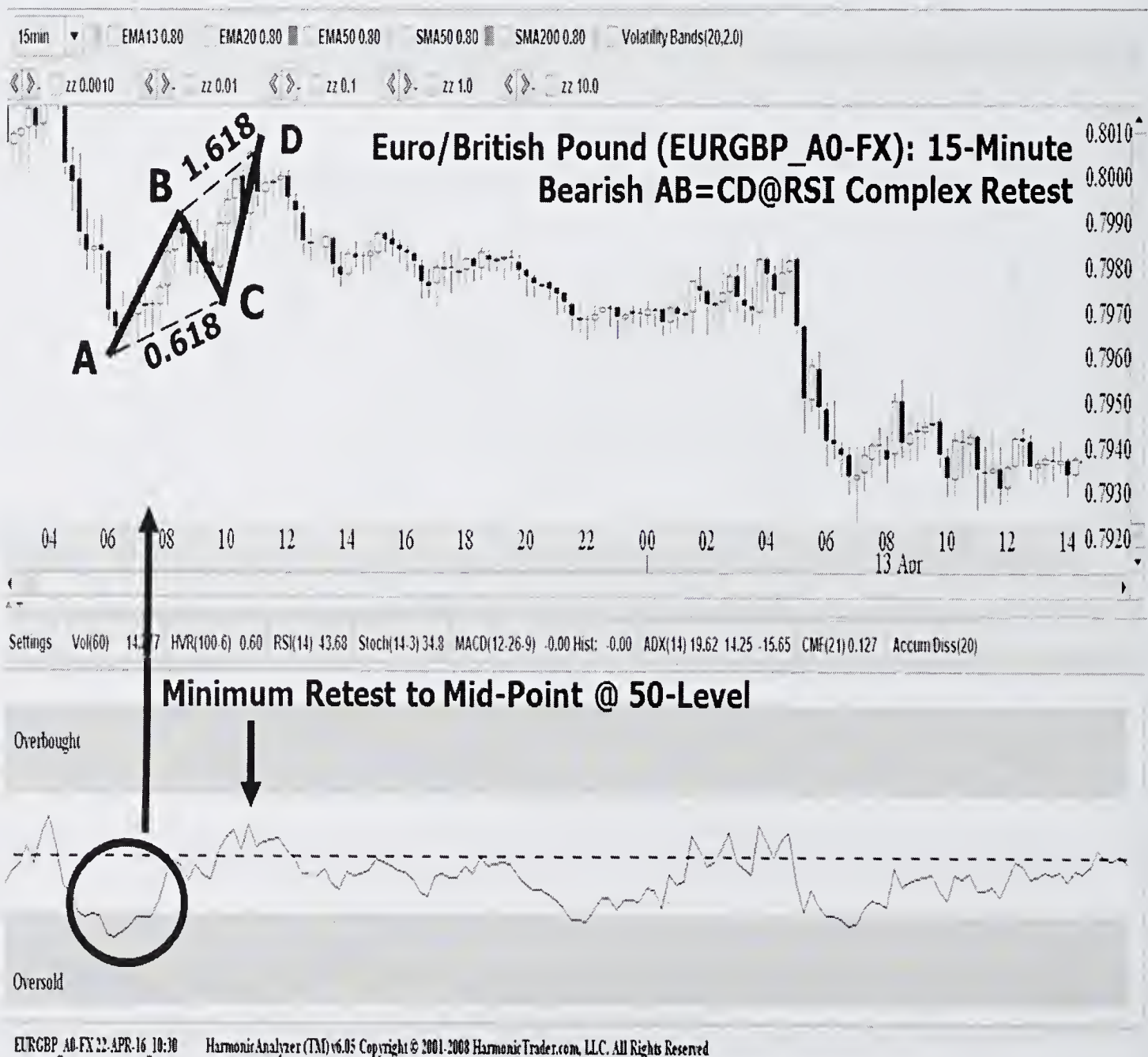
Although the price action formed a rather small pattern structure, the RSI indicator reading satisfied the conditions for the situation. This is an important consideration when identifying these situations. Sometimes they can be distinct as was exhibited in the prior example of Microsoft. In this case, the AB=CD pattern is smaller but as significant, especially when coordinated with the minimum retest to the midpoint line at the 50-level.

Advanced Indicator Analysis in Harmonic Trading Conclusion

My integration of Welles Wilder's Relative Strength measure with harmonic patterns was an enormous step forward in the analytical process of determining what truly defines a profitable opportunity. As I have outlined throughout this book, the key distinctions that are required to determine reactions from reversals must include other considerations than price measures. I believe that RSI is an ideal oscillator to gauge how far a market has moved in a specific period of time. However, the indicator's formula is somewhat static in its manifestation of readings.

There are many instances where multiple tests of an extreme area can trigger false positives. Although I believe that these can be filtered to avoid flawed signals, the true strength of any indicator is to provide a constant bias of predominant market direction. The clearest indicators can exhibit these characteristics and compensate for random market movements that can often distort other readings. Despite some of the drawbacks of the indicator, it is clear that the single analysis of this measure alone does not constitute a valid opportunity. Rather, the integration of these interpretations with harmonic patterns creates a fertile environment of reliable and consistent measures that possess powerful predictive capabilities of probable future price action.

Chapter 6
Harmonic Strength Index (HSI)

Harmonic Indicator Analysis

There are many shortcomings of technical indicator analysis. Most notably, the indicator unto itself is not a reliable signal on its own. In my *Volume 2* book, I outlined the unique RSI BAMM strategy of Divergence and Confirmation. Again, I would like to keep it simple but I can easily demonstrate these relationships from real market examples and the understanding of how this analysis works. Although the strategies I have categorized are derived from the Relative Strength Index, they are effective on in their right. I have continued to experiment with technical measures, especially those that employ harmonic ratios. I have found that indicators that possess a harmonic modifier to their respective formula provide a more appropriate insight as to the environmental bias of market conditions, especially when patterns confirm these measures.

The process of this discovery and refinement started in my research of harmonic patterns and Relative Strength. When I was putting together the material for *Volume 2*, I 0spent a great deal of time refining indicator readings and uncovering similar structural relationships as I had done for harmonic patterns. The strategies required several years of refinement before I was comfortable with the established parameters that confirmed harmonic pattern opportunities. Overall, the concept of confirmation is critical to validate the price levels that structural signals establish. Initially, I was satisfied with the results of Relative Strength readings. However, as I experimented with harmonic relationships in indicators, I unlocked many interesting discoveries. In fact, I feel I have created a harmonic indicator that measures environmental variables in an unprecedented manner. This is called the Harmonic Strength Index (HSI).

Harmonic Strength Index (HSI)

The Harmonic Strength Index (HSI indicator is a proprietary formula but is designed to act as an early validation measure WHEN harmonic patterns exist. This is the best application for the indicator, especially as extreme reversals confirm pattern completion points. Quite simply, HSI is the next phase of Harmonic Trading. It is a broader expression of harmonic price behavior in the financial markets and our research with this formula has led to other indicator measures that I will present after I'm satisfied with the research. In some cases, certain technical tools can be validated within a few months but most of my experience has required a few years for each

major concept to be tested before the entire process can be distilled. In the case of the Harmonic Strength Index, we have been tinkering with this indicator for nearly 3 years. Although the formula has evolved, the essential strategic concept has remained as the foundation for the goal of what is being measured. Essentially, the indicator is expressing the harmonic limits of any price segment with respect to a complex formula of ratio measures inspired by Relative Strength Index.

I do want to make it clear that HSI is dramatically different in its measure and expression than RSI. However, I cannot over emphasize the importance of Welles Wilder's Relative Strength Index formula and, more importantly the principles of the indicator. Adapted from the Relative Strength formula, the basic concepts that measure overbought and oversold levels became an interesting focus for my research. For years, I exclusively focused on Relative Strength. I have developed a number of proprietary strategies with this indicator but I certainly acknowledge that none of this would be possible without the immense contribution from Welles Wilder. However, he is not the only individual that I must attribute to the development of the Harmonic Strength Index. Keegan McClellan has been instrumental in the development of the formula and advancement of the essential ideas that has truly made this a collaborative effort.

Keegan initially contacted me several years ago to sign up for my student program and consult privately to review his trading. Initially, we spent several hours discussing his skill set and I realized that he had a broader comprehension than most students that I encounter. He was well-versed in all patterns and possessed a thorough understanding of the deeper concepts from *Harmonic Trading Volume 2*. Although most are aware of my first two books, the more advanced confirmation strategies in *Volume 2* have been embraced widely by avid Harmonic Traders. I strongly encourage everyone to learn that material and incorporate it with the strategies learned in this book. These discoveries are outside of the harmonic structural framework. But, they accurately describe the ideal technical environments where harmonic patterns have the greatest potential for a sizable reversal.

Keegan and I have expanded upon the initial breakthrough of the Harmonic Strength Index to develop other ideas. Due to the fact that these are relatively new - less than three years, I still need time to further refine their application. I cannot thank Keegan enough for his dedication and patience with me to realize these advanced concepts. His contributions were material and significant. Without his collaboration, these tools would not exist. In fact, my collaboration Keegan is mostly responsible for the official introduction to the trading world of what is now known as the subject of *Harmonic Indicators*. In the years to come, I look forward to the future contributions of what Keegan McClellan will offer the trading world. His ideas and ability to turn concepts into effective tools has left a lasting impression on the body knowledge that is Harmonic Trading. We all owe Keegan a big thank you for his dedicated collaboration.

Proprietary Signals for the Sake of Selling a Product?

I would like to take a moment and discuss an obvious dilemma in my attempt to present new strategies that advance the subject of *Harmonics in the financial markets*. I am well aware that promoting a proprietary product that must be purchased presents an ethical dilemma for those traders who want to learn but are required to pay for the tool to benefit from its capabilities. I want traders to know that I am not trying to just hawk a new product in my attempts to promote the merits of the Harmonic Strength Index. In fact, the years of research that were required to develop this technical measure are not something I want to give away for free but at the same time I certainly want to put the power of this tool into the hands of traders. Simply stated, I am offering this indicator in good faith as a substantial advancement of the understanding of harmonics in the financial markets. Although many of the interpretations from my work in Relative Strength can be applied to these indicator readings, I would like to outline some specific situations that will help those who are currently utilizing HSI to get more out of what the readings are expressing.

Much of this research was derived from the continual tinkering and experimentation of advanced methods to find common characteristics that confirm technical scenarios. The initial identification strategies presented in the Harmonic Trading approach differentiated pattern structures as unique situations. In *Harmonic Trading Volume 2*, I released RSI BAMM confirmation strategies that provide excellent confirmation conditions to define the best pattern opportunities. The existence of confirmation signals unto itself serves as further evidence of what a pattern might suggest. For example, a pattern that completes within a Potential Reversal Zone (PRZ) while simultaneously testing an extreme RSI range is a situation that possesses greater evidence of a market at a technical extreme with an impending reversal at hand. Although these situations take time to learn what to look for, once identified these ideal signals serve as an effective filter to discover the most valid pattern situations. The Harmonic Strength Index is a significant measure within the window of opportunity established by the pattern. Remember, this Defined Trading Realm of price measurements and indicator readings is typically small trade executions relative to the total population of data being analyze. But, all traders can benefit from the most accurate confirmation strategies in this finite area – no matter what. Ultimately, this is the objective of the Harmonic Strength Index – to improve the predictability of patterns at their completion that helps to discern reactions from larger reversals.

I think most Harmonic Traders would agree that one of the drawbacks of Harmonic Trading is the ability to determine which patterns possess the greatest potential. It is important to note, certain patterns can possess similar properties but fail to possess the same reversal potential. The primary reason for this discrepancy is the fact that a pattern's potential is directly are impacted by the relative location of the formation within the overall trend. I have discussed importance of harmonic patterns within trend channels in my previous three books. I do believe this concept must be

Harmonic Trading Volume 3: Reaction vs. Reversal

considered before any trade opportunity is executed. Patterns that are developing counter to the market's primary direction will obviously experience greater difficulty to realize a large reversal than those structures that form the base predominant trend. Harmonic patterns do not form in every market all the time but they do occur frequently enough to where such distinctions must be made. In addition to the other complex environmental scenarios that can feature harmonic patterns, there is some degree of discretion required, as only the most ideal situations should be considered as valid trading opportunities.

Harmonic Strength Index Basics

The Harmonic Strength Index is an indicator that generally ranges between 0-100. These extremes are defined by unique harmonic levels that measure temporary overbought and oversold market conditions at the 88.6 and 11.3 indicator levels, respectively. The key challenge is to coordinate the price response following a pattern completion relative to the extreme HSI indicator reading. Patterns work well when this indicator confirmation unfolds because the structural signal is defining a unique environmental price level. These relationships take some time to be accustomed to their signals in relation to price analysis. I always like to recommend to Harmonic Traders that they "live with it for a while" and keep the indicator on screens over the of a few weeks to get acquainted with what the readings measures. For me, HSI readings reveal important price levels unlike any other measure and help to analyze the potential of any price.
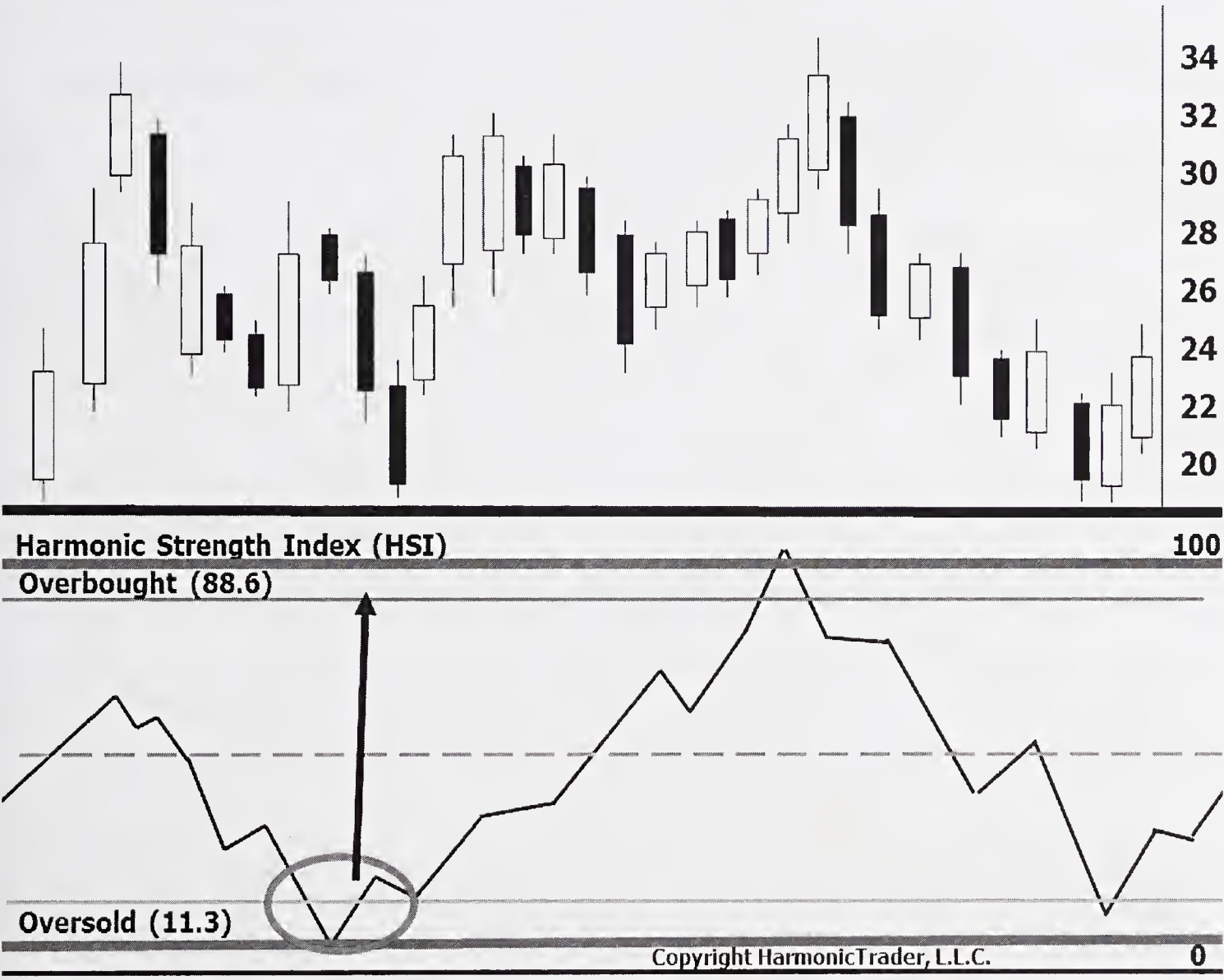
Reading the Harmonic Strength Index (HSI)

The HSI analysis focuses on a few distinct levels as it generally ranges from 0 to 100. Although the indicator can exceed these extreme levels, <u>the most important aspect of the reading is when it reverses from an extreme range.</u> To complement the 0 and 100 limit, we have created new price levels of the 11.3 and 88.6 that define extreme conditions. These measures are designed to reflect the harmonic limits of the indicator. Most important, this concept represents merely the beginning of what is possible to be measured from a harmonic basis. As I have mentioned before, I truly feel that this is the future for patterns and the improvement of the Harmonic Trading methodology as a whole.

The indicator is similar to Relative Strength in that it trades from one extreme to the other. However, Harmonic Strength Index was designed to incorporate ratio measures that filter out some of the excessive variation and noise typically found in Relative Strength. I was looking for a formula that would express the directional potential that patterns possess. Although I still feel that Relative Strength possesses important technical aspects of any market, the Harmonic Strength Index improved upon the environmental expression that substantiates proper expectations and clearly defines

directional bias. The indicator is typically a leading signal that precedes the price reversal. Most important, the indicator reading possesses its greatest predictive capabilities as it reverses out of the extreme zone. This is an important distinction because the reversal of the indicator typically precedes price. Furthermore, the entire indicator reversal out of extreme zone must be registered before considering a reaction price. This is the primary technical that is most effective when it coincides with completion of a harmonic pattern. Let's take a look at parameters that define Harmonic Strength Index.

Harmonic Strength Index (HSI) Bullish Reading

Harmonic Trading Volume 3: Reaction vs. Reversal

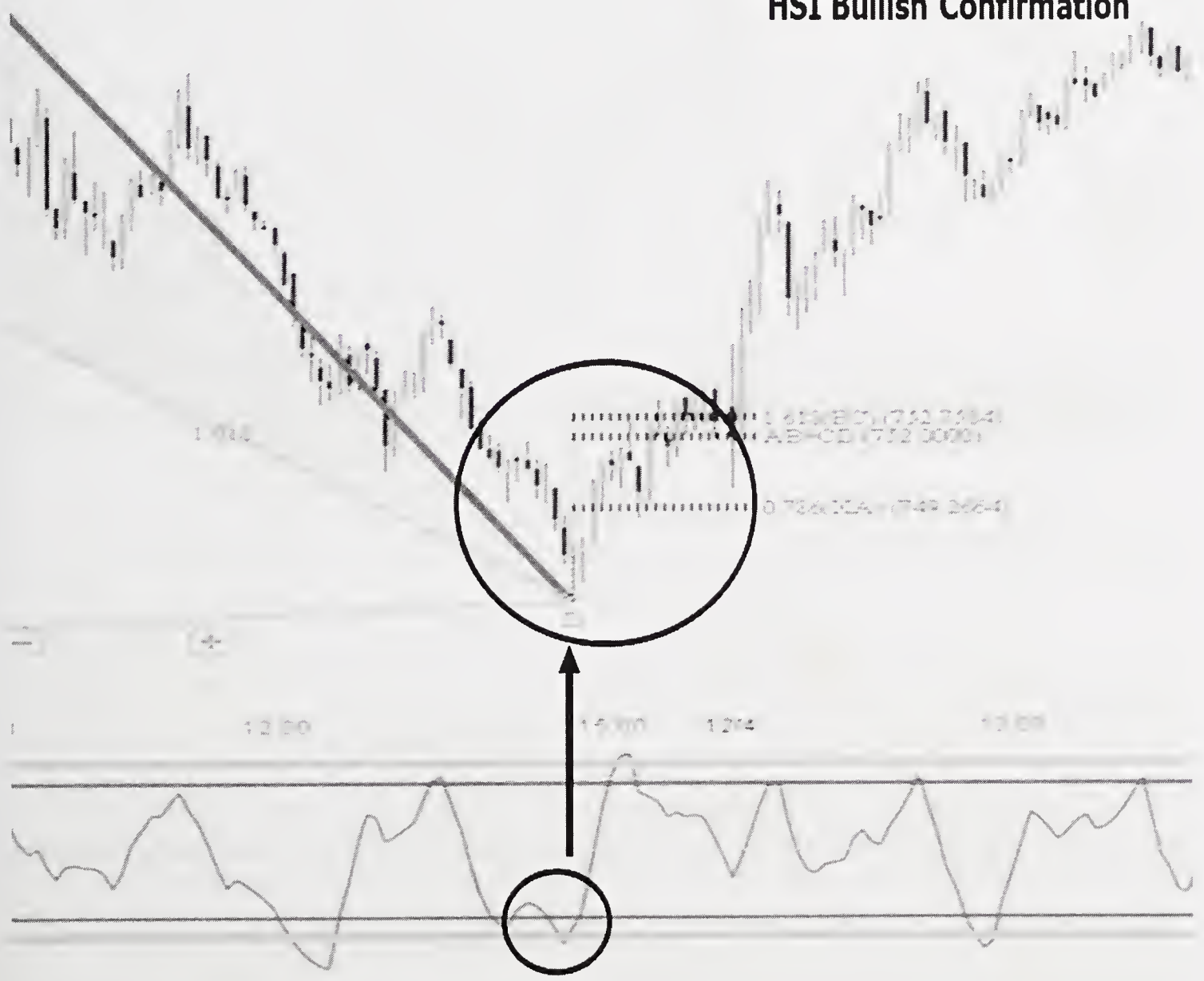The oversold zone in the Harmonic Strength Index is delineated by the 11.3 reading. Although the indicator can exceed the area below 0 and go negative, the defining event is the actual reversal above the minimum 11.3 level once the extreme test has completed. Even in these situations, the indicator reversal is an early signal of impending price action.

Google (GOOG): 5-Minute
Bullish Bat
HSI Bullish Confirmation
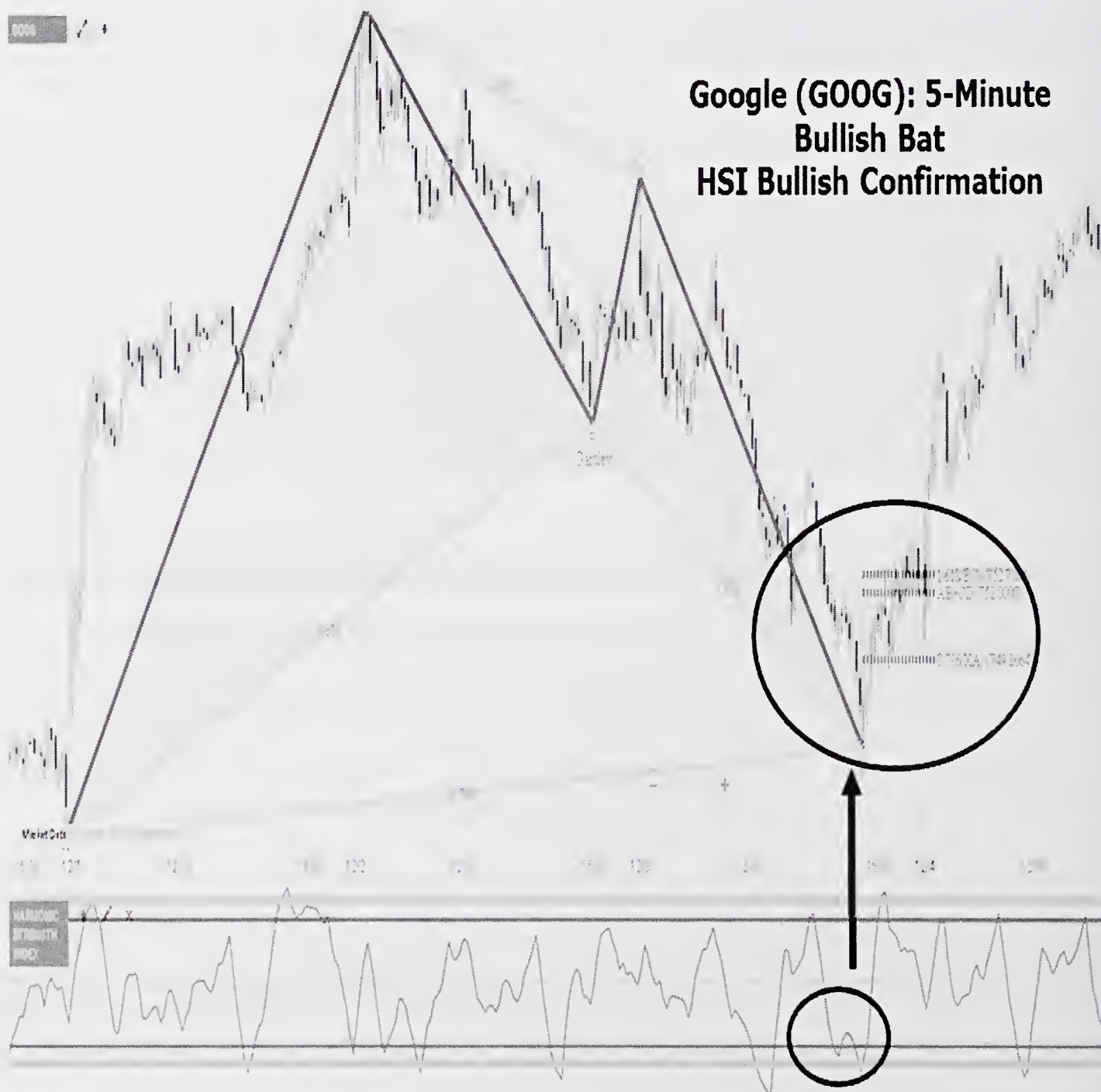
It is important to note that extreme tests that reverse below 0 from a negative reading typically signal a more exhaustive test of support. Also, these situations will require more time. The key is to focus on the individual HSI readings as the trading forms each price bar. As was the case for Google on the 5-minutechart, soon as the reading enters the extreme area, the initial trigger developed when the individual HSI reading stopped and reversed in the direction of the pattern. The harmonic support was confirmed by the pattern completion and the HSI reading - both moving in the predominant trend and anticipating reversal direction.

Google (GOOG): 5-Minute
Bullish Bat
HSI Bullish Confirmation

Harmonic Trading Volume 3: Reaction vs. Reversal

Harmonic Strength Index Bearish Reading

An HSI reading is considered overbought AFTER the indicator reverses OUT of the entire zone. The overbought range starts at the 88.6 but it can exceed the 100 level. These structural indicator readings at the extreme tests typically form a sequential reversal. This means that the indicator reading will continue higher into overbought zone. However once the reading peaks out, it is quite common for the successive indicator readings to steadily decline. As I mentioned previously, this indicator is designed to express sequential movements that can define price environments that move from an overbought extreme to an oversold extreme and vice versa.
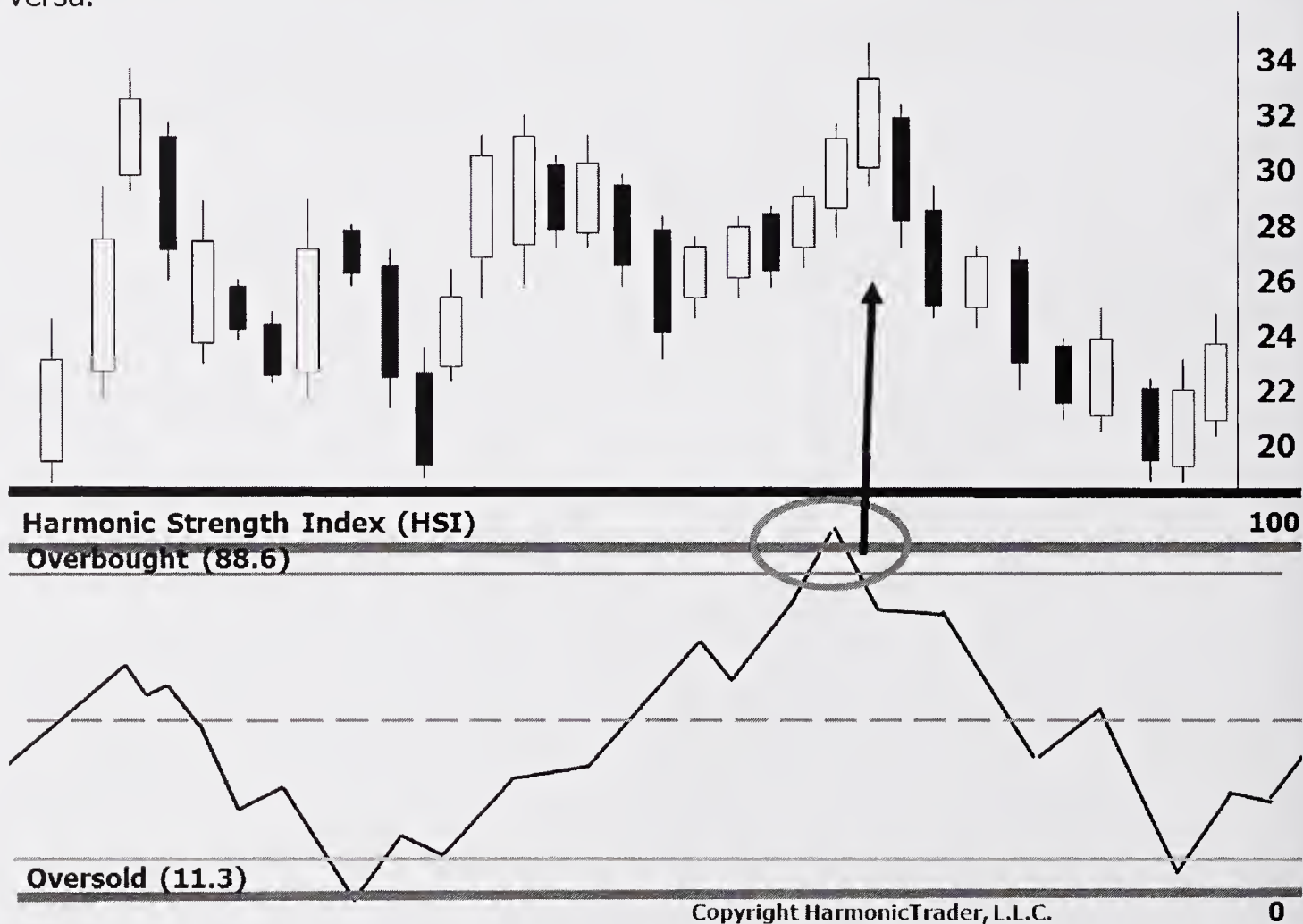
To generate an official overbought HSI reading, price action must exhibit a distinct reversal from the indicator after testing the 88.6 level at a minimum. Although the reading can trade as high as above 100 – or even 120, the key technical event that must occur to confirm the reversal is a reading that is trending out of this area. The indicator reading must enter the overbought zone and reverse shortly thereafter under the 88.6 minimum level. In its simplest application, these are the important singular

events in each price bar that unfolds in the extreme zone of the Harmonic Strength Index that must be monitored and have particular significance when found with harmonic patterns.

The following chart shows a Bearish AB=CD that possess ideal Harmonic Strength Index confirmation. The Harmonic Strength Index reading rolled over exactly in the Potential Reversal Zone. As the intraday AB=CD the pattern, the indicator clearly defined the short-term extreme.

Euro/US Dollar
(EUR/USD): 5-Minute
Bearish AB=CD
HSI Bearish Confirmation
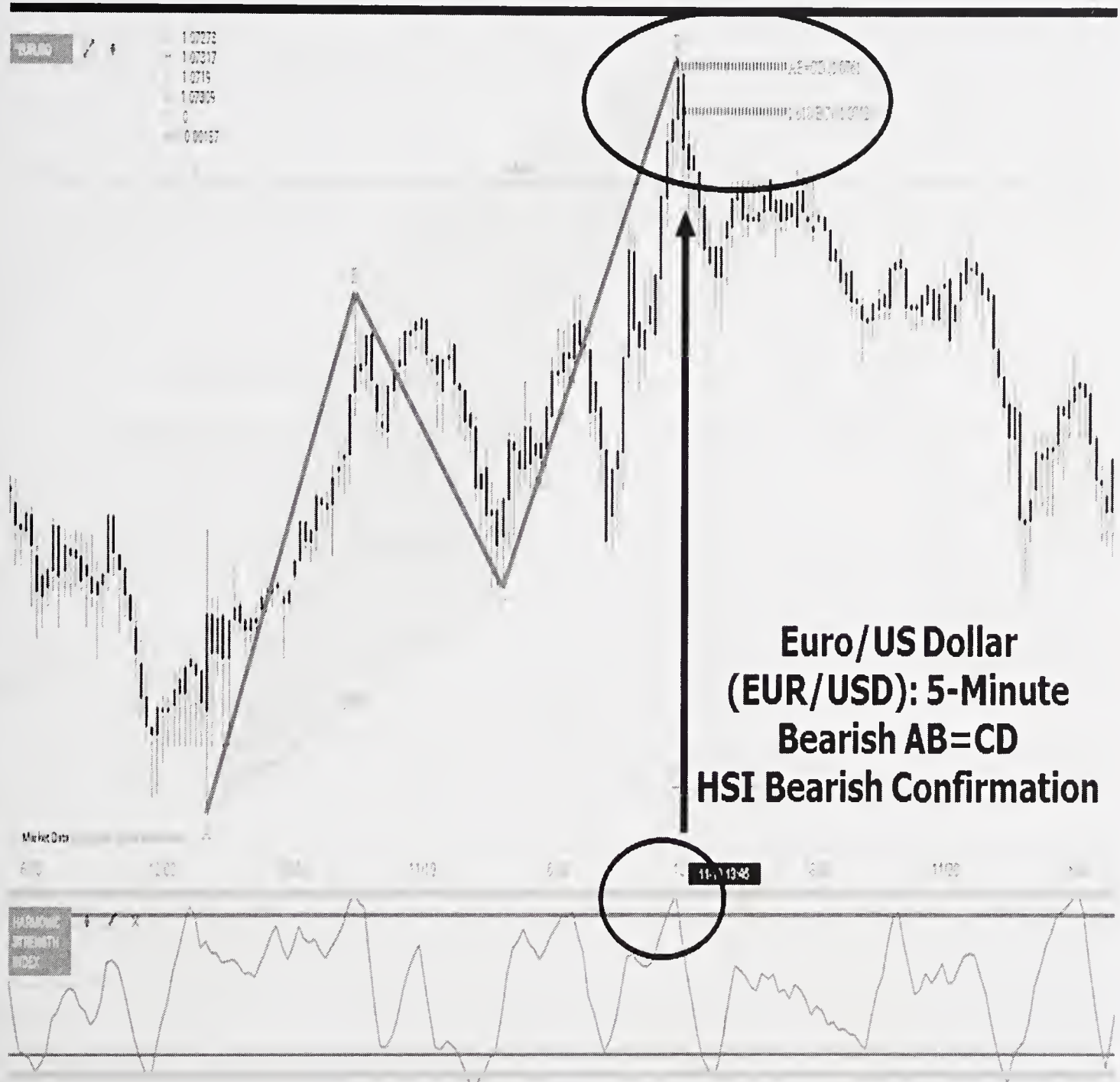
The following chart the price action Potential Reversal Zone shows the individual price bars that completed in this harmonic resistance. Immediately after testing the entire area, the price action reversed sharply. The exact AB=CD completion point

pinpointed the reversal precisely at the Terminal Price Bar. The immediate reactive character in the harmonic resistance zone was a demonstrative change in character that the pattern was predicting. This is the exact type coordination required to validate reversals and define profitable opportunities.

Euro/US Dollar
(EUR/USD): 5-Minute
Bearish AB=CD
HSI Bearish Confirmation
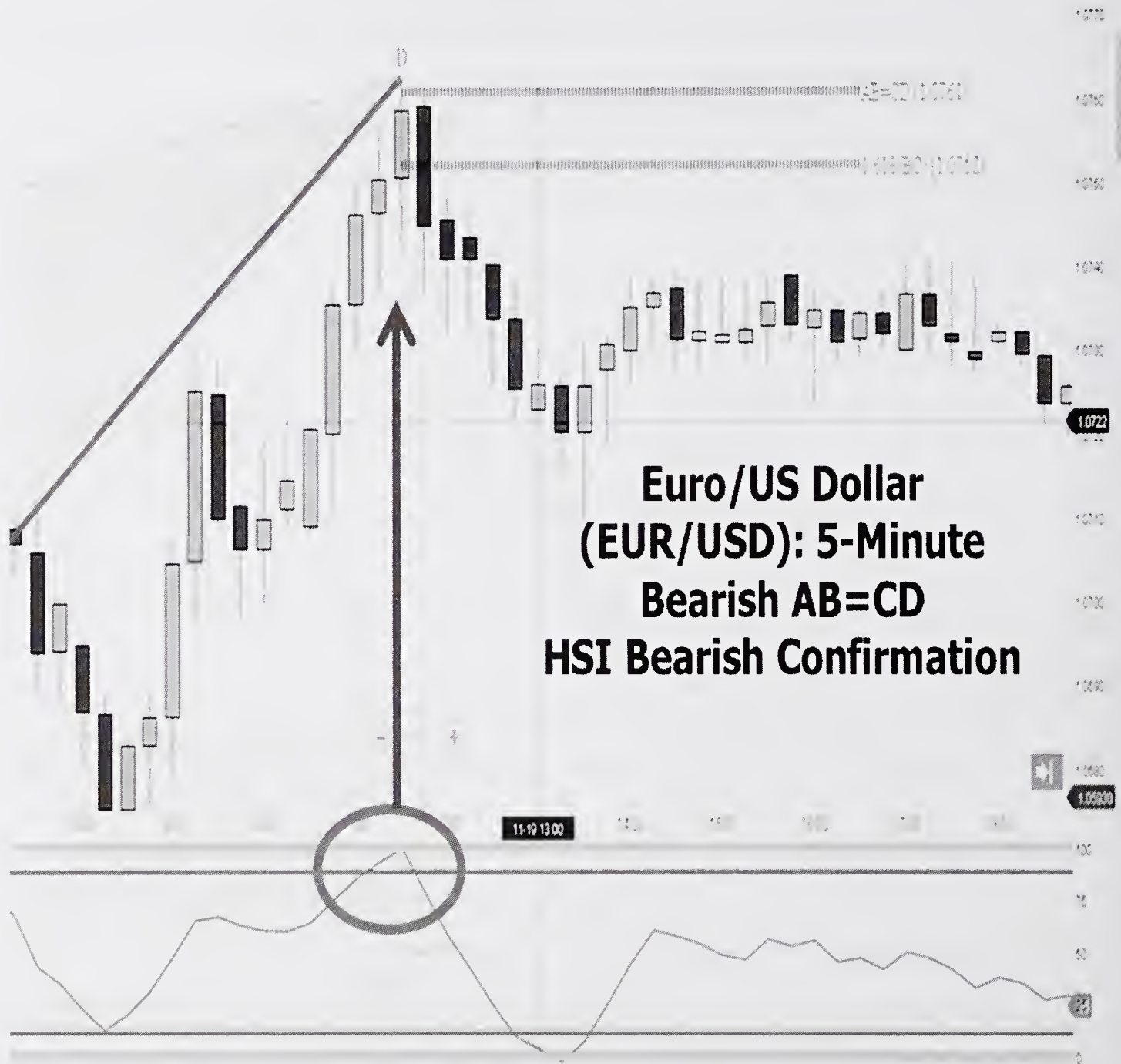
It is important to note that the Harmonic Strength Index reading must reverse from the extreme zone before considering the trigger valid. Due to the nature of the indicator, the trend will typically not reverse before the indicator declines below 88.6 HSI level. In the case of EUR/USD, the indicator provided the early trigger of a valid opportunity at hand.

Mid-Line @ the 50-Level

Much like the interpretations of the midpoint line in Relative Strength, many of the same relationships do apply to the Harmonic Strength Index readings. Also, there are specific expectations and interpretations that are derived from a sequence of HSI indicator readings that distinguish specific environmental conditions. As is the case with the RSI BAMM for example, a double extreme indicator reading that is separated by a midpoint of 50 will represent the most significant BAMM-type formations. In addition, there are interesting relationships when the indicator reading maintains specific levels. For example, it is quite common to see bullish trending markets steadily rise and maintain a reading of all the 50-midpoint line. Conversely, bearish trends will exhibit price action that registers under the 50-midpoint line and fails to even reach the 88.6 line. These are a few traits of these readings, and other strategies will be presented to get the most out of this indicator.

Harmonic Strength Index Expectations

The primary expectation where the indicator works best is with a distinct harmonic pattern as defined by the Potential Reversal Zone. When these conditions exist and price action tests a pattern's completion point with an extreme HSI reading, the reaction follows shortly after the indicator reverses. That is, many if not most cases will possess the indicator reversal occurring before price. This is important because the early signal provides advance notice of the potential support/resistance that is imminent. Furthermore, the indicator complements pattern reversal zones, as the environmental conditions within these extreme readings define important implications for the internal strength of the price action.

It is common in many situations for the indicator reading to continue in the reversal direction and fail to confirm at the price level that defines the completion pattern. This is an excellent example where the indicator is signaling a flawed structure. At a minimum, the situations should represent a warning of a potential pattern of failure or the scenario should have reduced expectations that seek to minimize loss in all circumstances. Another important consideration with the HSI indicator is that it frequently marks important continuation points within predominant trends – even when no structural signals provide reliable price levels these areas. All of these relationships become clear over time but the most important constraint involved with indicator reading itself is the actual trigger bar that marks the confirmation of reversal.

Similar to Relative Strength, the price bar that results in the indicator reading to close beyond the extreme level following the reversal is a unique individual price point that must be considered. In fact, other price constraints including individual measurements identify the stop loss limitations of HSI reversals. Of course, not every

HSI reversal is going to yield a sizable move. Again, this is why we must integrate multiple measures and act on those opportunities that are confirmed by the gamut of these perspectives

Serial Indicator Reversals

Due to the nature of the Harmonic Strength Index formula, the expression of these readings has been designed to exhibit a predominant bias and reflect states of price action that have moved too far in one direction within a specific period of time. Sometimes, the indicator will move dramatically with the price. In other instances, the indicator will move from one extreme to the next with very little price movement. These situations must be distinguished. HSI is different from Relative Strength in that its formula has been designed to express these extremes as they relate to harmonic measures no matter how far price action has moved. In this regard, the indicator provides tremendous insight into the vitality of any price segment. Furthermore, the expression of this indicator in both extreme reversals and movement from extreme to extreme must be considered - *Serial.*

This is a general assumption that the indicator reading will move from one extreme to the next. The key trigger point is when the indicator leaves the extreme reversal zone. As the indicator reading moves into an extreme area, the ultimate reversal at the 88.6-100 line and/or the 0-11.3 level cannot be determined until after the structure has reversed from the range. One of the interesting aspects that was noticed early in the development of this indicator was a unique ability of these extreme reversals to establish countertrend moves where the indicator demonstratively continued in the reversal direction once it cleared the extreme range. Not to mention, the indicator trigger itself has been proven to be a leading indicator that provides the definitive countertrend price level for the change in trend. Once the indicator has peaked out, the trigger bar that denotes this change serves as an important price limit for the impending reversal.

I must emphasize the importance of waiting for the reversal out of the extreme. In the Harmonic Strength Index, as the indicator continues to register readings in the predominant trend the price will follow. In fact, a reading that enters the extreme zone will typically experience a price acceleration as each price bar registers a deeper level. For example, a market that has moved quickly with an HSI that exceeds the 88.6 line possesses inherent strength. It is common to see indicator readings that can rally above the minimum 88.6 level, continue above the 100 mark as price accelerates in a dramatic fashion. Regardless, the trend is respected until the indicator demonstratively reverses from the overbought extreme. Again, this is a clear leading indicator but helps to avoid mistakes such as early entries or attempting trades that lack confirmation.

In this example, it is also important to make the distinction of the extreme reading that is registered. Depending upon whether the indicator reverses from 88.6 or from 100, the overall conclusion will be different. A reading that reverses from the 100

level may be considered more significant than just the 88.6 test. Regardless, the indicator will typically continue to trend higher in the extreme range until it has peaked. In the bearish example, a reading that hits the 88.6 level will continue higher with each price bar until the reading triggers a lower level. Assuming we were looking at a 15-minute chart, the indicator readings will continue to increase sequentially. Regardless if it is at 88.6 or 100, the key technical event unfolds when the indicator reading begins to roll over. If we were looking at a 15-minute chart, the sequential indicator readings may look something like this:

Time	Price	HSI Reading
9:45 AM	103.22	77.08
10:00 AM	103.55	82.14
10:15 AM	103.79	89.10
10:30 AM	103.97	91.51
10:45 AM	104.51	105.77
11:00 AM	104.70	100.24 #
11:15 AM	104.73	93.21
11:30 AM	104.47	91.64
11:45 AM	104.38 $	84.95
12:00 PM	103.98	72.66

It is quite common to see HSI readings that follow this sequence of readings. Although this is a hypothetical schedule of numbers, it demonstrates the serial characteristics of the indicator. Of course, it is not always going to be this exact but the general notion of HSI is to focus on this serial change when it happens, especially in the extreme zones. When we look at the illustration, notice the time and sales price readings that represent the high of each individual bar. The HSI readings that accompany the sequence of prices typically reflect this environmental assessment. It is important to note that as the price peaked, the indicator reading will usually reverse as an early signal (#). It is quite common to see consecutive HSI readings diverge from the price extreme. This is an early but important trigger in the analysis of the indicator reversal. The key event is when the price falls out of the zone as denoted by the "$" mark at that readout time. These relationships will become clear with more experience

but it is essential to closely monitor the individual readings as indicator reverses in the extreme zone.

Harmonic Strength Index (HSI) and Relative Strength (RSI)

The foundation for all my work has been to experiment with integrative techniques that compare various measurements to discover common characteristics that define market environments. These integrative conclusions are the basis for all trading decisions. As I've mentioned previously, no indicator – RSI or HSI - can ever be considered as a standalone trade signal. However, there are a variety of aspects that confirm price and must be integrated to harness its information. Obviously, HSI and RSI possess similar characteristics and do possess interesting relationships when compared. Although it is not my desire to try to connect every signal, the clearest relationships are usually the most significant and have the greatest potential to unlock market signals.

There are a few ways to compare both measures. The strongest correlation is when both indicators confirm each other at extremes. However, there are many times when Harmonic Strength Index will register an extreme reading yet RSI will not. There are number of combinations that can form in these situations but the general take away is to focus on the price action as soon as the HSI trigger has been initiated. These are situations where HSI is indicating an "internally" exhaustive price segment that is usually a countertrend reaction. This is one of the most reliable advantages of HSI because it reveals hidden areas of support/resistance unlike any other indicator. Similar to the way harmonic patterns can define "invisible" levels of support and resistance unlike any other methodology, HSI does the same for indicator readings.

When both trigger an extreme reading, there is a greater probability of confirmation. More importantly, the price level that marks the trigger represents a technically more significant area that must be monitored. This is a situation where multiple technical readings that confirm the same assessment will be much more reliable than any singular measurement on its own.

Complex RSI with HSI Confirmation

One of the most common situations that can effectively confirm both methods is when a complex RSI structure forms with an impulsive HSI formation. The complex formation in the Relative Strength reading can take much longer and experience accelerated price behavior as it is in the final process of reversing. I believe that complex RSI structures are effective singular confirmation signals with patterns. However, the expectations of a limited reaction are more likely and must be considered. The other interesting consideration that frequently materializes in these situations is that the RSI reading will trigger an early signal of potential change in trend as the complex formation reverses from the extreme. Eventually, a Harmonic Strength Index

reading materializes in many of these situations to signal that the price is finally prepared to reverse following an extended complex consolidation.
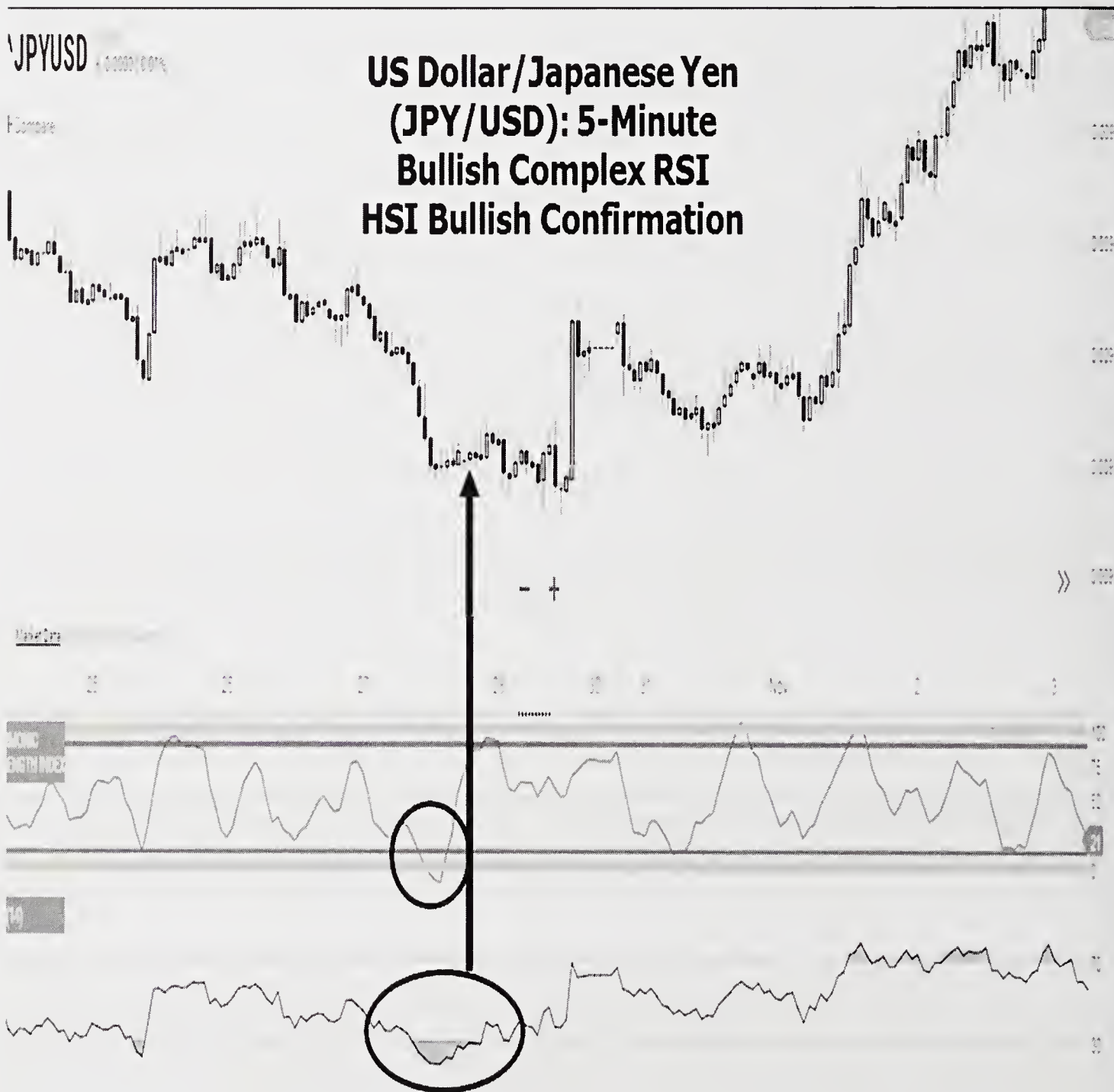
Bullish Complex RSI with HSI Confirmation

When a complex RSI formation exceeds the oversold level at 30, it can be difficult to know whether the price will merely consolidate or this indicator type will provide a material reversal. When HSI reverses from an extreme that corresponds with complex structure, the price action will typically experience a larger reversal, as these situations provide greater bullish confirmation.
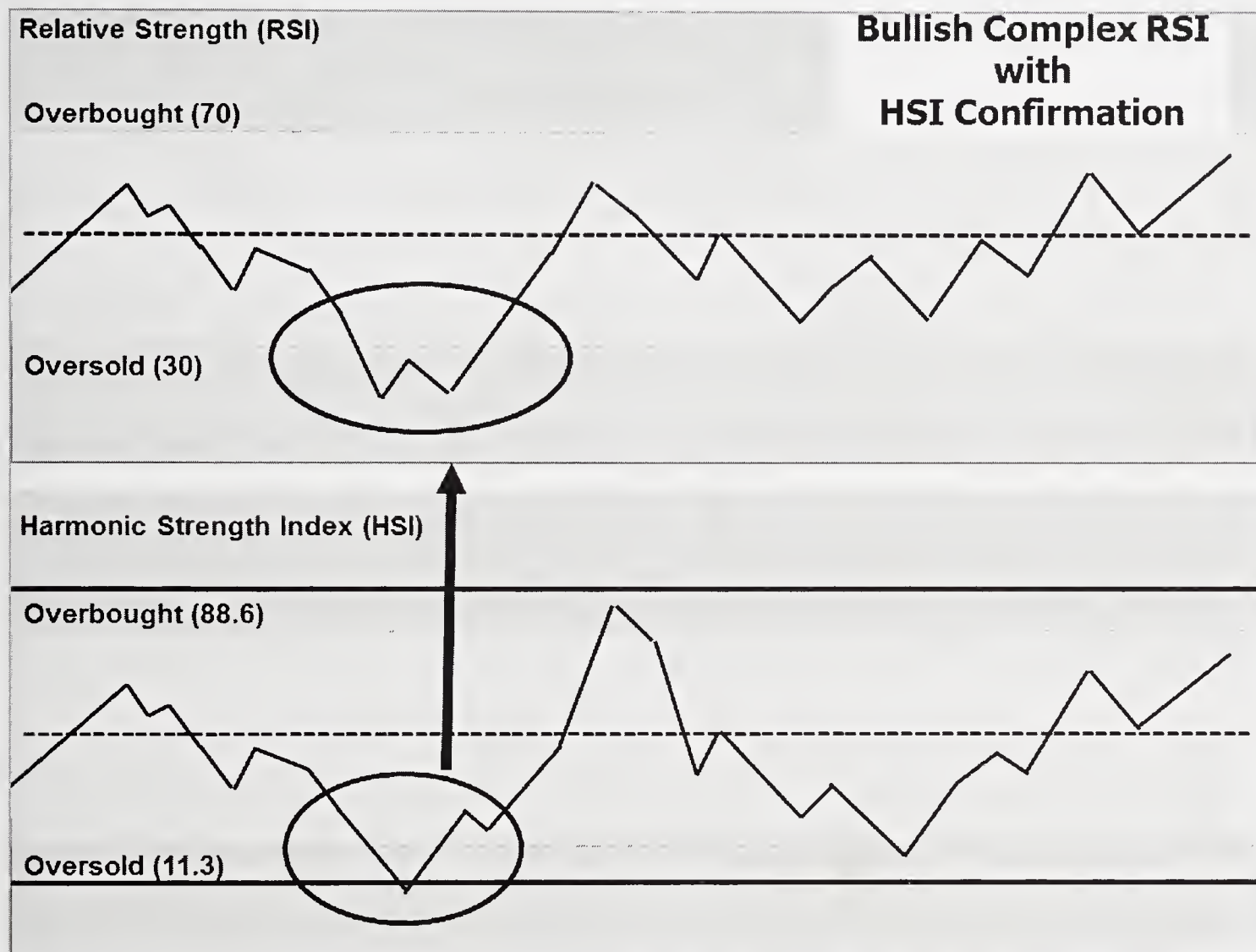
Again, these situations become more apparent once they are readily identified. I recommend that all Harmonic Traders take time to digest the relationships they are exploring until the larger picture becomes clear. The comparison of the Harmonic Strength Index versus the Relative Strength Index possesses many interesting relationships. Some of these I am exploring, as unique variations while other harmonic

modifiers have created unique technical measures that yield profound technical insights and relationships in specific environmental situations.

The following chart of the US Dollar/Japanese Yen shows a complex bullish RSI indicator reading that was confirmed by an extreme Harmonic Strength Index reversal. In this instance, the HSI reading was early but the reversal marked the initial stabilization level of the downtrend. The price action clearly responded after the RSI reading reversed from the oversold zone. When these multiple readings materialize in the same area, the price level must be monitored closely as potential harmonic support of significance.

US Dollar/Japanese Yen (JPY/USD): 5-Minute Bullish Complex RSI HSI Bullish Confirmation

Bearish Complex RSI with HSI Confirmation

As a complex reading reverses from the overbought limit in RSI above 70, it is typical to see an extreme HSI reading that confirms this formation. Although it is common for the HSI readings to be early, the combination of both formations is an extraordinary confirmation signal.
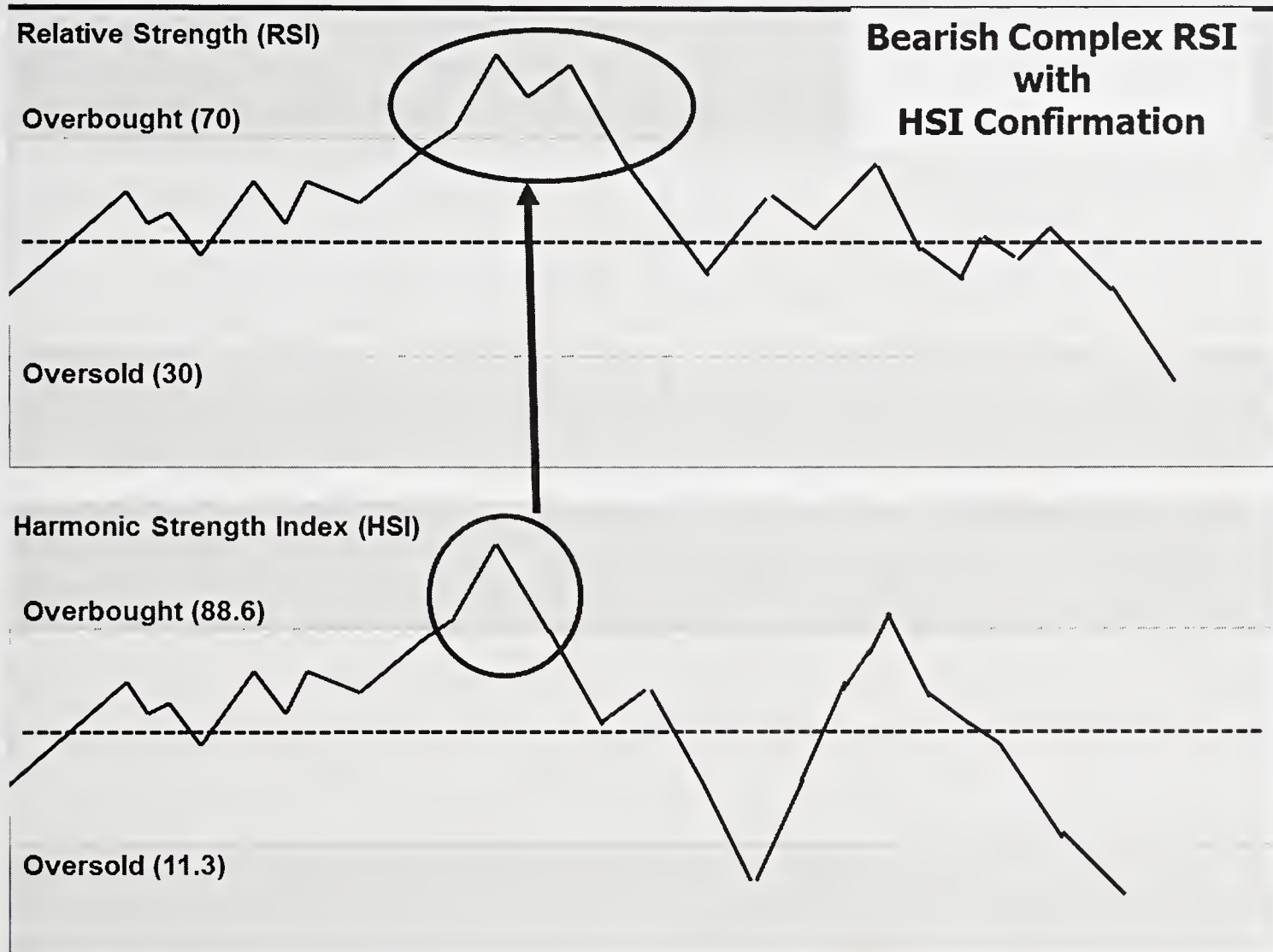
The following daily chart of Tesla demonstrates the long-term ability of the Harmonic Strength Index to confirm complex RSI readings. This was an interesting situation where the 88.6 level was tested briefly in the same area as the complex RSI formation. Once the complex RSI reading reversed from the extreme zone, the trigger was confirmed. The price action stalled immediately after the Harmonic Strength Index reverse the RSI indicator readings required more time before declining below the overbought 70-limit.

Tesla (TSLA): Daily
Bearish Complex RSI
HSI Bearish Confirmation
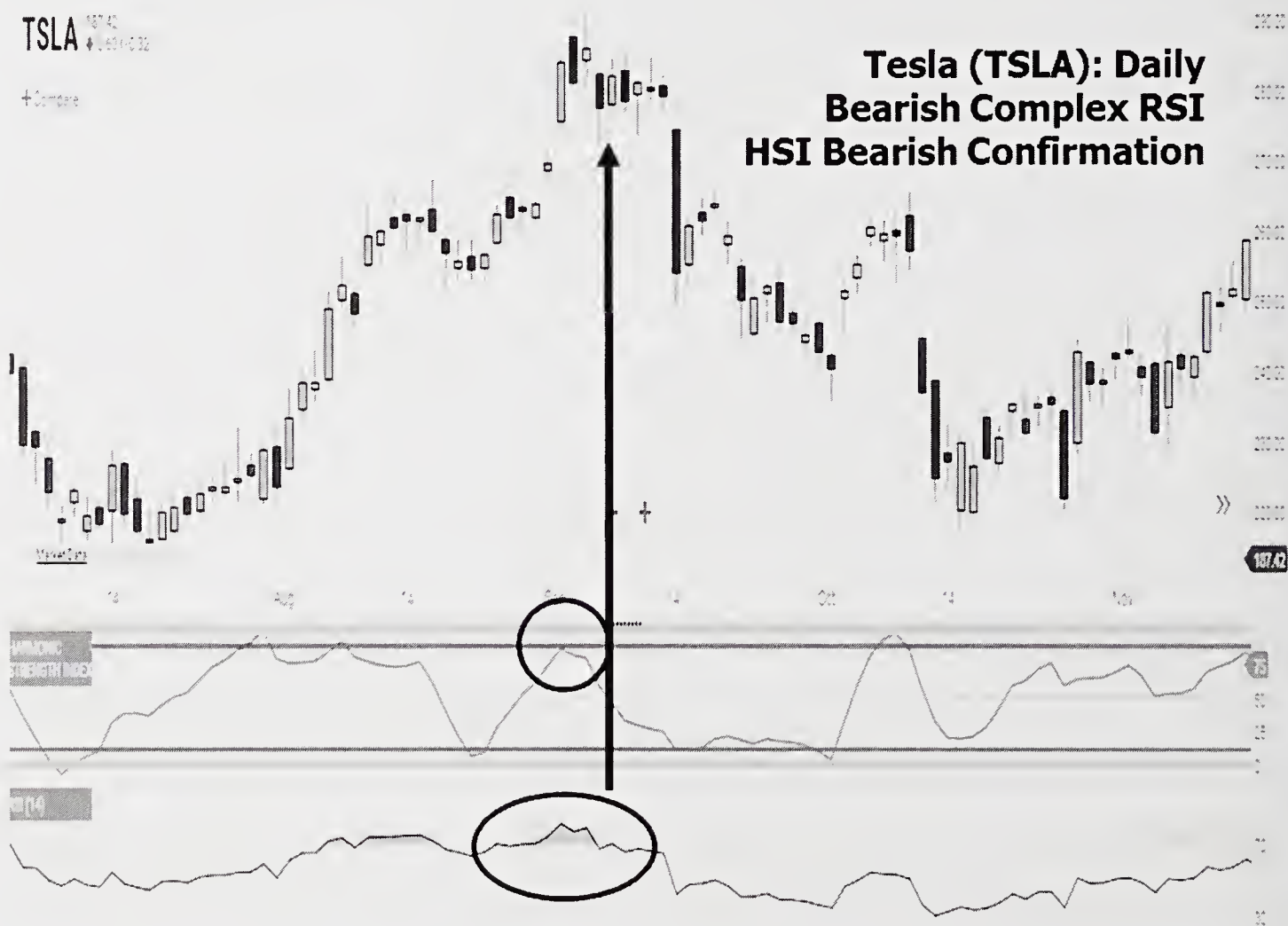
On a final note, is important to stress that these measures are the result of experimenting with dozens of different formula combinations to find the handful of analytical tools that consistently identified the most critical points within any trend. The relationship of HSI versus RSI is a fantastic example of what is possible when you bring a comparative harmonic framework to a traditional technical indicator. These ideas alone could probably fill another book but that's not happening anytime soon!

Harmonic Strength Index BAMM

As we have reviewed in the chapter on Relative Strength, all of the same structural assessments and assumptions of these indicator strategies can be applied to HSI. Most notably, we can identify and categorize those situations of confirmation and emergence where HSI possesses the BAMM structure. That is, the indicator reading that reverses from an extreme, tests the midpoint line at 50 and then retests that original extreme level. Although I will not repeat the concepts or illustrations, I suggest reviewing the section on RSI and replacing it with HSI in the context of indicator types and classifications. The HSI BAMM is a concept I am currently refining to determine what are the distinctions from the RSI foundation. Essentially, the primary conclusion is that these situations do denote a more significant technical level.

Harmonic Strength Index Conclusion

The most important breakthrough that the Harmonic Strength Index encompasses is the foundation of measuring indicator readings with harmonic ratios. Although not every technical indicator can be adapted in this manner, there are a number of discoveries beyond HSI that do express conceptual strategies within a harmonic framework. Over the years, I have advanced a variety of software applications that has gradually included new measures that are outside the pattern rules. Although the pattern structures will always be the basis for any trading opportunity, the indicator readings and harmonic measures have provided the necessary confirmation to identify those patterns that materialize in the environments with the greatest potential. The Harmonic Strength Index is a substantial breakthrough in assessing harmonic limits of how far the market can move in one direction within a certain period of time. We've seen examples where the indicator can signal an extreme move while the price moves sideways at best. These situations identify important characteristics of the overall trend. In its final iteration, the Harmonic Strength Index is the most accurate indicator to confirm harmonic patterns.

As I have previously mentioned, the presentation of the strategies and overall promotion of the indicator is intended to advance the knowledge - not sell a product. I make the indicator available on most software programs included with basic packages and offered reasonably as an individual add-on tool. Usually, I will provide free trials so that all traders can review the merits of the indicator for themselves. This is all I will say about the subject but there is an industry problem with individuals selling a variety of programs that have little trading value. I stand by my research and I know that this indicator can provide information unlike any other measure.

On a final note, the Harmonic Strength Index marks a new phase within the Harmonic Trading approach. As technology advances and programming becomes simpler, advanced strategies are now able to be tested and refined to unprecedented

levels. In fact, one of the hottest areas of research on Wall Street today is the programming of Artificial Intelligence with computers that actually learn. Many people have attempted to program neural – type networks for decades but the new framework in which many programs are offered have the capability to distill complex variables into simple back testing algorithms. As this technology advances, trading automation and statistical verification will become commonplace.

I believe the fundamental challenge all outfits face involves which variables to program. Over the years, I have engaged in several attempts to program the deeper concepts of Harmonic Trading and explore possibilities of automation. I have even encountered individuals and hedge funds who admitted to me they were actively testing algorithms based on my rules established in the first few books. Most of them responded with basic results that pretty much agreed with my decades of research – that is, most patterns do provide a reaction while some patterns have much higher probability rates due to the individual ratios they encompass. I am currently expanding my research and statistical quantification of exact harmonic pattern scenarios. Albeit complex, the computing power of today facilitates this research and optimizes statistical results all within one platform. I have focused on private research and custom programming to identify those situations I feel have the greatest potential for consistent success.

In my own research, I have generated hundreds of case studies that have helped me define many of the proprietary strategies that I have presented in my books. I believe that harmonic measurements are the basis for understanding price movements that is completely outside the box of any other technical approach. I have already programmed all of these high probability pattern situations into exact algorithms and I continue to statistically optimize their best application. Although I have released some of this statistical research in the past, I firmly believe that the future of Harmonic Trading will pursue those strategies that possess the greatest statistical validation. I am personally expanding my work to focus on this area and I know that the trading industry is undergoing a vast shift to uncover those situations that can be quantified with the greatest statistical results as well. In fact, I have already created an automated Harmonic Strength Index module that has yielded consistently positive results. On its own, the Harmonic Strength Index is an excellent confirmation tool at pattern completion points. In combination with Relative Strength, deeper insights can be ascertained and the overall state of any trend can be confirmed. As I've mentioned previously, the Harmonic Strength Index will reveal important pivot points unlike any other technical measure. I am proud of the results that have been generated from the past few years of research and look forward to future refinement of these measures, as it marks the next phase of proprietary strategies within the Harmonic Trading arsenal.

Chapter 7:
Advanced Harmonic Trading Management Strategies

In *Harmonic Trading Volume 1*, I outlined a comprehensive trade management model. This model was the result of several years of research after I released the identification strategies in *The Harmonic Trader*. Many other measurements that defined trade management parameters have not been presented in any of my previous books. I have introduced a variety of concepts in my *Patterns into Profits* webinar program. But, this is the first time I have compiled all strategies that complement the ideal Harmonic Trading management model in a book. Furthermore, these additional insights provide a greater degree clarity for the overall *Defined Trading Realm*, especially as these parameters relate to the management of harmonic patterns.

Although the management phase of the trading process can be the longest as price action can take time to establish a larger reversal, there are situations where these strategies are dictated by the volatility of the pattern completion and require an active management of the position. Other conditions may require more time to assess the larger reversal possibility. In either situation, the general categorization of management expectations depends upon how the real-world response to the harmonic pattern opportunity expresses itself. After assessing all ideal harmonic parameters relevant to the Potential Reversal Zone, the behavior of the price action as it trades beyond the "execution window" must be monitored closely within the prescribed Harmonic Trading management parameters. These strategies should include a multiple unit exit strategy to capture an automatic profit objective while allowing another discretionary portion to stay in the trade until the market signals that the reversal trend is no longer continuing. These guidelines create pattern-specific trade management strategies that are all measured considerations assessed in advance to create a "Defined Trading Realm" for management purposes.

Reversal Trendlines

Trendlines are extremely important for a number of reasons. They help define the predominant direction of any market on any timeframe. Trend channels provide a moving range of support and resistance. This is extremely effective in monitoring trending markets. Although there is some degree of interpretation required when assessing harmonic patterns, trendlines represent another structural measurement tool that can clearly detect changes outline important inflection points within the management process.

- **Primary Trendline (≥45 Degree Slope):** This management trendline must possess a distinct and steady 45-degree slope projected from the reversal extreme at the Terminal Price Bar. Although price action will typically require more time to resolve the progress of the Primary Trendline, it does represent a flexible price limit to assess stop loss adjustments as the trade unfolds. Most reversals will form a primary trendline initially as the price action changes trend.

- **Accelerated Trendline (≥60 Degree Slope):** After price action has initiated a reversal from the completion point of the pattern, the trendline that materializes after this consolidation marks an important basic determinant in the type of reaction that will unfold following completion of the pattern. In many cases, the price reaction will be quite sharp and follow a trendline that is greater than 60°. Although the slope of these trendlines may vary, the accelerated nature of this price move possesses a distinct and obvious character. In management situations, the violation of this trendline can trigger optimal profit objectives especially when integrated with other measurement strategies to effectively manage the position.

Manipulating the Slope

One common response I frequently hear from students in regard to the slope assessment of the trendline is that the magnification of the chart can be changed to adjust the degree of the trendline. First, let me say that if you are trying to adjust the chart's magnification, you are probably already in trouble and need to get out of the trade! Seriously though, these basic concepts are more general assessments where the primary and accelerated trendlines will be obvious. Although the general 45° primary slope is an approximation, it should be less severe than the accelerated trendline. The different nature of these slopes will be obvious. In fact, the accelerated trendline is a steep, short-lived move that is unsustainable. Although this volatility may be due to any one of a number of factors, the clear character of the sharpness of the accelerated trendline cannot be disputed.

Simply stated, most trend reactions that are volatile and steep in nature will experience some degree of consolidation before continuing in the same direction. When these accelerated trendlines are violated, the price retracement is inevitable. On a final note, I believe that the issue of manipulating the slope speaks to a larger behavior that traders will exhibit when they are uncertain about their positions. If you find yourself trying to adjust trendlines to fit your scenario, it is imperative to recognize that something is inherently wrong. This also applies to timeframes when traders will try to examine larger possibilities when their immediate situation is not working out. These are a few of these examples that unconsciously exhibit but do represent an interesting consideration of one's personal signs to acknowledge as impending trouble.

Bullish Reversal Trendline Types

After the Terminal Price Bar has been established, the consolidation that commences beyond the pattern completion point begins to take on a degree of uptrend progress. Sometimes, the initial reversal can be sharp exhibiting a dramatic move. In most instances, these reversals are short-lived and must be managed accordingly. However, those reversals that can maintain a progress that upholds a minimum 45° primary uptrend will likely continue in that direction.
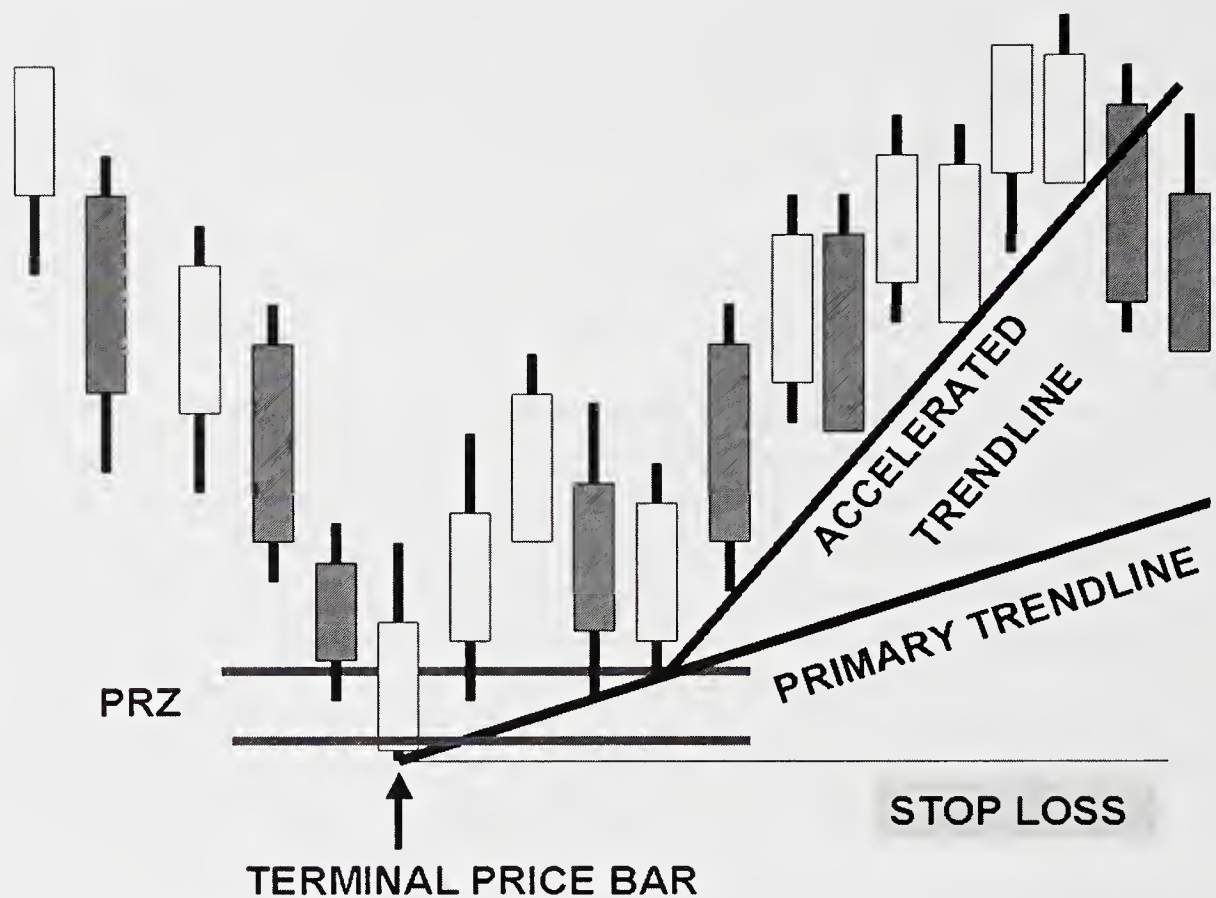
The most important aspect of recognizing these trendlines is their importance in defining optimal profit management strategies, especially in Type-I situations. The following chart shows an ideal Alternate Bullish Bat Pattern that experienced a sharp reversal soon after all the numbers were tested in the Potential Reversal Zone (PRZ). In the following example of the continuous contract in Gold, the reversal following the Alternate Bullish Bat possess a sharp trendline acceleration.
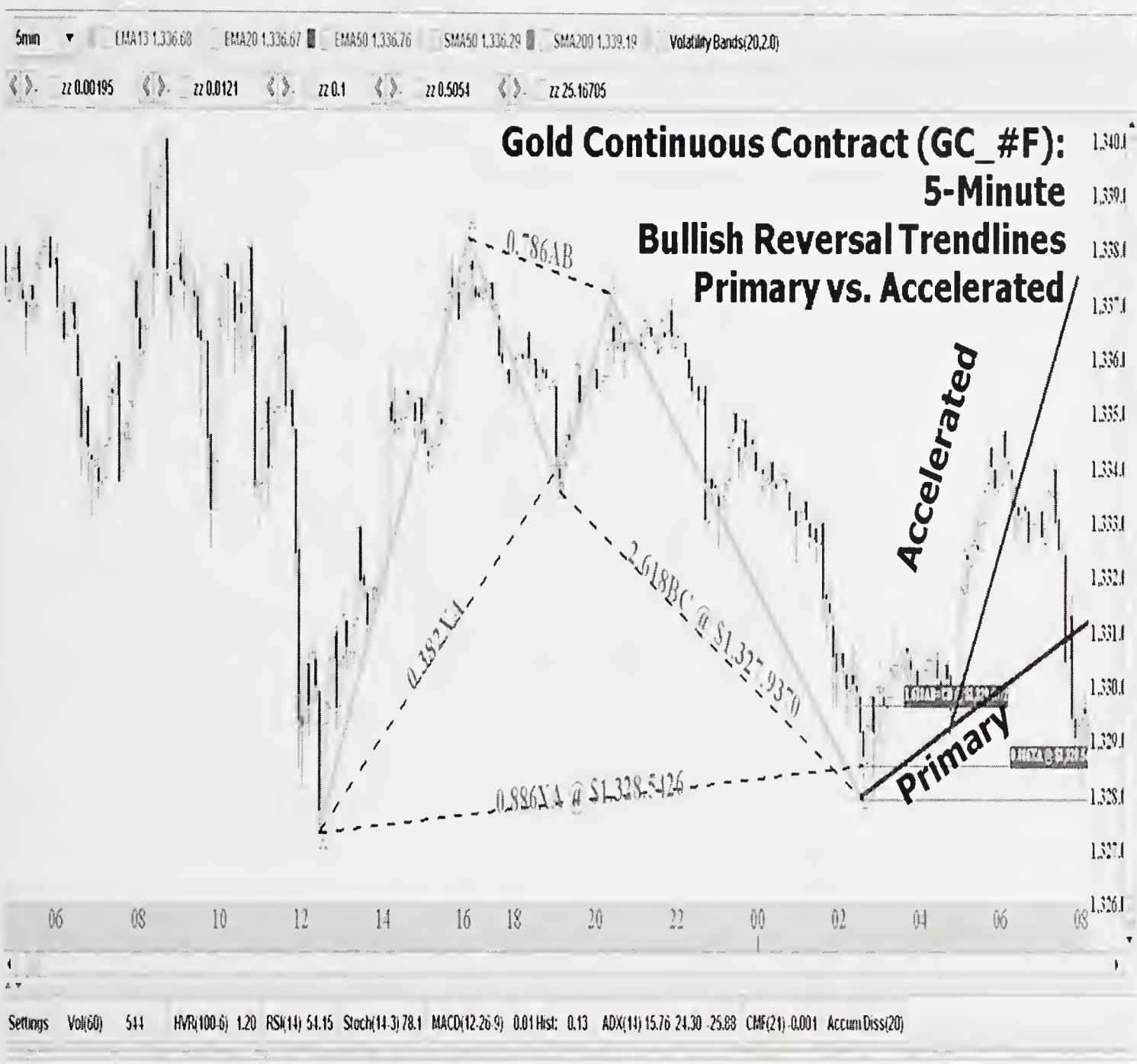
Gold Continuous Contract (GC_#F): 5-Minute Bullish Reversal Trendlines Primary vs. Accelerated

The price action stabilized on the initial test of the pattern and formed a steady 45° primary uptrend. After this brief consolidation phase, the reversal exhibited an accelerated move. However, the inability of the reversal to continue higher, especially after the accelerated trendline was violated, signaled the end of the reaction.

The price action in the Potential Reversal Zone (PRZ) in this example demonstrates the effectiveness of the primary and accelerated trendline to gauge the extent of any reversal. In this case, the price action provided clear confirmation after the Terminal Price Bar was established.
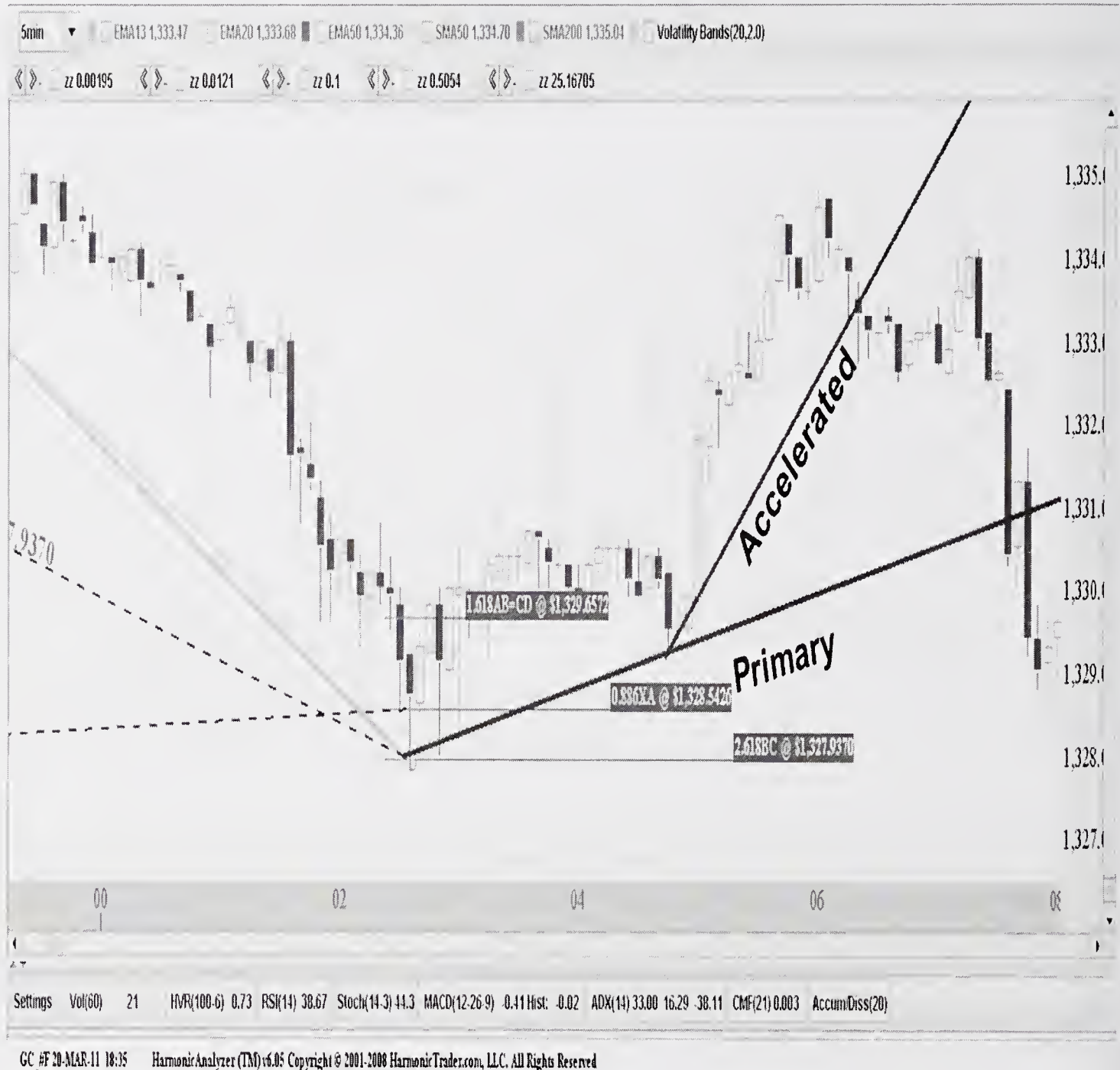
Bearish Reversal Trendline Types

After the Terminal Price Bar has been established, a simple primary trendline should be projected at a general 45° angle from the peak to gauge the progress as the reversal unfolds. It is quite common for price action to take on an accelerated nature and yield a sharp countertrend move. These are extremely effective in those situations when the pattern is completing for the first time. The natural reaction at the completion point of a distinct pattern will typically provide a pause at a minimum unless something much more overwhelming is unfolding. But, those situations are practically obvious.
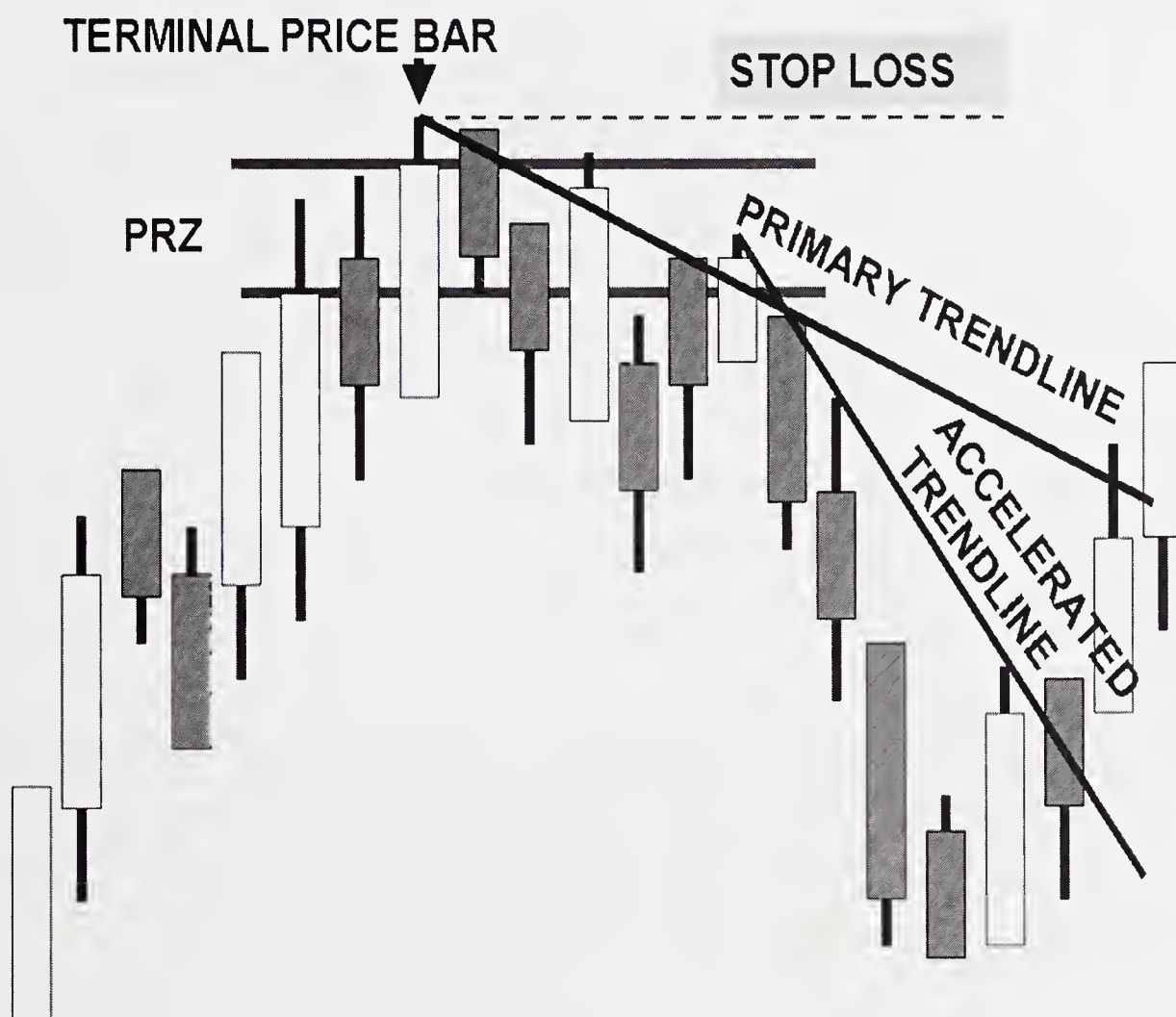
This chart shows a Bearish Gartley on a 15-minute basis that formed a distinct pattern that exhibited ideal reversal trendlines following the completion of the structure. As soon as the Terminal Price Bar was established, the price action stalled in the Potential Reversal Zone (PRZ). After some consolidation, the reversal accelerated.

Australian Dollar / Canadian Dollar
(AUDCAD_A0-X): 15-Minute
Bearish Reversal Trendlines
Primary vs. Accelerated
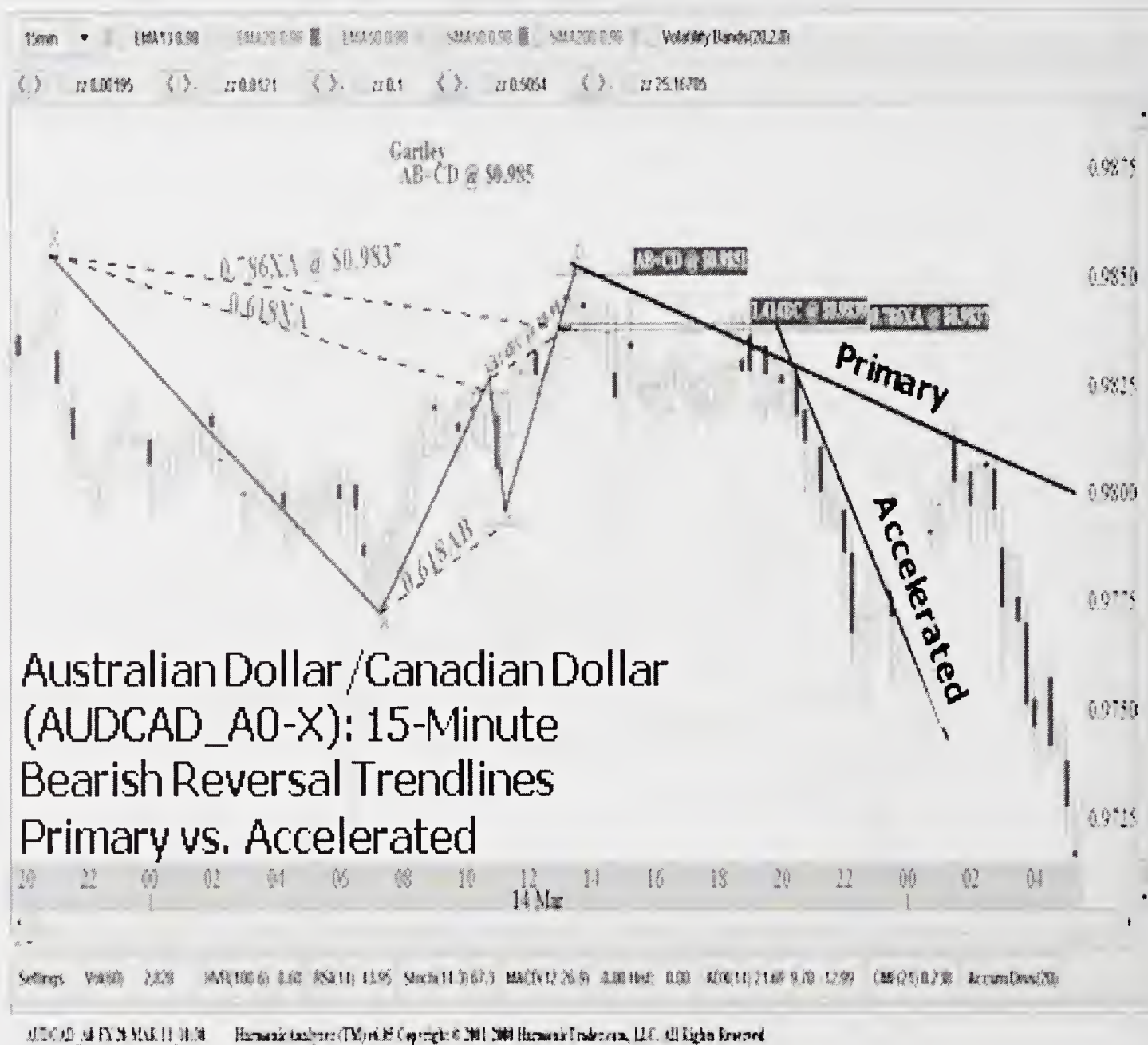
After a brief period of consolidation following the completion of the Terminal Price Bar in the AUD/CAD pattern, the primary reversal downtrend established a definitive make-or-break trailing stop area to assess the probability for a substantial decline. The reversal declined sharply lower and continued to trade below the primary reversal trendline.

The interesting aspect of this price action is how the trendline clearly guided the trade management in this situation. The progress of the reversal was able to maintain a primary downtrend and begin to accelerate confirming the pattern as an important bearish continuation structure.

Australian Dollar/Canadian Dollar (AUDCAD_A0-X): 15-Minute Bearish Reversal Trendlines Primary vs. Accelerated
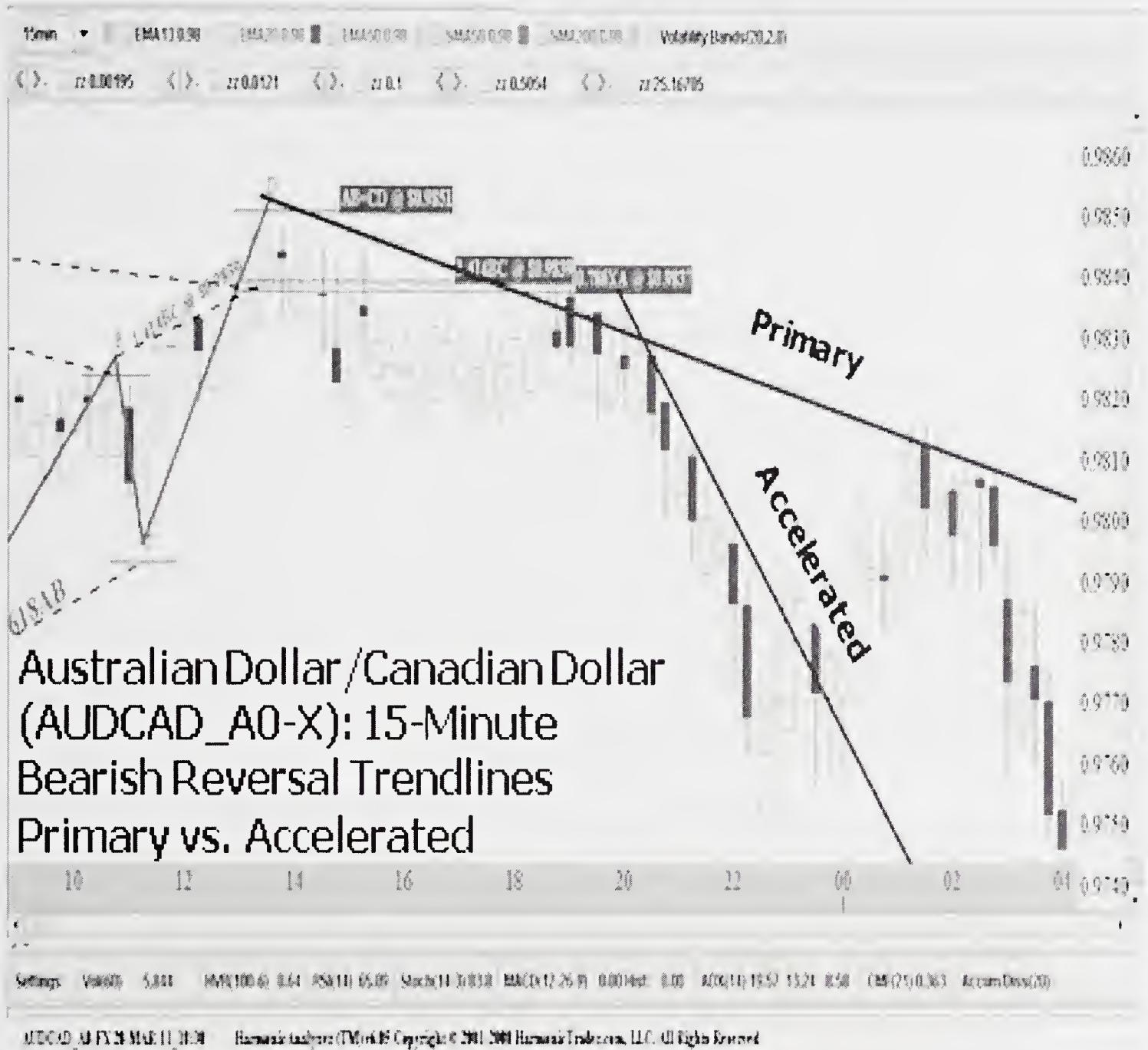
Although in most situations, a violation of the accelerated trendline would trigger some profit taking action, the primary downtrend line provided a clear trailing stop limitation to maximize the profit objective and manage the trade. We will look at some other advanced trade management strategies later this material that complement these trendlines.

Trade Management of Harmonic Trading Reversal Types

As we outlined in the chapter on trade execution, Type-I & Type-II reversal types instill the proper expectations to optimize the handling of an executed signal. Although these are not terribly complicated, it is essential to follow these situational–specific strategies of the Type-I and Type-II guidelines. Furthermore, each reversal type possesses its own unique set of expectations and employs particular biases as other strategies unique to each reversal can facilitate trading decisions. Ultimately, the predefined expectations and harmonic framework of measurements must be applied to the markets properly. Success depends upon defining those conditions where an active management strategy should be employed as opposed to a more passive approach that seeks to capitalize on longer-term situations that includes predetermined price parameters for every aspect of trade.

Harmonic Trading Trendlines: Type-I vs. Type-II Reversal

- **Type-I**: Since we manage these positions aggressively with automatic profit objectives and trailing stop management close to the primary trend, the importance of trendline assessments will be critical in capturing those temporary reactions and assessing potential for longer-term reversals. In most cases, an accelerated trendline violation will result in the close of the position. This incorporates the understanding that these scenarios are usually short-lived and provide a dramatic but temporary reaction. Furthermore, primary trend lines can be employed as a means gauge the true make-or-break for the position. In general, the Type-I philosophy is aggressive and prone for more intense management activity that secures profits when accelerated trendlines are violated.

- **Type-II:** The Type-II reversal anticipates a secondary retest that is unfolding. This confirmation of the established harmonic level will possess greater technical significance. However, these situations will experience accelerated trendline violations as we utilize the primary slope of the reversal to allow more time for these scenarios to resolve themselves. Also, smaller but complex formations such as other harmonic patterns forming on the retest of the Potential Reversal Zone (PRZ) can form on the retest of the primary trendline to confirm the reversal progress. The key in these situations is to utilize the accelerated trendline to secure a partial profit no matter what and allow another portion of the position to remain active until the primary trendline is violated.

Trade management of any harmonic pattern situation should employ closing positions with a multiple unit strategy of the original entry as a means to optimize profitability. Since Type-I reversals possess a more aggressive perspective, the profit management must be anticipatory. Understanding that these reversals are reactionary in nature, profitable moves that materialize quickly should be automatically closed at predetermined targets. Quite frankly, it does not matter what happens following the close of the trade. Sometimes, Type-I trades can be closed with the small profit or loss only to have the position work out in your favor. The only thing that matters is your result of whether the management of the position netted a profit or loss. Positions can always be reentered, especially in those situations that have overwhelming technical evidence to define the harmonic zone.

A common scenario for Type-II reversals possesses both the RSI trigger at the retest of the Potential Reversal Zone (PRZ) or slightly beyond, where the situations might seem to be failing but the price reversal realization is delayed due to the lagging RSI confirmation trigger. Certainly, the best executions possess some type of extreme RSI reversal on the pattern's timeframe. This is key because linking the primary RSI and proper RSI extreme readings that highlight those conditions for the price to react from the completion pattern.

These signals provide clear expectations and represent the most important aspect of this differentiation. It can be frustrating to know when to actively manage a position versus holding on to another for a longer period of time. While managing a trade based upon a harmonic pattern, it can be difficult to know in advance which situations will yield the monster "Home-Run" reversal and which ones should be actively handled to maximize the profit. Most harmonic patterns attempt to pinpoint clear reversal levels on the initial test that define clear reactive situations but these short-lived moves must be handled properly. In fact, this is the phenomenon that most new Harmonic Traders experience when they initially apply the measurements and are able to predict these reactions. Even if the price response is minimal, the sheer ability to predict where the market will react can be quite empowering.

Now that the pattern rules are well known, most traders are able to discover these measures and identify trades at price levels with an unprecedented degree of certainty. It only takes one trade to realize that these predictive capabilities need to be the structural foundation of any professional trader's skill set. More detailed analysis is required to know when to take that profit for short-term gain or to try to ride out any consolidation for a larger possible profit. Many of these decisions are determined by pattern and reversal types. Regardless, Harmonic Trading employs defined parameters in every situation to optimize the management of positions relative to harmonic measures.

Harmonic Trading Management Strategy Types

I. **Automatic Profit Targets:** Secure a profit automatically (with a limit order) at a predetermined ratio – 38.2% or 61.8% of the pattern – to ensure a winning trade on part of the initial position. Creates a "comfort zone" for the discretionary portion of the position.

II. **Discretionary Profit Targets:** The discretionary strategies employ secondary confirmation readings and trendlines to allow more time to assess price action signals that attempt to stay in the market as long as possible to realize the full potential of the reversal.

Harmonic Trading Management: Automatic Strategies

Most people who suggest that profit objectives should be randomly set at prior price levels without regard to the extent of the pattern ignore the fundamental basis of why these measurements work. In my *Harmonic Trading Volume 1* book, I quoted J.M. Hurst's *Principle of Harmonicity* where he put forth the proposition that price segments can be related to each other by small whole numbers. I have expanded upon this notion of replacing "small whole numbers" with harmonic ratio measurements. The key point here is that price segments can be measured and provide relevant technical information regarding probable future price action. Due to this relevance, profit targets can be accurately projected as long as they are based off the pattern itself not a random point.

Another consideration with automatic profit targets is to determine the appropriate minimum level. Since the inception of my work, I have argued that the 38.2% measure is an objective is typically the definition of any retracement or significant harmonic measured moved. Although there are other types of measures that can use smaller Fibonacci – related ratios such as 23.6% or even the 11.3%, the general move of any material PRICE significance is defined as a 38.2% retracement measure. I have always argued that the 38.2% price retracement is a minimum formation to validate any pattern segment. Furthermore, the composite of ratios validates opportunities as harmonic.

The automatic Harmonic Trading Management strategies seek to capture the "Natural Harmonic Reaction" of any pattern. As I have discussed earlier in the book, the automatic and natural reaction that price action experiences at the completion of most harmonic pattern opportunities provides a situation where there is enough time and

price to assess the larger possibilities. This requires that opportunities are measured properly and executions are triggered at the measured price objectives. These types of strategies define a more predictable process that seeks to capture profit objectives at targets that are defined IN ADVANCE. Although both reversal types employ automatic strategies to varying degrees, the strategy is generally effective in securing profits within an optimized time period.

Automatic Harmonic Trading Management Tips:

Type-I vs. Type-II management considerations include the amount of time permitted for price action to completely express the full reversal following the completion of a pattern. The automatic strategy creates a management mechanism that is quite effective over the course of a population of trades, especially since it can reduce human error and facilitate more consistent profits. The obvious dilemma Harmonic Traders face is to determine if an automated profit strategy yields better results over the history of one's trading as opposed to trying to find the "home-run" situations.

- Aggressive Harmonic Trading Management Strategy
- Seeks to capture the "Natural Harmonic Reaction" of the pattern.
- A more predictable process that is optimized by proper pattern identification and disciplined execution.
- Profit targets defined IN ADVANCE.
- Best for initial pattern completion (T-Bar+1).
- The profit objective should be measured as a ratio from the pattern off the reversal extreme (AD leg).

There are numerous studies that actually support those trading strategies that employ an automatic management mechanism that is defined before the execution is even considered. In Type-I situations, automatic profit targets will usually constitute the majority of the trade management. We will look at the overall Harmonic Trading management model later in this material but it is important to be aware of this phenomenon. Simply stated, the Type-I reversal yields reactive responses to the initial completion of any pattern while the Type-II retest possesses larger possibilities but still considers automatic profit targets to optimize these decisions.

Profit Anticipation

The key in the translation of harmonic measurements to identify structural signals as profitable opportunities requires a realization that a portion of the position must employ an automatic profit objective. Regardless of the reversal type, harmonic patterns require an automated management strategy simply due to their nature. Although some situations do identify remarkable opportunities, the realistic approach to all harmonic patterns is to treat them as temporary vehicles that yield clear execution parameters and profit objectives.

When I initially managed live positions, I would take a more passive approach and wait to see if something larger may develop in every situation. I found myself sitting on my hands although I was executing well-defined opportunities. My delay in capturing profits substantially hindered my overall performance. I believe traders will realize more consistent success if they incorporate a measured management strategy that anticipates profit objectives in advance and closes out trades automatically with predetermined orders placed at the same time as the execution.

From a general trading perspective, the automatic management strategy anticipates the natural harmonic reaction and attempts to secure realistic profit amounts that most commonly fall within the range of a pattern's price limits. Furthermore, the prescribed ratio targets and other automatic strategies instill a greater degree of discipline in the management of the trade. Although people often disagree on the exact initial profit objective as measured by the pattern, it is clear that there are a few basic measurements that should be the basis for the automatic strategy. Most notably, the 38.2% and the 61.8% countertrend ratio measurements represent the minimum natural reactive harmonic targets to anticipate. Although this model framework is most appropriate in Type-I situations, it does serve as the general minimum expectation to define possible price objectives.

We will address specific situations and how to optimize these measures in different scenarios. However, the ability to establish automatic profit objectives demonstrates a larger comprehension regarding the entire trading process. I have continually stressed the framework of identification, execution and management. Within this three-step process, most trading decisions must be considered even before the entry of the position. As a primary principle within the Harmonic Trading plan, I have urged many students and other interested Harmonic Traders to employ some sort of automatic management strategy on part of every position. Through it all, my fundamental expectation about most harmonic patterns is that there will be a profitable reaction that requires an aggressive management strategy. More importantly, each consideration throughout the management process requires an aggressive set of expectations to monitor the price action closely and adhere to the parameters of the prescribed trade. Most successful traders whom I have encountered have a comprehensive understanding of how to define entry, exit and stop loss parameters that develop an overall assessment of the market's condition.

Bullish Automatic Profit Targets

This illustration exemplifies the simple measurements employed to define initial profit targets. This model was a result of years of research that measured the clearest reversals and most common limits of any pattern's reaction. These relationships will become clear as you analyze patterns from this perspective. As I previously mentioned, the Type-I reversals are usually exclusive automatic profit management situations. In the Type-II reversals, the automatic targets are still assessed but the execution of the position typically employs other confirmation assessments.
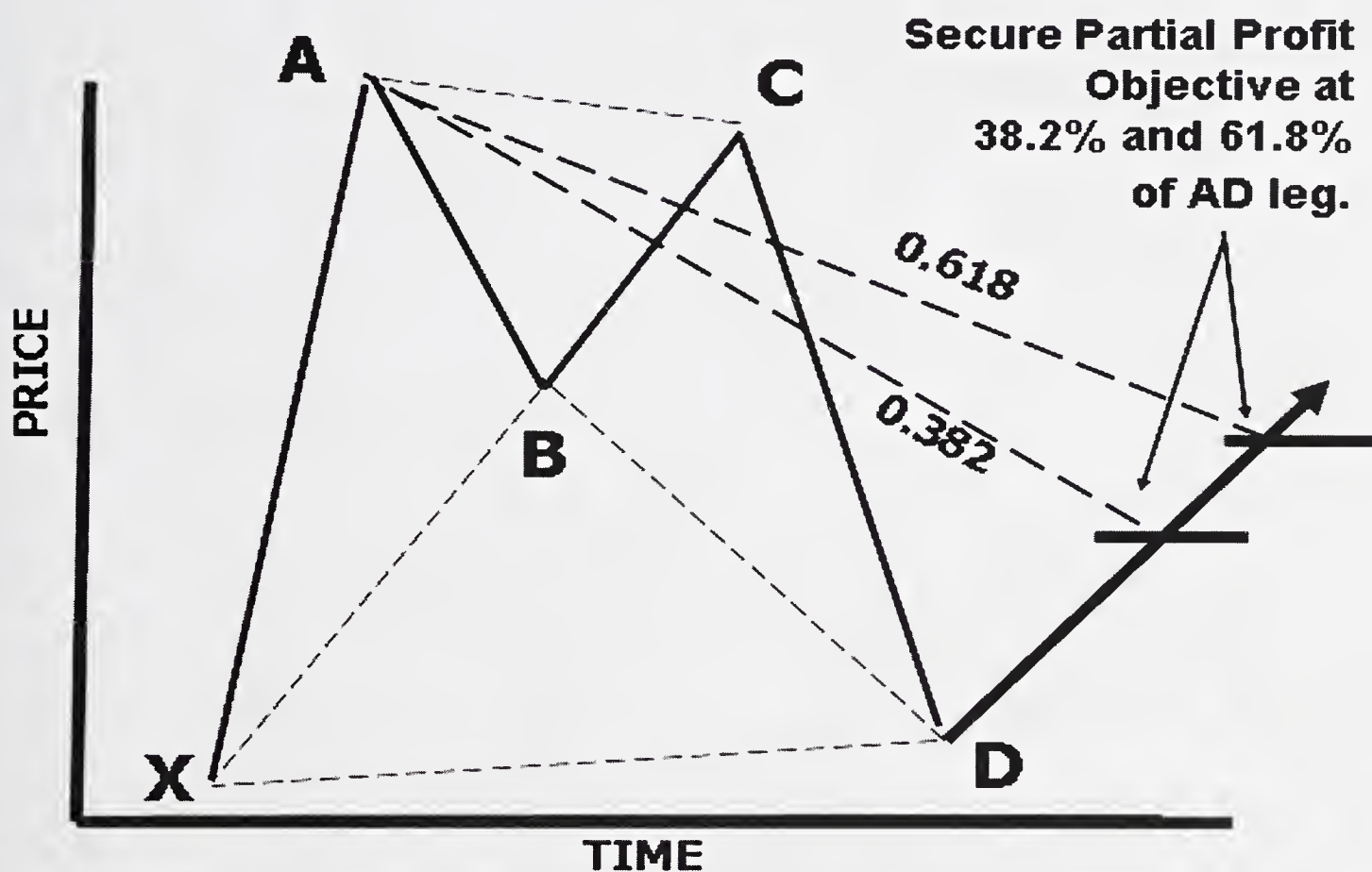
Another advantage of these profit targets is that they provide a minimum objective to compare the associated stop loss limit and determine precise risk/reward percentages. Typically, harmonic patterns should possess a minimum 2:1 but preferably 3:1 risk-to-reward ratio. In fact, there are many websites that have risk calculators that explain the importance of maintaining these risk parameters over the course of many trades. Essentially, regardless of the methodology, most trade parameters must require these minimum measures to maintain a consistent overall performance, especially in the event of a few losing trades.

The following Bullish Gartley in the Euro/U.S. Dollar exemplifies most common harmonic scenario in Type-I situations. The clear structure defined an ideal execution zone for the trade. Immediately following the completion of the pattern, the reversal rose sharply. The automatic targets - as measured from the peak of the pattern at the A point down to the reversal low - defined the 38.2% retracement at 1.3858 and the 61.8% retracement at 1.3927 as the minimum target objectives for the trade.
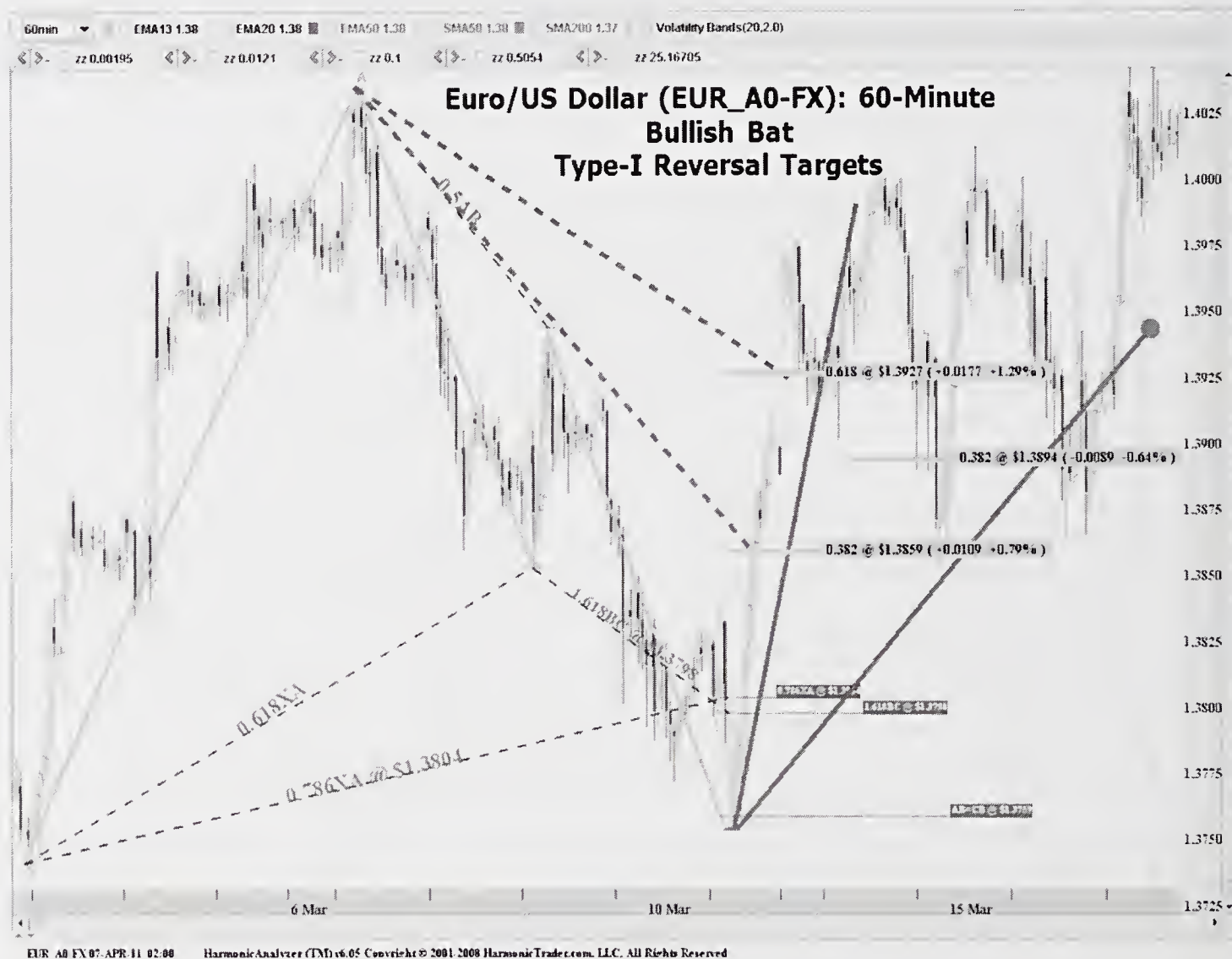

Even if part of the position was closed out early at the 38.2% level, the total profit trade realized an even sizable gain at the second target of 61.8% level. One interesting note about Type-I trades is that they typically experience some consolidation even if they eventually continue in the reversal direction. In this case, the price action reversed sharply and reached both targets shortly after completing pattern. Although the price action extended beyond these levels, the automatic profit strategies did optimize the amount of time required in the trade. Even if position was held, clearly there was extensive consolidation required before a larger reversal ensued. This is a perfect example of trying to optimize the amount of time in a particular position. This is a common dilemma that all Harmonic Traders base. It can be easy to assume that the

automatic profit objectives are leaving money on the table. However, my research shows that over the course of many trades, automatic profit objectives tend to be more efficient and this management style capitalizes upon the natural harmonic reaction that is inherently volatile in character anyway. Therefore, the failure to establish profit targets in advance with limit orders does leave positions vulnerable to not capture profits when volatile moves are realized.

Bearish Automatic Profit Targets

The bearish model seeks to capture the reaction to the minimum 38.2% and 61.8% targets. It is important to note that these are minimum objectives, and the strategy seeks to capture a portion of the initial reversal within this range. This anticipatory strategy is an essential element in the trade management arsenal. I think most Harmonic Traders are overlooking the need to automatically secure profits at predetermined targets.
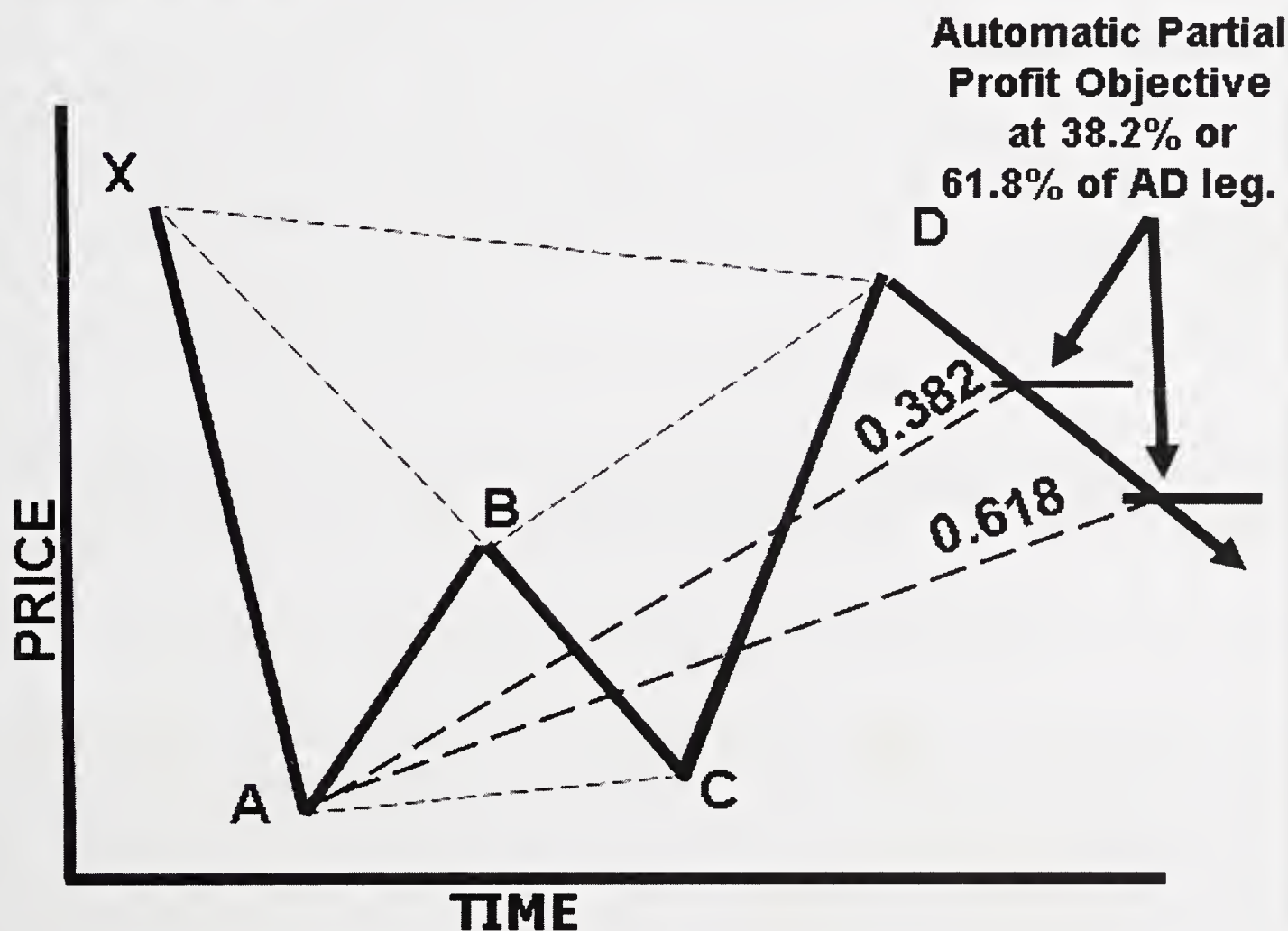
The next example of the Swiss Franc shows a rather dramatic reversal at the completion of the pattern. Interestingly enough, the initial reactive thrust immediately tested both profit targets shortly after completing pattern. After a brief consolidation, the larger reversal was realized. One interesting aspects of this reversal is that it did not

violate the distinct downtrend established from the Terminal Price Bar. In many management instances, the only consideration is monitoring a reversal trendline, especially after all price targets have been established.
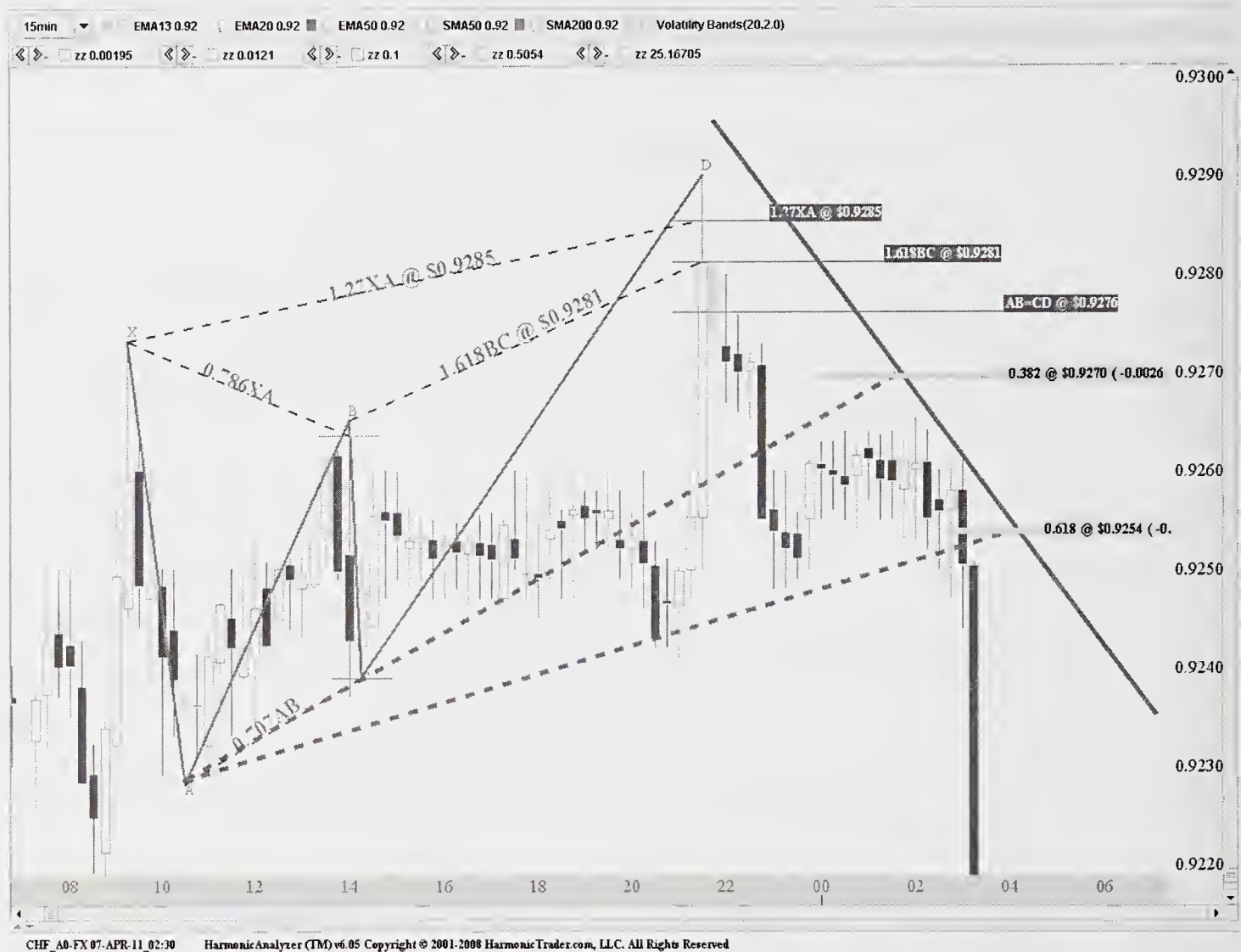
Harmonic Trading Management: Discretionary Strategies

The discretionary strategies employ secondary confirmation readings and trendlines to allow more time to assess price action signals that attempts to stay in the market as long as possible to realize the full potential of the reversal. There are variety of measurements and concepts that comprise these discretionary strategies. Unlike the automatic profit targets established by the limits of the pattern, discretionary strategies involve a personal assessment of multiple variables. Often, Harmonic Traders must decide between which management parameter is more significant. The internal debate of attempting to stay in a position longer to allow a larger reversal to develop is constantly monitored relative to those discretionary limits that define the state of the trade. For example, certain price measurement comparisons must be assessed relative

trendlines to gauge the potential for a reversal to reach beyond a nominal reaction. In fact, the conglomeration of all of the strategies within the Harmonic Trading process attempts to define a larger assessment of the probable future price direction. There may be certain dominant factors that may serve as a primary basis such as demonstrative price action or strong execution confirmation that helps develop a clear bias to guide management decisions.

The discretionary strategies are most prone to error. Harmonic Traders must assess multiple variables to optimize profits realized and minimize risk required. In most situations, there will always be potential scenarios where we could have handled the trade better. Although this is a motivating factor to improve skill sets, the important concept is to not hyper-focus on what the perfect scenario would have netted. Rather, the optimization of management decisions should always be guided by those strategies that consistently capture the majority of the possible move at hand.

Discretionary Harmonic Trading Management Tips:

- Discretionary Profit Targets can include other harmonic measures and strategies such as trendlines.
- Allows more time for consolidation to realize larger reversal.
- Employs Trendline Analysis to manage the profit portion to stay in the market as long as possible to realize the full potential of a reversal.
- Exchanges Immediate Objective of Automatic Profit target for Larger Discretionary Possibility.
- Giving Back Profit vs. "Leaving it on the Table"
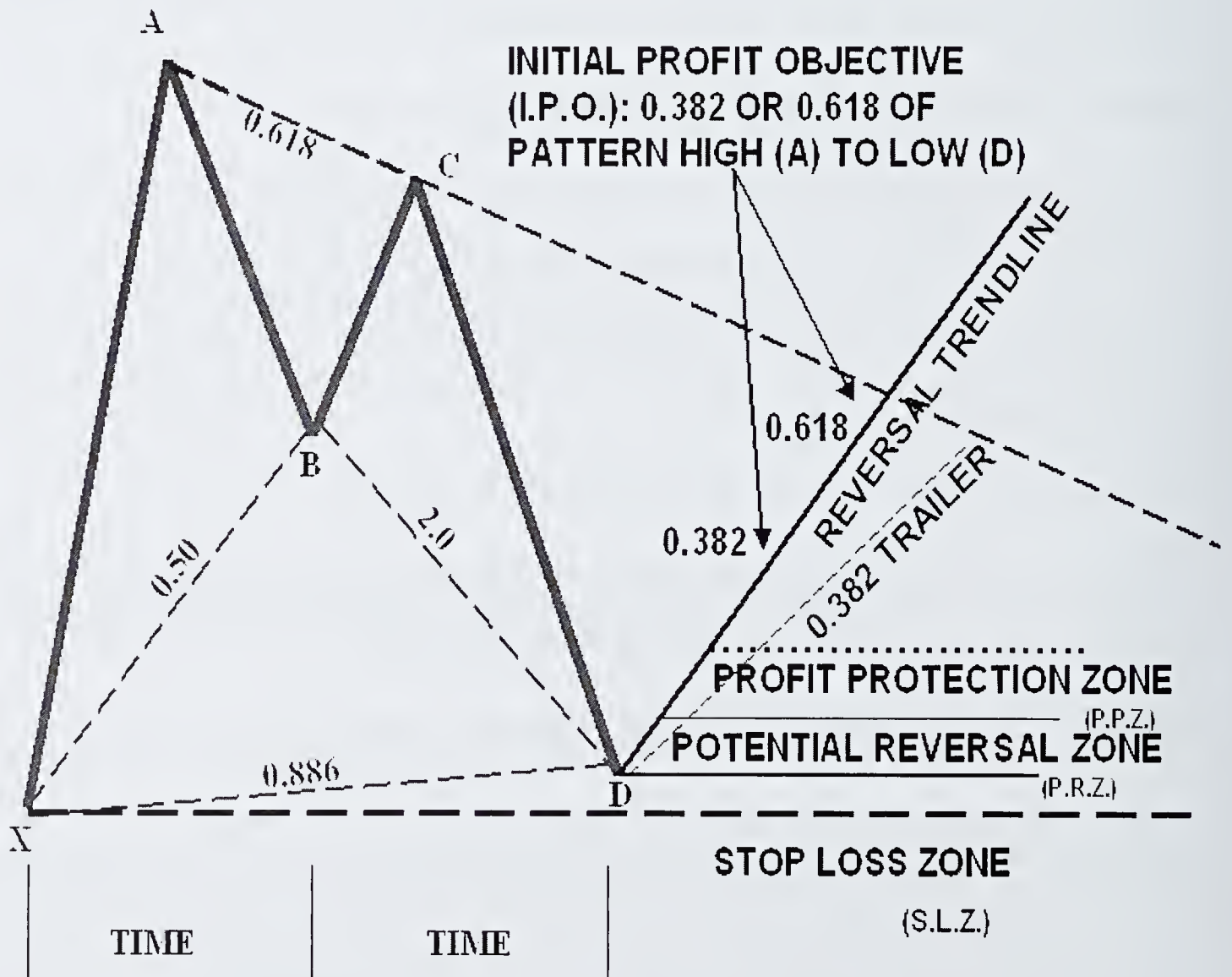- More common in Type-II reversal management decisions.

We will now take a detailed look at the expectations of each reversal type and how automatic versus discretionary strategies determine whether we actively manage a position or allow more time for the larger scenario to develop.

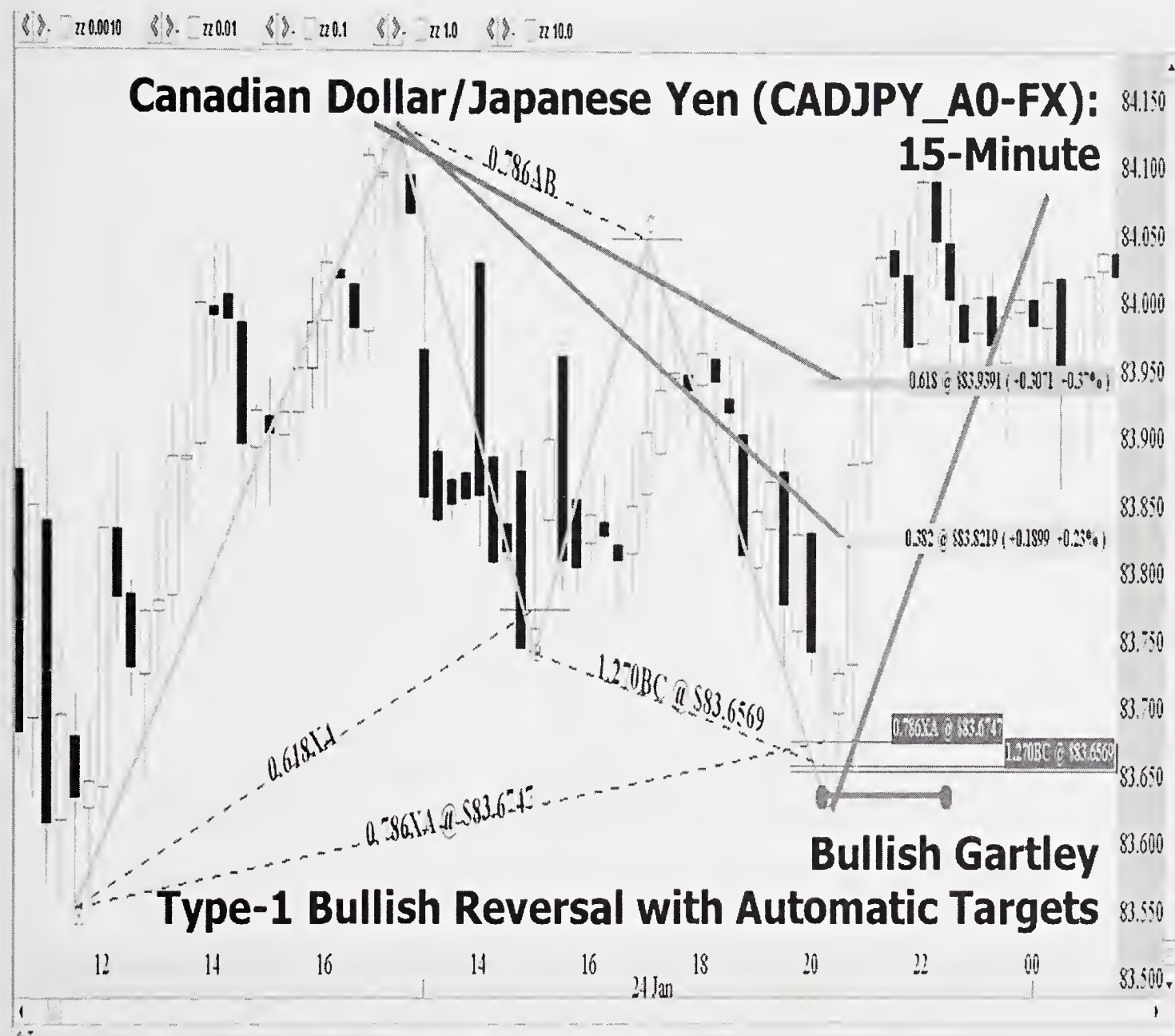## Harmonic Trading Management of Type-I Reversals

As we have seen with the execution strategies, the management of Type-I reversals focuses primarily on the initial pattern completion - that is, the first time the price action tests the Potential Reversal Zone (PRZ) and establishes the Terminal Price Bar to validate a harmonic pattern completion as a LIVE TRADE OPPORTUNITY! In most situations, we look to execute starting immediately after the Terminal Price Bar has been established (T-Bar+1) and anticipate that price action continues in counter-trend direction (T-Bar+3) without retesting Potential Reversal Zone (PRZ). Before the position is even executed, the predetermined 38.2% & 61.8% profit target levels are established to automatically cover the position.

Bullish Type-I Harmonic Trading Management Model

Although I presented this model in *Harmonic Trading Volume 1* and outlined each of the management strategies, I have refined the overall application of these concepts to create a framework that distinguishes reactions as opposed to reversals. The goal of most Type-I trades is to secure profits at limited objectives. Although this may seem counterintuitive to most traders, this recognition facilitates an overall understanding that not all price segments are the same. Therefore, it is essential to identify those common parameters that help distinguish the early signals of probable future price direction.

INITIAL PROFIT OBJECTIVE (I.P.O.): 0.382 OR 0.618 OF PATTERN HIGH (A) TO LOW (D)

REVERSAL TRENDLINE

0.382 TRAILER

PROFIT PROTECTION ZONE (P.P.Z.)

POTENTIAL REVERSAL ZONE (P.R.Z.)

STOP LOSS ZONE (S.L.Z.)

The following example of the Canadian Dollar/Japanese Yen on the 15-minute chart exemplifies a Type-I reversal and affiliated management strategies. The pattern was quite distinct with a well-defined Potential Reversal Zone. These numbers defined the area at 83.65 as the ideal completion point pattern. The 38.2% and 61.8% targets were calculated for approximately 20 and 35 pips, respectively.

Canadian Dollar/Japanese Yen (CADJPY_A0-FX): 15-Minute

Bullish Gartley

Type-1 Bullish Reversal with Automatic Targets

Although the price action rallied well above the 61.8% second target, price action stalled shortly thereafter and retraced most of those excess gains. Again, this is the challenge most Harmonic Traders face with these reversals.
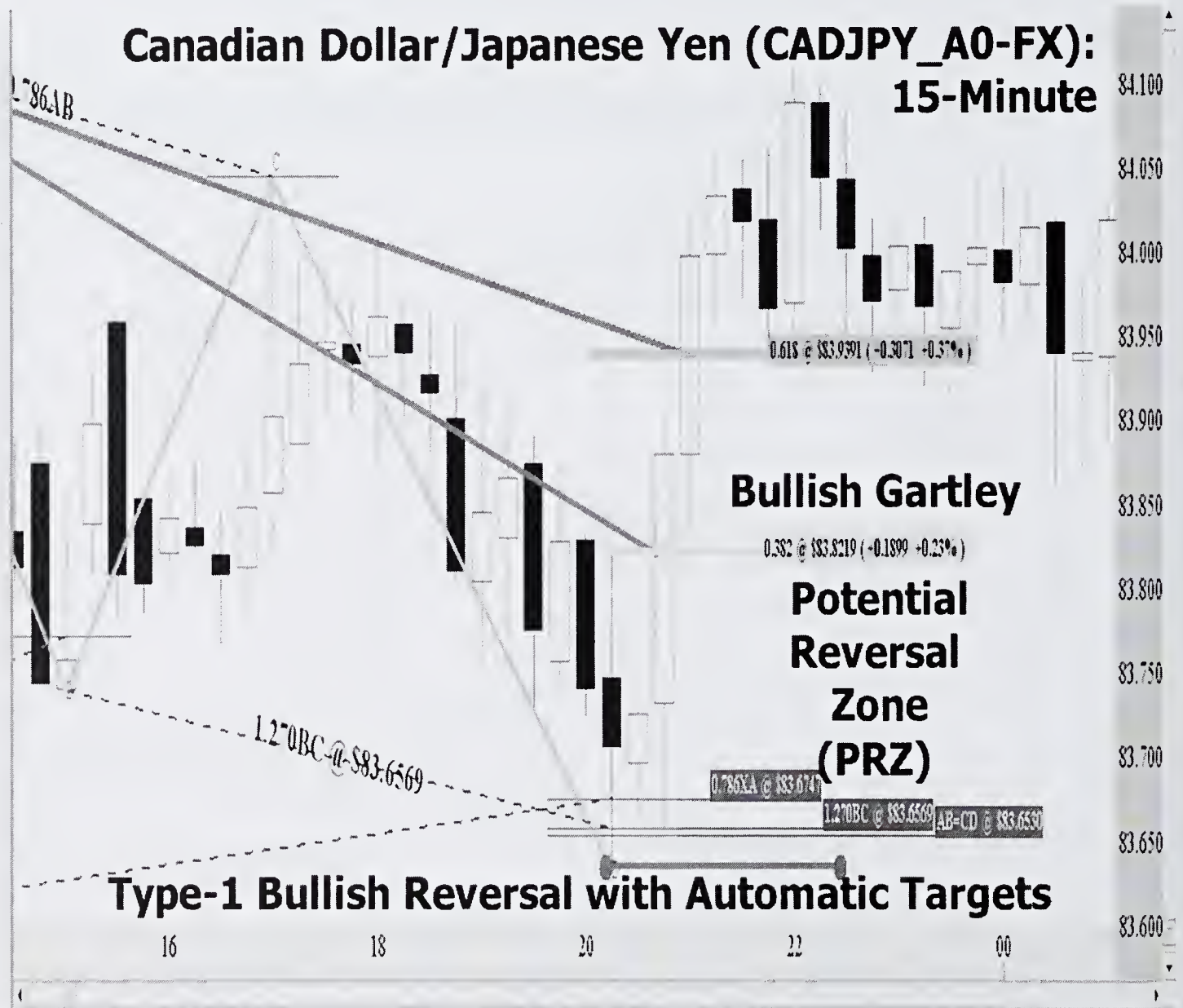
The automatic targets guarantee that certain profits are locked in yet remorse commonly sets in as the possibility for greater gain becomes apparent. In these situations, the Harmonic Trader must be realistic about what is attainable, utilize established profit targets to ensure gains are realized and then integrate lessons learned to capture more of these reactive moves while still maintaining a tight management policy throughout the process.

Bearish Type-I Reversal Management

Albeit rather complex, the entire model outlines measurements and areas that include expectations of how to handle price action following the execution of a trade.
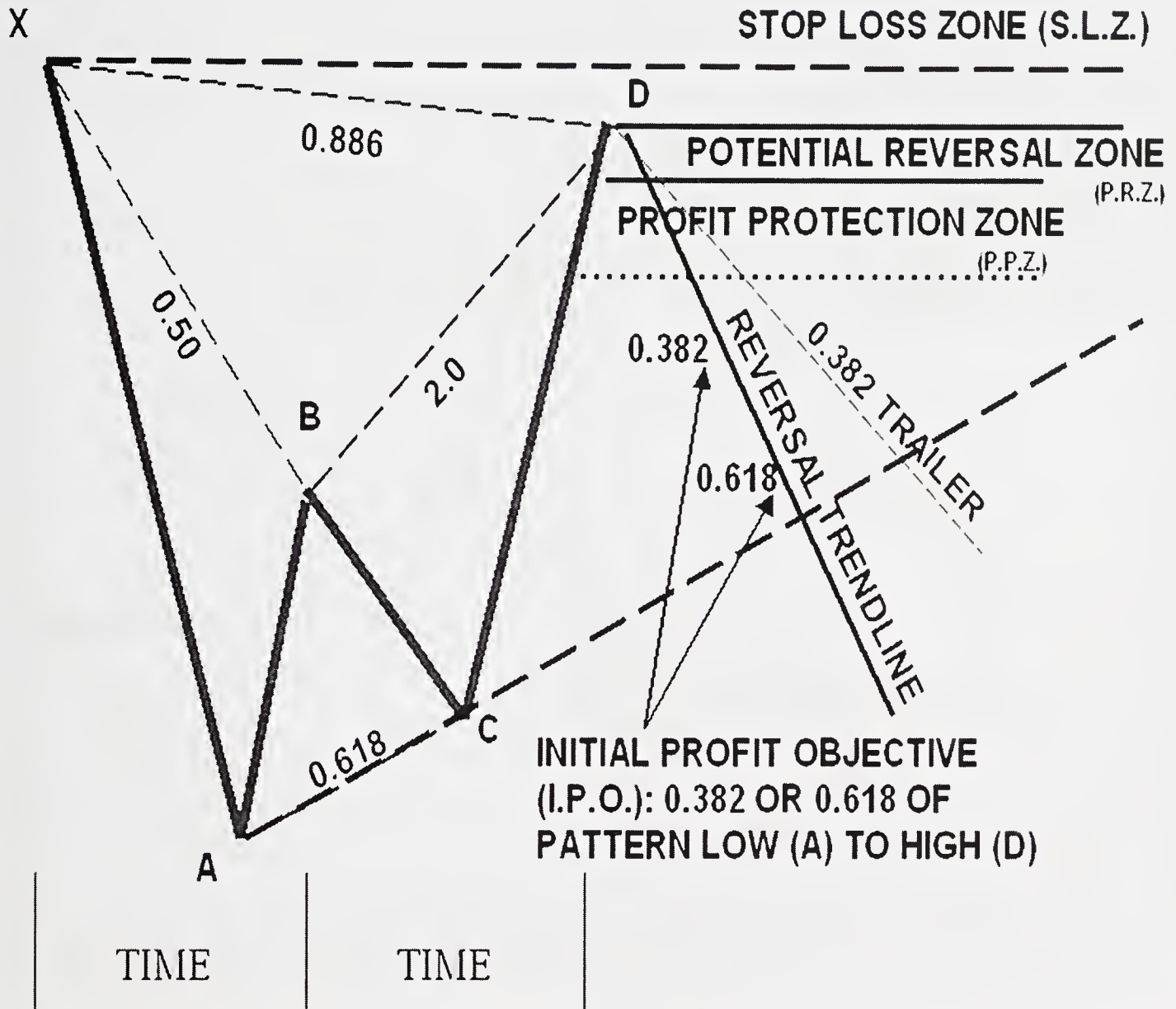
Clearly, the Type-I objectives define the 38.2% and 61.8% targets as the goal of the trade while not triggering the stop loss. Although concepts such as the Stop Loss zone, Profit Protection Zone and 38.2% trailing stop represent discretionary strategies, most of the automatic targets and trendline assessments will define actions in the Type-I management framework.

The following example of the New Zealand Dollar shows a common situation that most Type-I trades experience. The reversal was quite ideal at the completion of the

pattern and the 38.2% initial profit target was realized after a brief consolidation. The initial reaction continued lower to test the 61.8% level. In these instances, the automatic targets would trigger that the profit is captured and trade is closed even though the larger reversal ensued later.
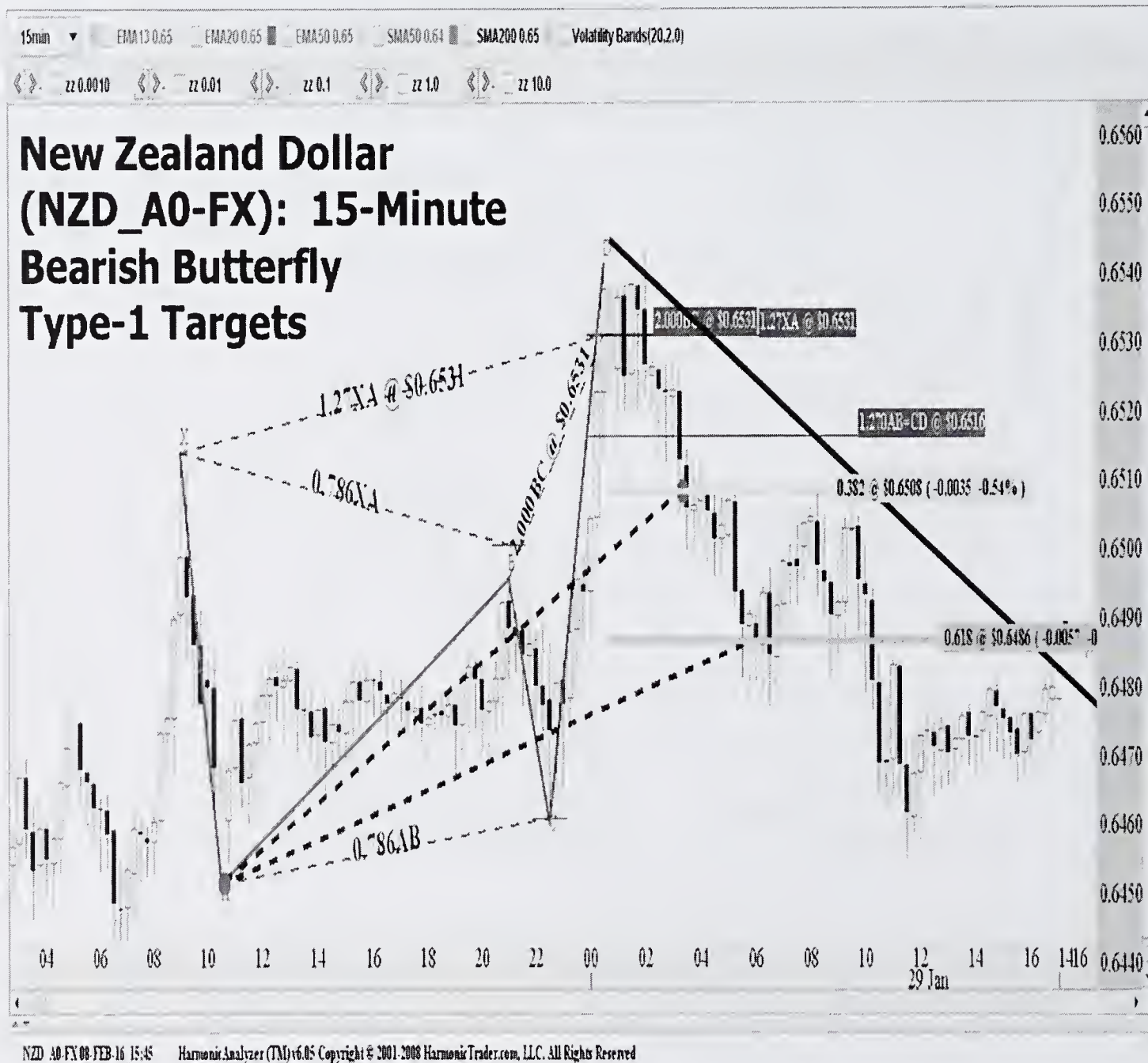
The interesting aspect of this situation which is quite common in most Type-I management considerations is the fact that the price action consolidated after reaching the second target at the 61.8% level. This is a common phenomenon at either the 38.2% level or the 61.8% second target. The Type-I reversal that cannot exceed the 61.8% second target on the initial reaction will likely experience some degree of a retest. When this is realized, Harmonic Traders must understand that the larger reversal

will require more time in any situation. Understanding this, our trade management parameters can be tightened to reduce risk required and capture profits more efficiently. In fact, I would rather execute these automatic moves then try to wait for the market to develop a larger reversal. In the Type-I management situations, if the price reversal is not demonstratively violating these initial targets, further consolidation will be likely.
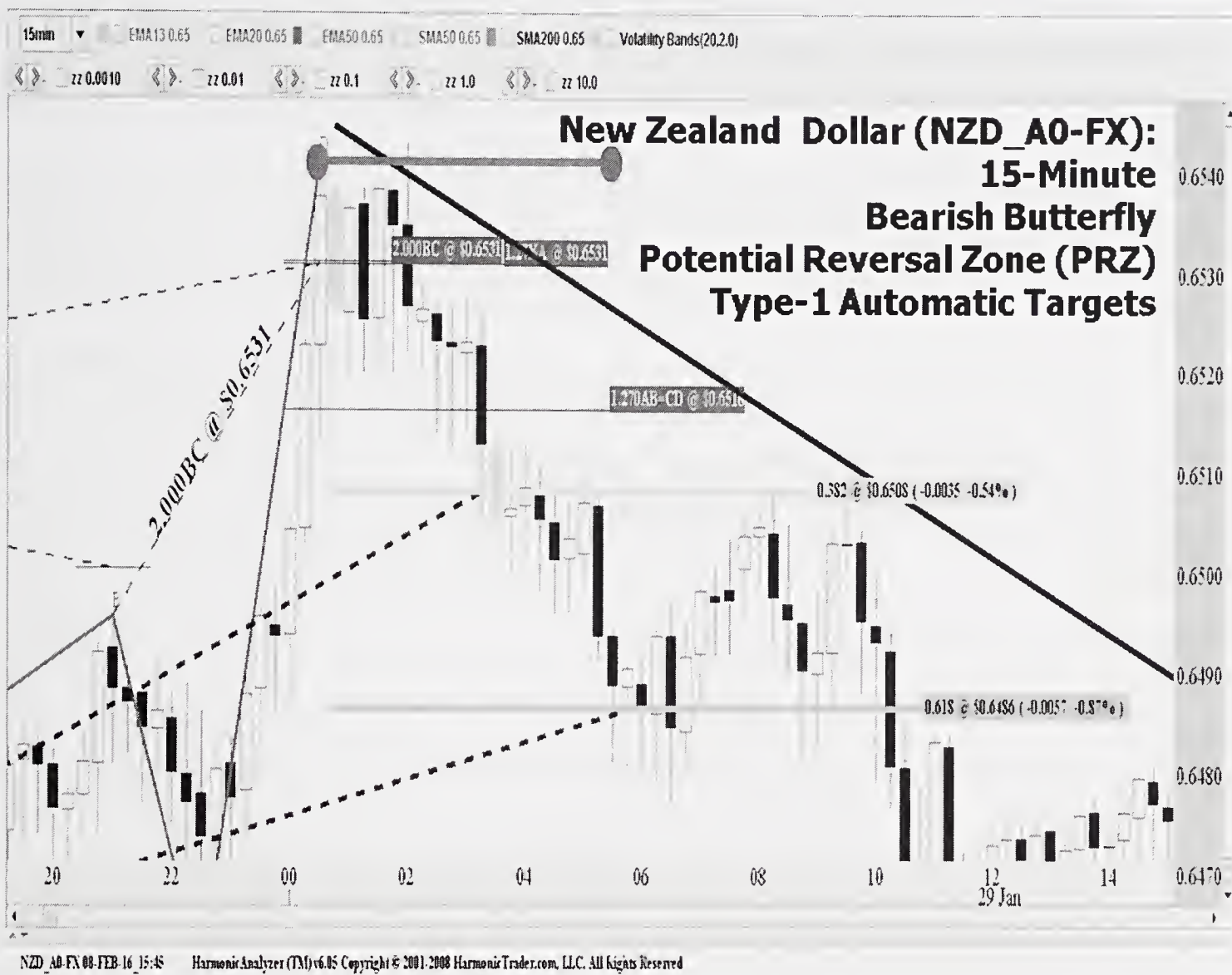
Type–II Reversals Management

The Type-II reversal is the most important event within a Potential Reversal Zone (PRZ). Since most pattern situations will experience some degree of the retest, the greatest impact felt from any pattern will not materialize until after this secondary test is completed. The management of these Type-II situations frequently requires confirming readings of the price levels established by the primary pattern. It is quite common for the price action to retest the Potential Reversal Zone to provide obvious

confirmation in the most valid situations. It is important to note that the Type-II scenario will possess other measurements that help determine the overall validity of the setup. The secondary test of any Potential Reversal Zone (PRZ) will include other confirmation signals that help determine the overall situation. In addition, the Relative Strength readings and price action triggers that unfolded during the Type-I test will help to pinpoint the clear make or break level for the secondary test.

The price action following the Type-I reversal can actually help to define what the potential profit objectives might be for the Type-II scenario. Generally, if a pattern is going to yield a valid reversal it will be confirmed on the secondary test of that structure. The secondary test will confirm the support/resistance that the pattern defines.

The Type-II strategies are a bit more flexible, as the assessment of the price action must be considered relevant to the ideal harmonic levels. These situations require more time before a larger reversal can ensue. The primary technical event unfolds after the secondary test reenters the Potential Reversal Zone and establishes a Type-II

Terminal Price Bar. In the same manner as the initial test, the price action during this retest establishes the permissible possibilities for the entire scenario as long as the price action continues in counter-trend direction shortly after the retest of the Potential Reversal Zone (PRZ). The ability to apply this general model serves as an effective means to thoroughly analyze particular trade opportunities and define all relevant parameters required to facilitate trading decisions within the Type-II retest.

Type-II Reversal Management Tips

- The SECONDARY RETEST in price action that tests the Potential Reversal Zone (PRZ) after TYPE-1 REACTION.
- Expect larger possibilities for profit potential as retest confirms pattern as important structural signal to define support/resistance.
- Look for smaller pattern structures and important measurements that confirm the completion point of the primary pattern.
- IDENTIFY Primary Pattern Potential Reversal Zone (PRZ) and look for full retest of ALL #s.
- EXECUTE @ Type-II Terminal Price Bar+ 1 strategy and assess secondary confirmation factors to confirm retest of Primary PRZ.
- MANAGE with Discretionary Strategies to allow more time for larger reversal to unfold.
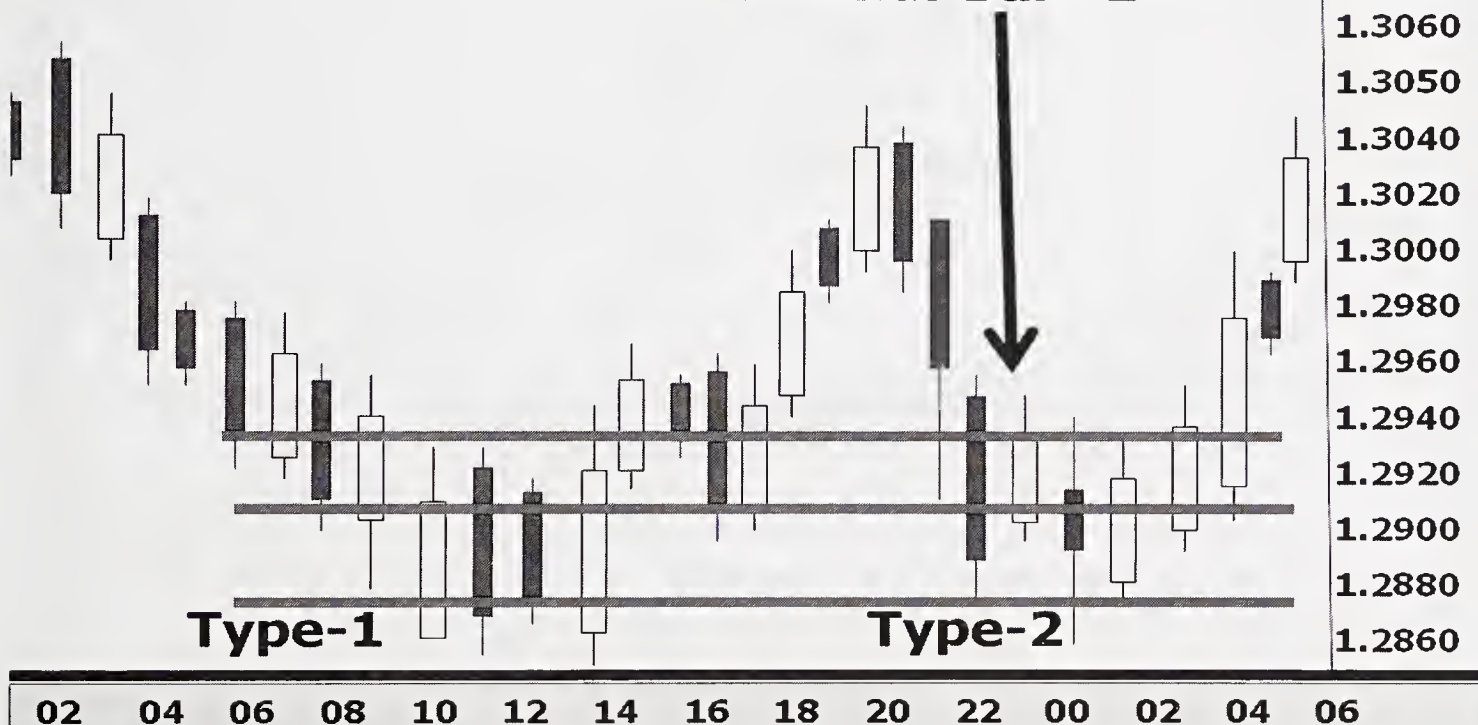
Bullish Type-II Reversal Management

The Type-II bullish reversal can be found in those clearest instances where an initial reaction to harmonic support experiences a pullback to retest the Potential Reversal Zone (PRZ). Although the most ideal situations will retest all of the numbers in the support range, the most common result is a nominal retracement that will typically form additional confirmation signals to help validate the opportunity.

It takes some time to be able to ascertain when a Type-I reversal ends and a Type-II reversal begins but the clearest initial signal is when the first rally rolls over and violates a simple primary trend line. The price action on the secondary test possesses enormous implications for the potential support. It is quite common in failed situations where the secondary test rolls over sharply and declines below the Terminal Price Bar. As I will outline later in this book, there are clear signals to these opportunities. It is essential to first understand and be able to recognize these reversal types.

Bullish Type-II Reversal

As the secondary retest is unfolding, the key event to denote the completion of the reversal is an entire test of the initial Potential Reversal Zone. At that point, the Type-II reversal has completed and we employ the Terminal Bar + 1 methodology to

examine immediate entry points for the position. Sometimes, smaller patterns or other identification measurements will confirm the support that is being retested. These are relevant and do help to confirm the retest of the Type-I support. As we re-examine the example of the Canadian Dollar/Japanese Yen on a 15-minute chart, the price action established a Bullish Crab pattern that experienced a sizable reversal on the initial completion. Despite the strength of the move, it quickly rolled over and retested the pattern's original Potential Reversal Zone. The price action stabilized at this harmonic support but required more consolidation before the larger reversal ensued. This example possesses all of the standard expectations for any harmonic pattern opportunity.

Canadian Dollar/Japanese Yen (CADJPY_A0-FX): 15-Minute Bullish Deep Crab

Bullish Type-2 Reversal Terminal Bar+1
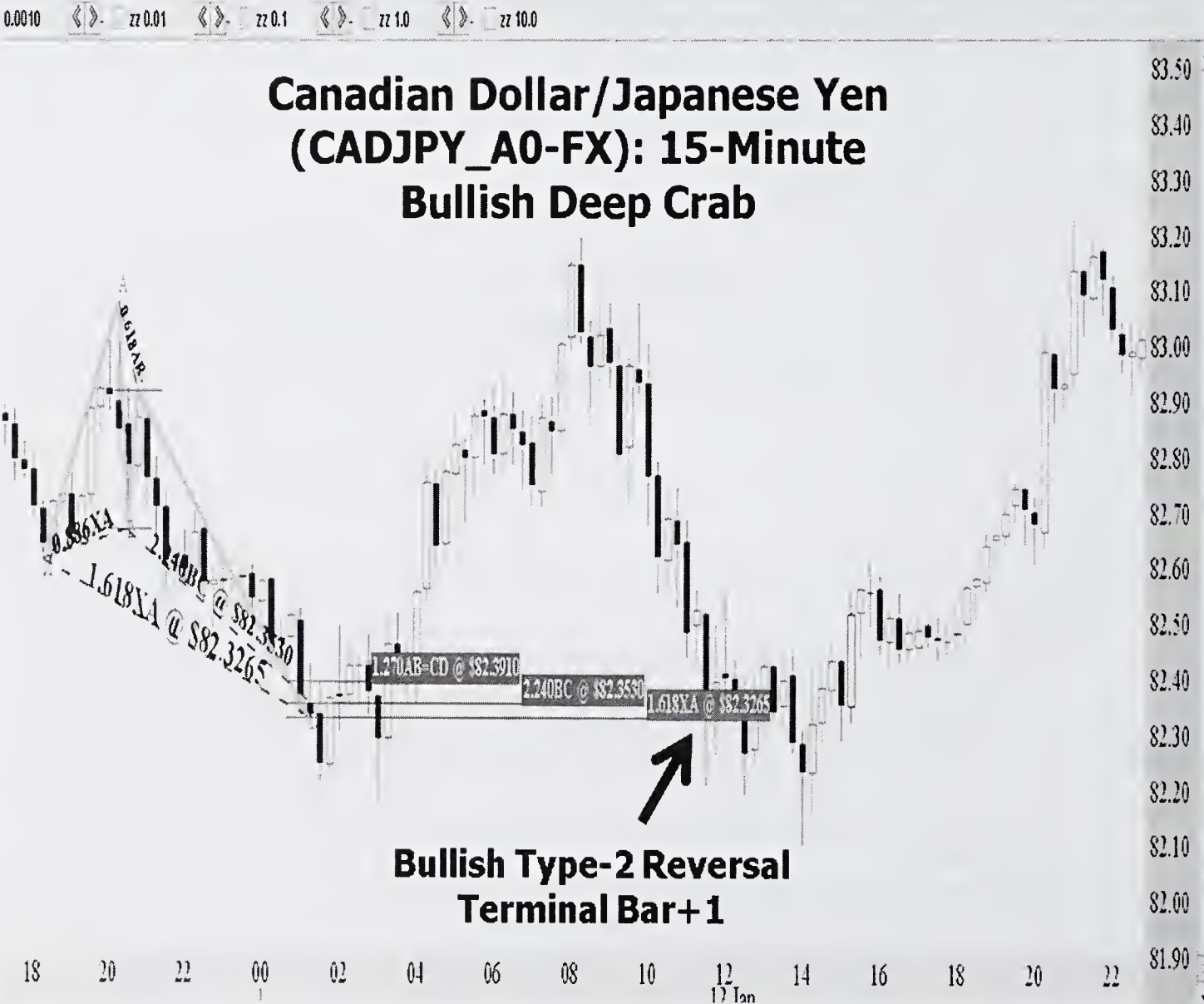
The initial pattern yielded a sizable but short-lived reaction. The secondary test required more time but marked an important confirmation point for the harmonic support. As this framework becomes more ingrained into your trading plan, these situations become easier to execute and manage more efficiently. In this instance, the

Harmonic Trading Volume 3: Reaction vs. Reversal

secondary test reversed sharply after completing the Type-II reversal. The execution price levels were essentially the same as the initial test however the profit targets were managed differently.

Although the typical 38.2% and 61.8% harmonic levels as measured by the extreme of the pattern served as important minimum objectives, the trendline analysis clearly maintained stop loss levels to stay in the trade as the reversal unfolded. The initial reversal rallied impressively where each individual price bar formed a successive pattern of higher highs and higher lows in the anticipated trend direction.
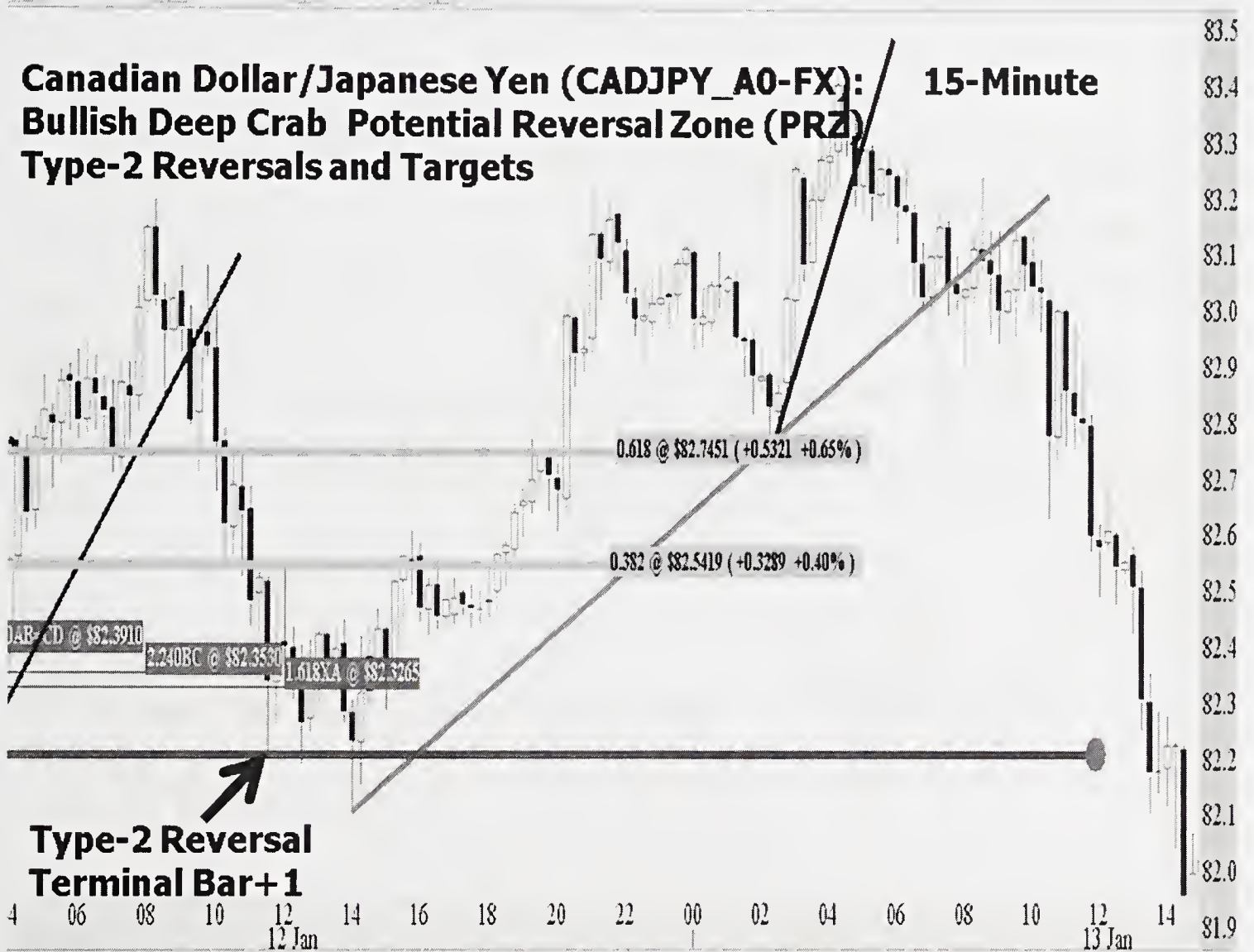
In Type-II situations, the initial portion of the position will likely be secured at the 61.8% minimum profit target. This would represent the automatic aspect of the Type-II trade management. Discretionary strategies are employed in these situations to allow more time for a larger reversal to materialize. Some traders prefer to wait until the trendline violation signals the end of the move. However, I still believe it is advantageous to automatically secure some portion of every trade at a predefined target while allowing discretionary strategies to facilitate decisions when to stay in the

Harmonic Trading Volume 3: Reaction vs. Reversal

trade. These assessments become clear with experience but are the primary means to distinguish nominal reactions from larger reversals.

Bearish Type-II Reversal

After experiencing a reaction from the initial completion of the pattern, most Type-II reversals will require more time for the price action to unfold but the expectations of a larger reversal increase as the harmonic resistance is confirmed on the secondary test.

Harmonic Trading Volume 3: Reaction vs. Reversal
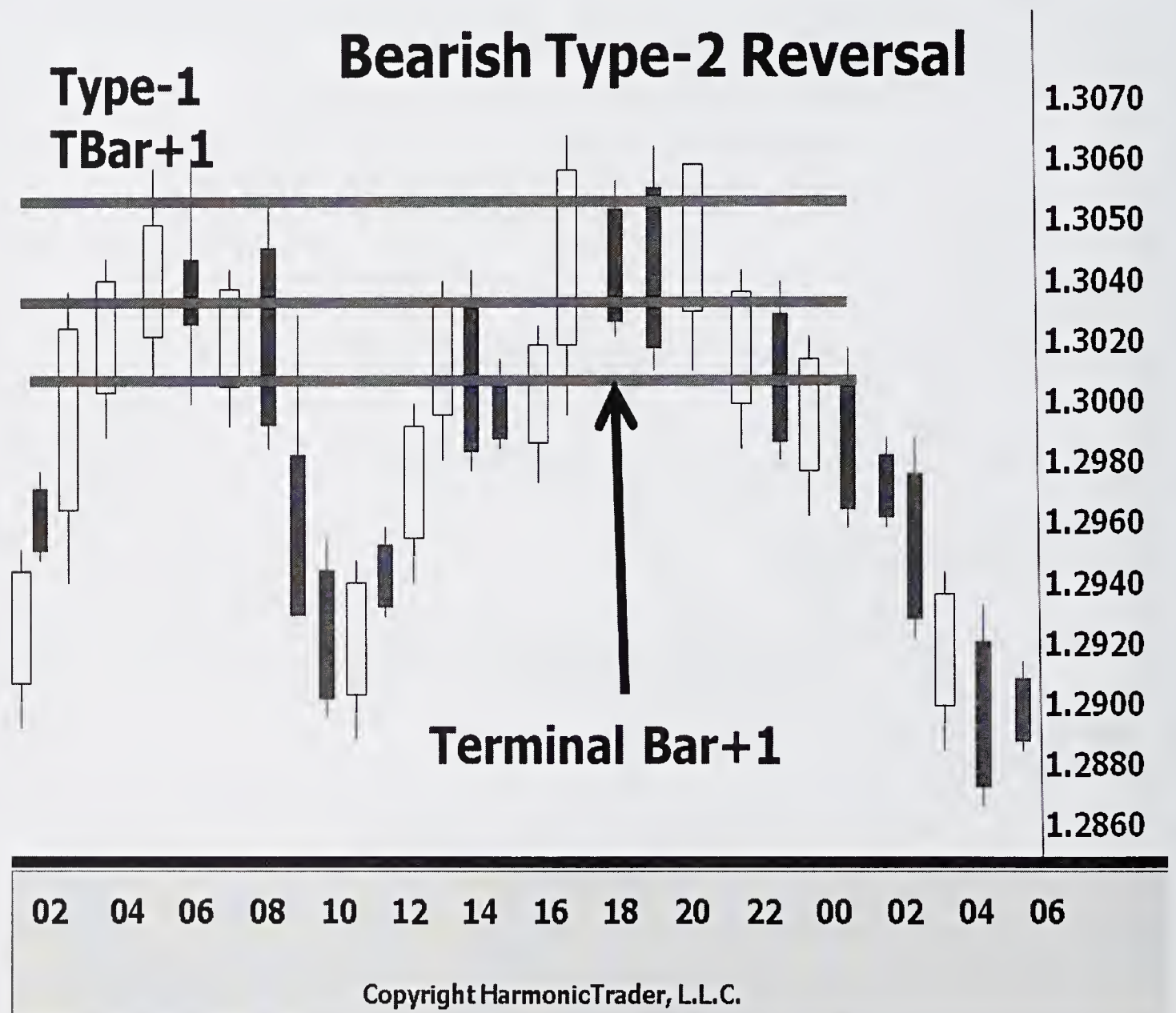
This following 60-minute chart of the Swiss Frac/Japanese Yen exemplifies the Type-I and Type-II phenomenon. For this case, let's focus on the Type-II phenomenon and the characteristics that triggered the reversal. Clearly, the pattern established initial resistance as the price action sharply reacted from the completion of the initial test of the Potential Reversal Zone.

Swiss Franc/Japanese Yen (CHFJPY_A0-FX): 60-Minute Bearish Gartley
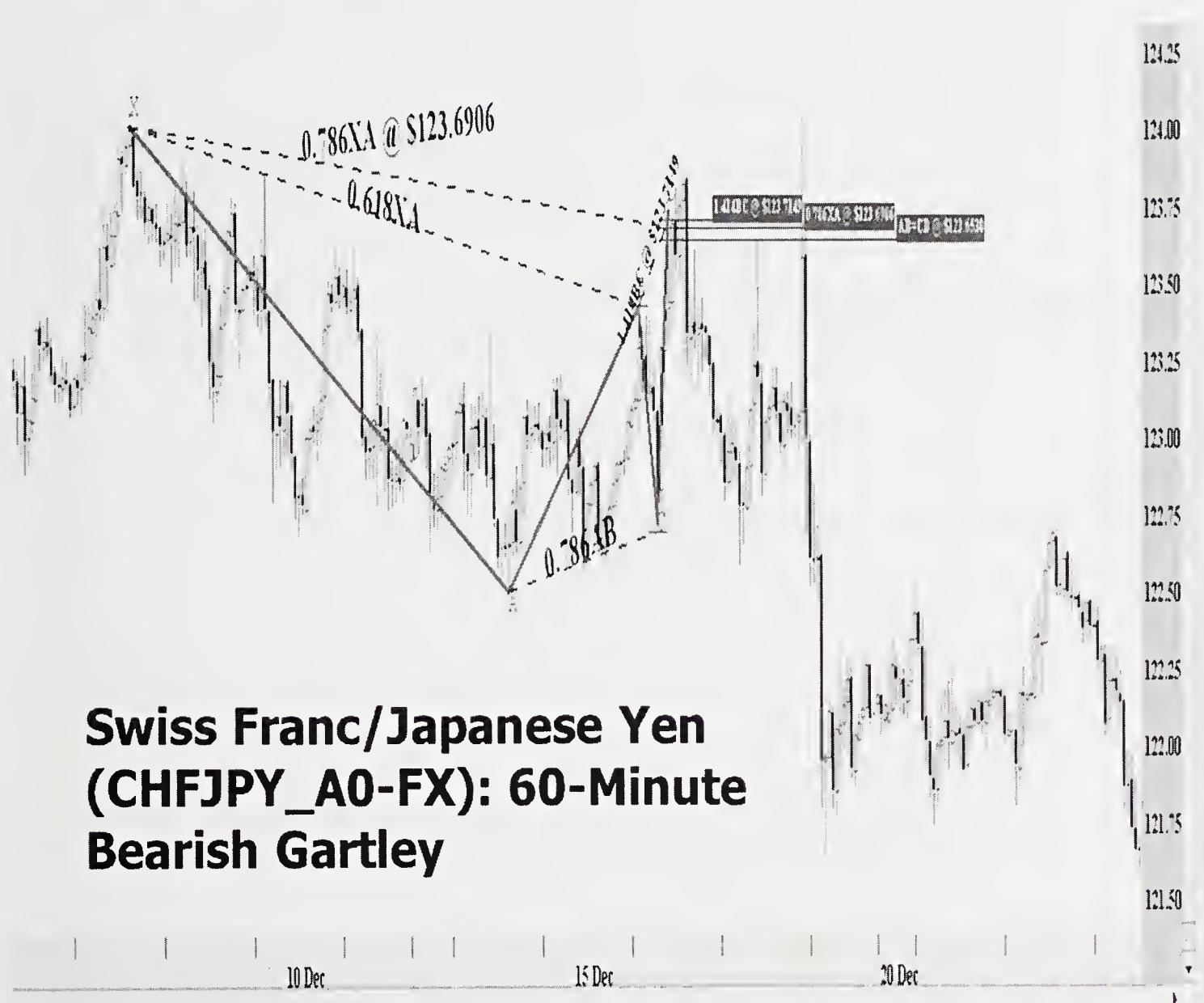
This chart of the price action in the PRZ demonstrates the power of an established harmonic level to affect price action. In the case of CHF/JPY, the Type-II reversal point clearly shows how the initial pattern marked substantial harmonic resistance. Although this reversal was sharp, the scenario was quite clear that the secondary test was to be respected and it yielded a much larger profit opportunity.

Swiss Franc/Japanese Yen (CHFJPY_A0-FX): 60-Minute
Bearish Gartley
Potential Reversal Zone (PRZ)
Type-2 Reversals and Targets

Type-2

0.382 @ $123.3468 (-0.5172 -0.42%)

0.618 @ $123.0272 (-0.8368 -0.68%)
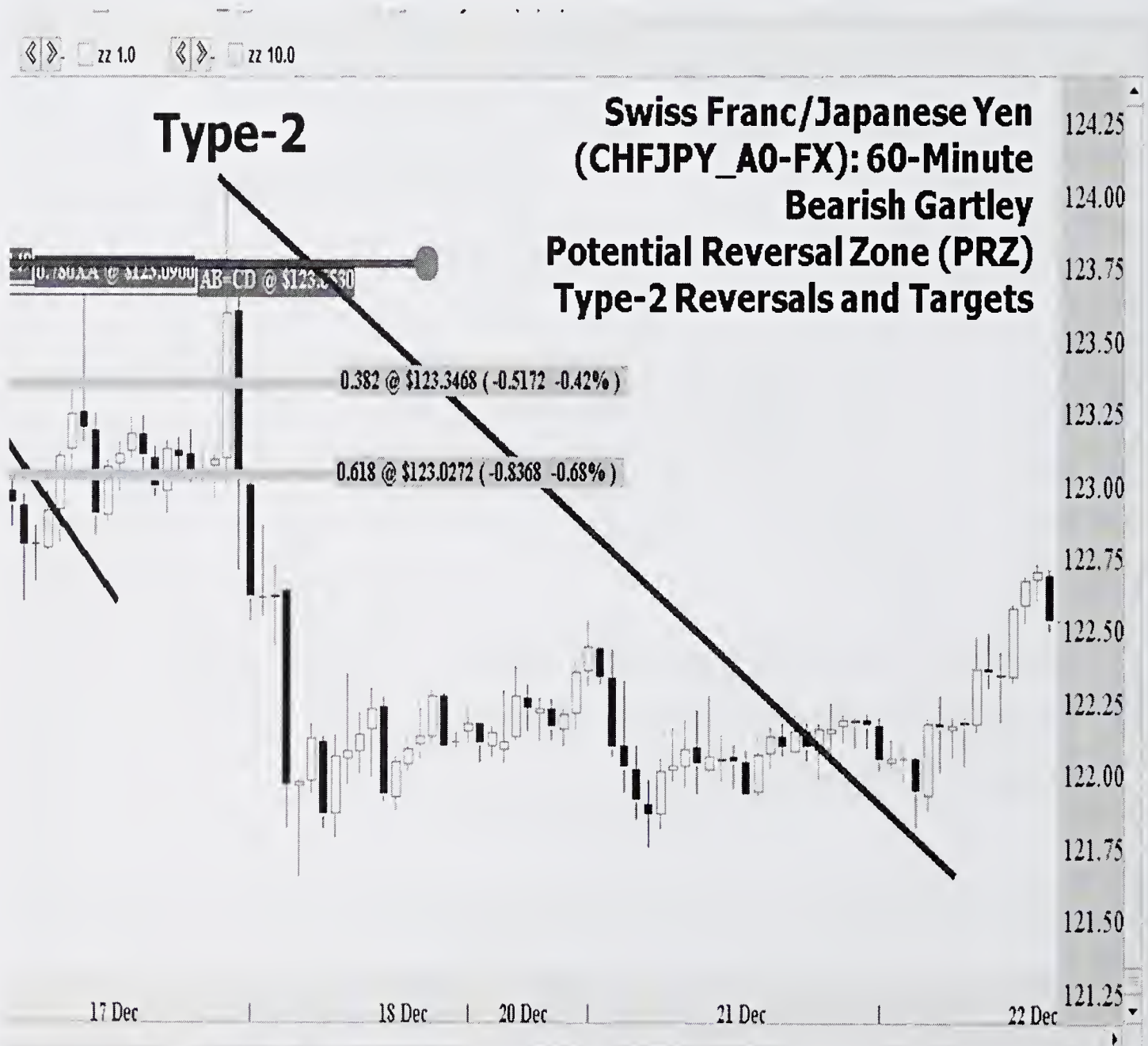
Type-III Reversals?

If there are Type-I and Type-II reversals, what happens when price action retests a Potential Reversal Zone (PRZ) for a third time? In most cases, a failed reversal of the Type-II retest will usually result in a complete failure of the pattern at hand. In essence, there are no Type-III reversals. Therefore, the greatest consideration of any Type-II reversal is the degree consolidation at the secondary test since the best situation should experience a reaction shortly after retesting all of the numbers in the zone. When price action is retesting a distinct completion point, there is a degree of urgency for that reversal to exhibit distinct characteristics to confirm what the basic pattern is dictating. It is very common for price action to consolidate beyond the secondary retest. Unfortunately, time is not on the side of these situations since the price action must confirm the pattern shortly after the secondary tests in most cases.

Officially, the Type-II Terminal Price Bar represents the stop loss limit for this reversal situation. This is an important consideration because the price level established by the initial completion of the pattern can be overlooked as it serves as the defining limit for Type-II confirmation. While the secondary retest is still a valid trading opportunity even if it does not possess any pattern structure to complement that Type-II area, the focus should still primarily be on the initial range of harmonic measures that established support/resistance from the initial test of the set up.

It is important to note that a third test of any significant harmonic level should trigger suspicion regarding its integrity. Although some levels of support and resistance can experience what some technicians calling a "triple bottom," I believe that such consolidation typically fails the measured area. Clearly, the more consolidation required following the realization of the secondary retest, the less likely the reversal will unfold. It is true that the secondary test does require further consolidation and is less likely to immediately reverse in the same way a Type-I scenario. The price action must exhibit the anticipated behavior shortly after reentering entering the Potential Reversal Zone (PRZ) on the secondary test. In addition, the Type-II Terminal Price Bar serves as an additional price level to consider and the ultimate make or break for the entire trade. The greatest advantage of the situations is that they require a smaller stop loss limit than Type-I situations.

Advanced Harmonic Trading Management Conclusion

I believe the Harmonic Trading management strategies represent some of the finest advancements of this book. The expectations established in the reversal types and the distinctions in handling these situations are important proprietary distinctions that go a long way in determining *reactions versus reversals*. Many of these concepts include Harmonic measurement strategies that are outside of the normal pattern considerations. Some of these concepts were a part of the initial discoveries presented in my first book, *The Harmonic Trader*. However, most of these ideas were developed after I released *Harmonic Trading Volume 2*. I feel that this material has completely clarified the subject of Harmonic Trading management. These are the prescribed rules and optimized framework to handle harmonic patterns. In the same way that the identification rules that become the standard for harmonic patterns, I am presenting these concepts

Chapter 8
Harmonic Trading Timeframes

Now that we have thoroughly reviewed the basic concepts of trade identification and execution, we can focus on the advanced ideas that define the validity of any Harmonic Trading situation. Essentially, we want to break it down to a few technical tools. These tools serve as the measuring basis to gauge the long-term viability of any Harmonic Trading situation. First, the price action at the completion of the pattern is the most important determinant of a valid trading opportunity. As defined by the Terminal Price Bar, the price action in the Potential Reversal Zone (PRZ) serves as the early indication of what can be expected from any pattern. Second, the condition of the Relative Strength/HSI readings at the completion of the pattern defines other expectations that must be compared to the pattern itself. We can employ basic trendline analysis to determine the condition of the reversal and compare this to the predominant trend. Concepts such as the primary and accelerated trendline tools to create make or break limits that guide trading decisions. Any price action that is not able to sustain specific trendlines must be regarded as an important signal of the reaction.

It is important to be mindful of the fact that harmonic patterns represent unique and defined price levels. We must expect a price reaction within the Potential Reversal Zone (PRZ) as the first sign that this structure truly possesses harmonic qualities. Although most markets do exhibit harmonic patterns to some degree, it is essential to find only those situations that possess the clearest relationships. Again, this is where preparation helps to avoid stakes and defined the best opportunities in advance.

We have numerous measurement strategies at our disposal. The key to remember is that we do not use every measurement strategy in every situation. Rather, we are trying to assess all opportunities from those three elements: Harmonic ratio relationships, *Market Sine-ature* or and environmental technical confirmation. Many of the execution and management strategies integrate more complementary measures depending upon how the price action resolves test the pattern completion point. Although it is not necessary to understand every aspect of each situation, a larger comprehension is derived from integrating multiple elements and being able to understand how the combinations relate to each other. Obviously, the degree of knowledge and understanding takes time but I feel that I have presented a framework that can be easily understood. Furthermore, these relationships are the result of years of research. I am literally saving people years of searching for those relationships that may work with proven concepts that can be immediately applied to any market on any timeframe.

As we discussed previously, it is best to look at the most liquid and largest markets for these types of opportunities but the simple understanding of this framework enables *The Harmonic Trader* to navigate complex environments and distill them into clear conclusions. A final perspective on further clarity necessary to understand the relative forces of any trade opportunity is to examine multiple timeframes to gain a relative perspective on the forces of price action from a larger timeframe and a shorter timeframe. Again, these are situational assessments where we employ particular timeframes at specific stages in the trading process.

This perspective is enormously helpful before and after a trade has been executed and the initial progress of a reversal can be monitored. Furthermore, other decisions such is profit targets and stop loss limits can be confirmed through this relative timeframe analysis. Finally, I want to point out that the subject of comparative timeframe has been discussed for decades. Although it is not necessary to incorporate every measure on each timeframe, the key is to define clear harmonic phenomenon that confirms the basic structural assessment. Analysis of comparative timeframe yields interesting insights and uncovers important technical price levels that may otherwise be overlooked.

Harmonic Trading Timeframe Types

1. **Primary = Timeframe that possess the clearest pattern structure.**
2. **Proximate = The (next) shorter timeframe after primary pattern has been identified.**
3. **Distal = The (next) longer or larger comparative timeframe after primary pattern has been identified.**

Harmonic Trading Primary Timeframe

One of the most common debates within the Harmonic Trading community is to ascertain exactly what constitutes the ideal pattern size. Although I do believe that smaller patterns possess different expectations then larger structures, the most appropriate guideline is to establish a minimum. As I have discussed previously, I believe that the expectations that are associated with a sample size of at least 30 price bars (Central Limit Theorem)
provides some type of scientific basis where we assume a higher degree of probability for normal distribution. Harmonic Traders always want to use a pattern size where it can imply irrational or volatile behavior skews performance and analysis. This is quite common on shorter timeframe's, especially tick charts. As I mentioned previously, harmonic patterns do form on these smaller timeframes however it is too tight of a price range to apply execution strategies that optimize the Harmonic Trading process.

The timeframe that possesses at least 30 price bars serves as a basis for all pattern size assessments. The primary timeframe should be defined by the clearest

pattern that is 30 bars or more. As I discussed previously about the dilemma of two different timeframes having the same pattern, I always recommend favoring the interval which has the clearest confirmation strategies as well. Of course, the larger time interval will be more significant than the smaller and we will look at how to compare multiple timeframes in this chapter. The key considerations with the Primary timeframe is to properly measure the pattern, identify the exact completion point with the Terminal Price Bar and understand the technical environment of the confirmation strategies to monitor the reversal.

An important trading tactic that must be assessed during the completion of the pattern is the analysis of the Terminal Price Bar. It is essential to identify the opportunity beforehand, monitor its progress as it enters the Potential Reversal Zone and literally link up the exact time completion with the price bar to monitor the patterns precise completion point. For example, an intraday pattern that materializes on a 15-minute chart will likely require two or three price bars to test an intraday pattern at a minimum. Specifically, the pattern itself can take an hour or two to complete depending on its size. However, the recognition of the exact completion point when the first bar to test all of the numbers – the Terminal Price Bar, the possibility of the trade execution becomes *permissible* instantaneously. This is important because the price action that immediately follows this completion point provides immediate signals as to the validity of the potential price move. This takes some experience on how to coordinate multiple variables but the key job that every Harmonic Trader must do is monitor the patterns completion point tick by tick as that individual price bar completes. It is at that point, the Primary timeframe becomes a live opportunity. Of course, there are a few other small triggers to observe as a final confirmation including RSI techniques that we have previously discussed. The key concept is to recognize that the identification phase ends at the immediate close of the primary timeframe price bar and the execution phase begins at the T-Bar+1.

Once the primary timeframe has been established, the price parameters for the trade must be assessed and the precise technical confirmation readings confirmed. As the price action tests the Potential Reversal Zone, the terminal bar will enter the Potential Reversal Zone and provide an insight as to how far beyond the Harmonic level the real action will go before reversing. The Permissible Execution Zone as defined by that terminal bar extreme defines how much area beyond the ideal measurement of the pattern structure the price action can exceed before invalidating the trade opportunity. This is the importance of waiting for the Terminal Bar + 1 on the Primary timeframe as most valid reversals will provide an immediate trigger that validates the predicted reversal direction.

Harmonic Trading Proximate Timeframe

The Proximate timeframe is the (next) shorter timeframe – typically intraday – after Primary has been determined. The assessments on the shorter timeframe seek to

optimize executions by identifying similar technical signals that the Primary is predicting. In fact, the coordination of multiple harmonic phenomena on varying time intervals is an excellent overall confirmation method that the opportunity at hand has greater potential for a larger reversal. The Proximate timeframe is typically at least one quarter the size the primary timeframe. For example, a harmonic pattern opportunity that develops on 60-minute timeframe will employ a 15-minute timeframe as the Proximate basis.

As I mentioned previously, these classifications are important because they define exactly what timeframes to examine. Although the comparisons may slightly vary, the important concept is to compare what is happening on a smaller timeframe relative to the clear pattern opportunity developing on the established primary timeframe. Sometimes, traders will focus on multiple lower timeframes and begin to confuse the analysis. In our example of the 60-minute chart, I would rather focus on what happens on the 15-minute basis than include the 5-minute basis as well. When we start looking at more than a few timeframes, the entire basis of the trade gets skewed. The trade execution becomes a live opportunity just after the Terminal Price Bar is established. In fact, the trade execution must be monitored on PROXIMATE TIMEFRAME until anticipated reversal has moved beyond the Potential Reversal Zone (PRZ).

Terminal Price Bar+1 on Proximate Timeframe

The most important event that unfolds at the pattern's completion point is the assessment of individual price bars on the Proximate timeframe that make up the "+1 bar" after the Terminal Bar has been established. Once the Terminal Bar is established, the immediate timeframe must be regarded more seriously. For example, if a primary pattern developed on a 60-minute chart, we would examine the completion of the pattern at the top of the hour after it hits all of the numbers in the Potential Reversal Zone. If the 60-minute pattern tested all of the numbers in the Potential Reversal Zone at 10:49 AM, we must wait until the top of the hour at 11 AM before we can actually consider taking the trade. This is essential because we are able to establish the Terminal Price Bar and ensure that the early harmonic reaction signs will unfold to provide insight to the validity of the opportunity. It is possible to monitor the trade on the Primary timeframe and the Proximate timeframe as it nears completion.

In this manner, we are able to assess the individual components of the exact completion point by breaking down the Terminal Price Bar and the +1 bar to decipher the immediate signals of confirmation. Remember, Harmonic Trading executions are based upon the price action in the Potential Reversal Zone (PRZ) on the PROXIMATE timeframe. This is an important strategic concept as it helps Harmonic Traders focus on the short-term price progress and the primary indicator of the larger reversal at hand. Also, the Proximate timeframe provides early indications of larger timeframe conclusions.

Harmonic Trading Distal Timeframe

The Distal timeframe is the (Next) furthest/longest timeframe – typically weekly, daily, 240-minute, 60-minute. It is most critical in long-term relative levels of support/resistance after the primary pattern has been determined. The larger price assessments on the DISTAL timeframe seek to reaffirm the primary structural pattern signal and establish the trade parameters of stop loss and profit target levels. Although profit targets are typically measured by the primary pattern, larger Distal timeframe price objectives do provide targets beyond the immediate initial harmonic Type-I and Type-II objectives.

The general process of coordinating the Distal timeframe does not get considered until after the Terminal Price Bar has been established. The action immediately following the Terminal Price Bar determines the validity of the execution while the complementary factors – especially RSI & HSI – must exhibit confirmation simultaneously as the price action reverses. Although the execution is monitored on the Proximate timeframe, the progress of the larger reversal can be monitored on the Distal timeframe especially when certain situations require more consolidation. There are number of ways to compare strategies and expectations but the confirmation strategies provide multiple elements that should also be expressed across all timeframes. Of course, these are the most ideal expressions of valid reversal behavior but the comparison of elements helps to uncover the significant technical events that are unfolding within the Potential Reversal Zone.

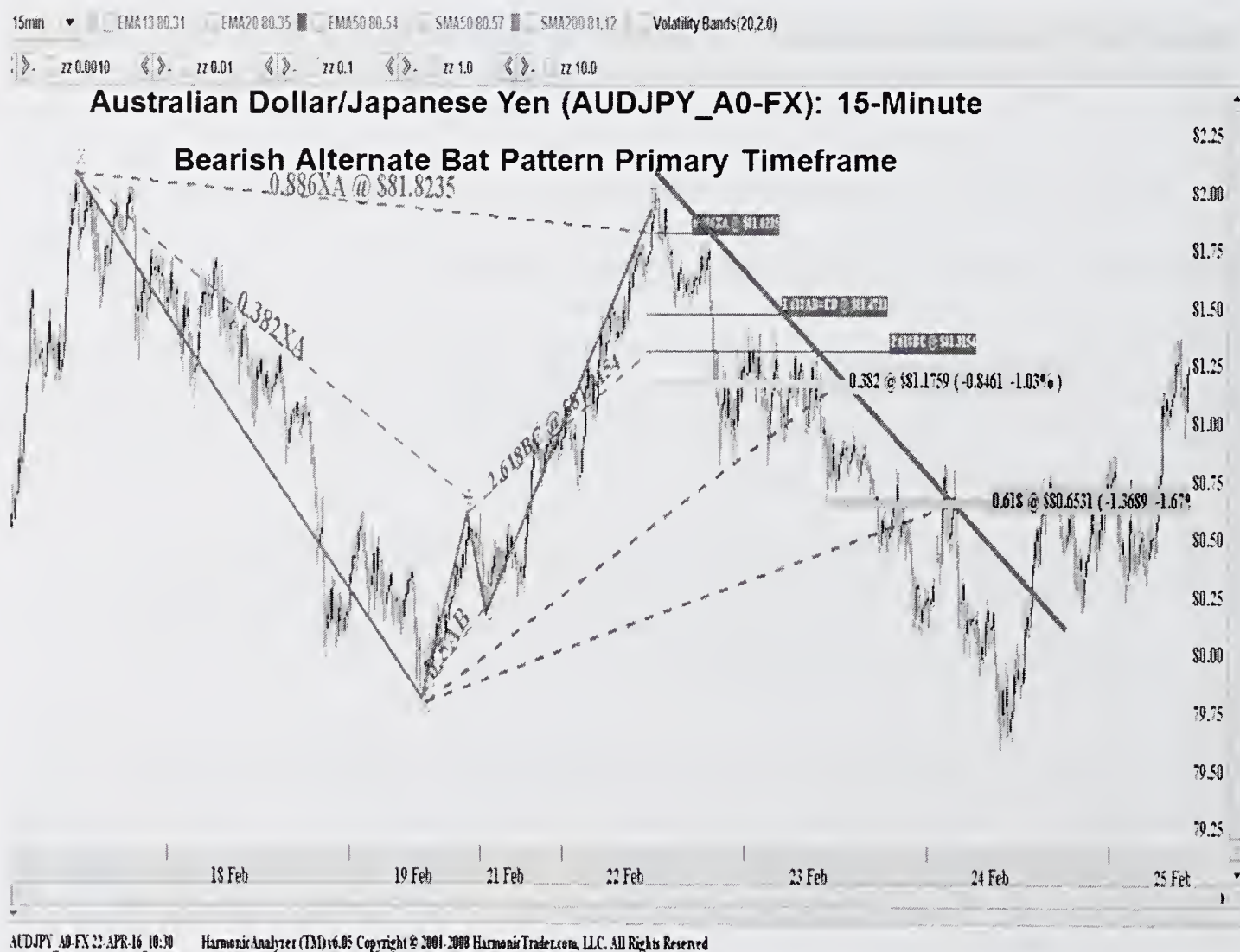## Three Harmonic Trading Timeframe Scenarios

The best way to demonstrate how to assess these three timeframes is to present the various trade types that possess a model approach of how to handle short-term versus long-term opportunities. These are general examples but do represent an ideal comparative approach to timeframe analysis.

1. **Intraday Trade = Reference intraday timeframes typically 15-minute intervals that seek to capture price move over course of a few minutes to several hours. All positions are open and closed within the same 24-hour period.**

2. **Swing Trade = Reference Daily, 60-minute timeframes that seek to capture price move over course of several sessions to many days.**
3. **Swing Position = Reference Weekly, Daily, 60-minute timeframes that seek to capture price move over course of several weeks to many months.**

# Harmonic Trading Execution Timeframe Example: Intraday Trade

Let's examine typical timeframes that involve an intraday trade opportunity example. This is a common situation active traders face every day. First, the most appropriate timeframe for short-term opportunities is a minimum 15-minute primary pattern. Although opportunities may develop on 5-minute or 1-minute timeframes, I feel that the risk reward ratios and obtainable profit targets are most reliably exhibited on a 15-minute timeframe no matter what the market. The following example of the Australian Dollar/Japanese Yen on the 15-minute Primary time frame shows an ideal Type-I scenario.

- **Primary Timeframe = 15-minute interval**
- **Proximate (next shortest) Timeframe = 5-minute**
- **Distal (next longest) Timeframe = 60-minute**

AUDJPY_A0-FX 22-APR-16_10:30   Harmonic Analyzer (TM) v6.05 Copyright © 2001-2008 HarmonicTrader.com, LLC. All Rights Reserved

Harmonic Trading Volume 3: Reaction vs. Reversal

Intraday Trade: Primary Timeframe

The following chart of the price action in the Potential Reversal Zone shows the immediate change in character as the pattern completed just shy of the 82 level. The initial 38.2% and 61.8% profit targets defined the 81.18 and 80.65 levels, respectively as the immediate management objectives for this scenario.
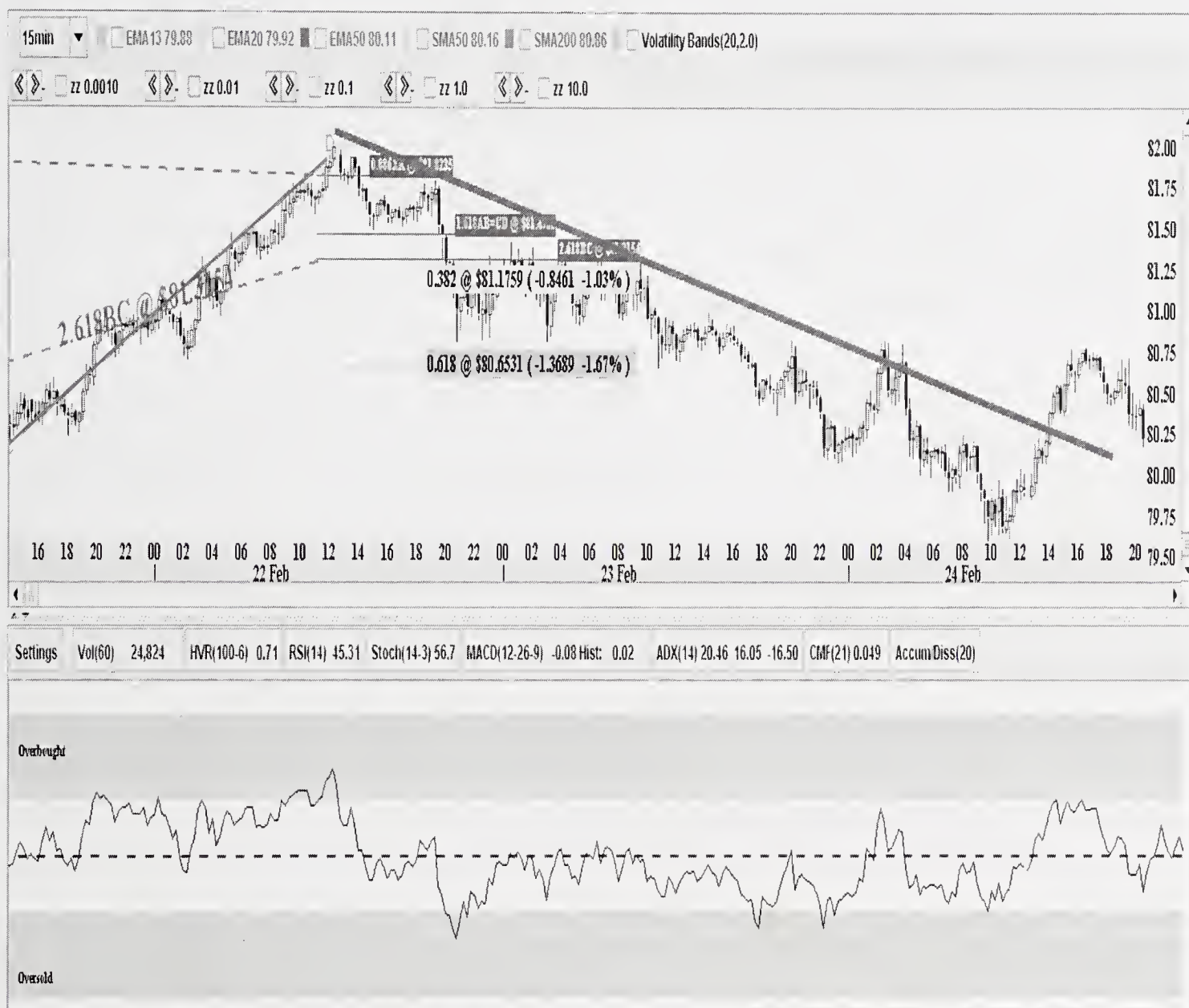

AUDJPY_A0-FX 22-APR-16_10:30   Harmonic Analyzer (TM) v6.05 Copyright © 2001-2008 HarmonicTrader.com, LLC. All Rights Reserved

As the reversal accelerated lower, it maintained a steady downtrend. You could say that this is the primary downtrend on the primary timeframe that helped maintain the management of the position. Clearly, the primary trendline indicated a larger reversal beyond a nominal reaction.

Harmonic Trading Volume 3: Reaction vs. Reversal

Intraday Trade: Proximate Timeframe

On the 5-minute Proximate timeframe, the harmonic resistance established by the primary pattern find the area just under the 82 level was confirmed by a short-term extreme Relative Strength reading. Clearly, the indicator reading reversed sharply in this area and served as the early signal of a larger reversal at hand. These situations are common and must be recognized on the Proximate timeframe for early validation of the primary pattern.
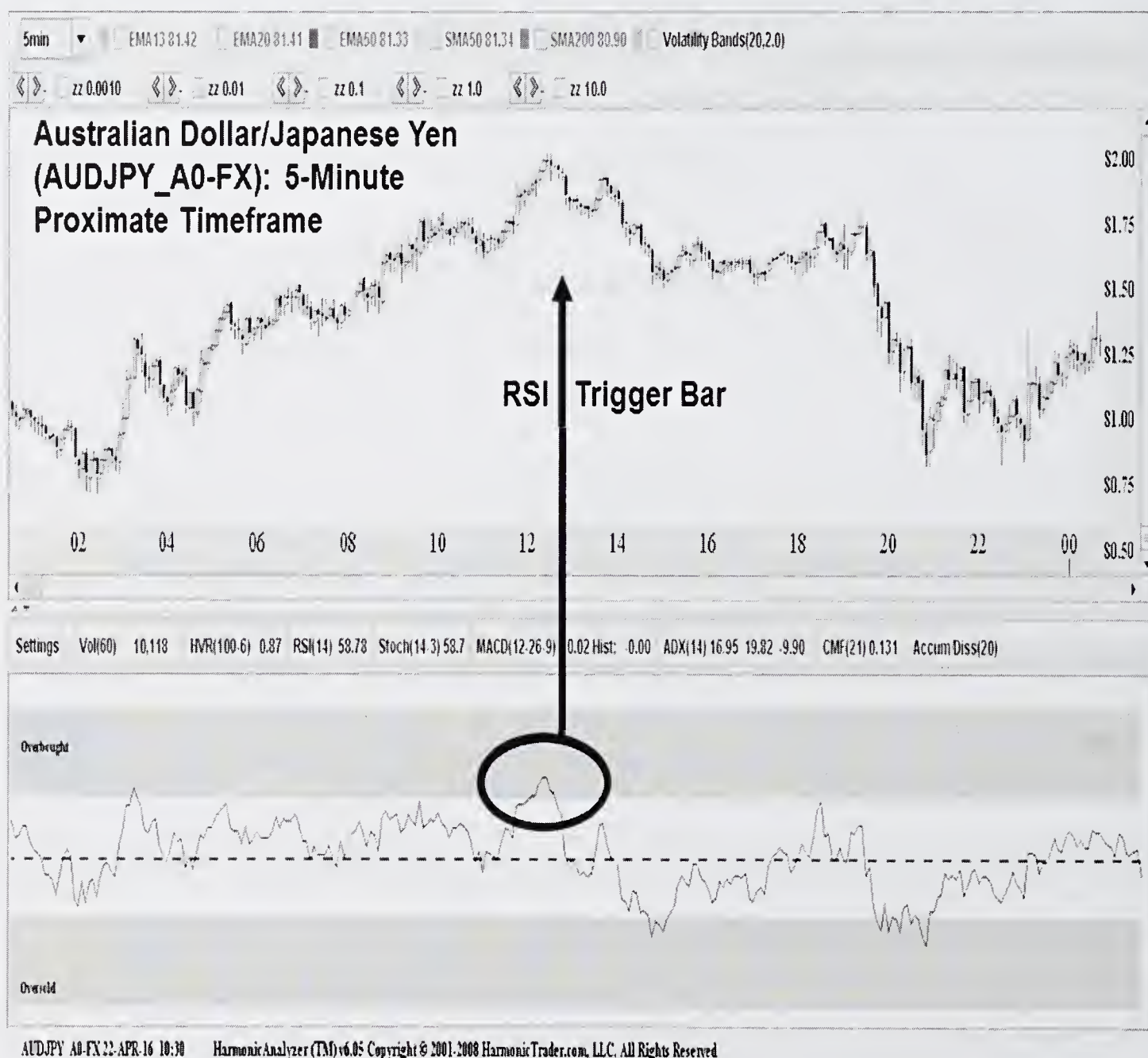
Intraday Trade: Distal Timeframe

In comparison to the longer timeframe, the situation possessed a distinct Bearish AB=CD pattern that marked the larger downtrend. Although it is difficult to see the primary Bearish Alternate Bat structure on this chart, the distinct downtrend was reinforcing the possibility of a continuation pattern. Furthermore, the distinct downtrend in the indicator was confirming the larger downtrend at hand.
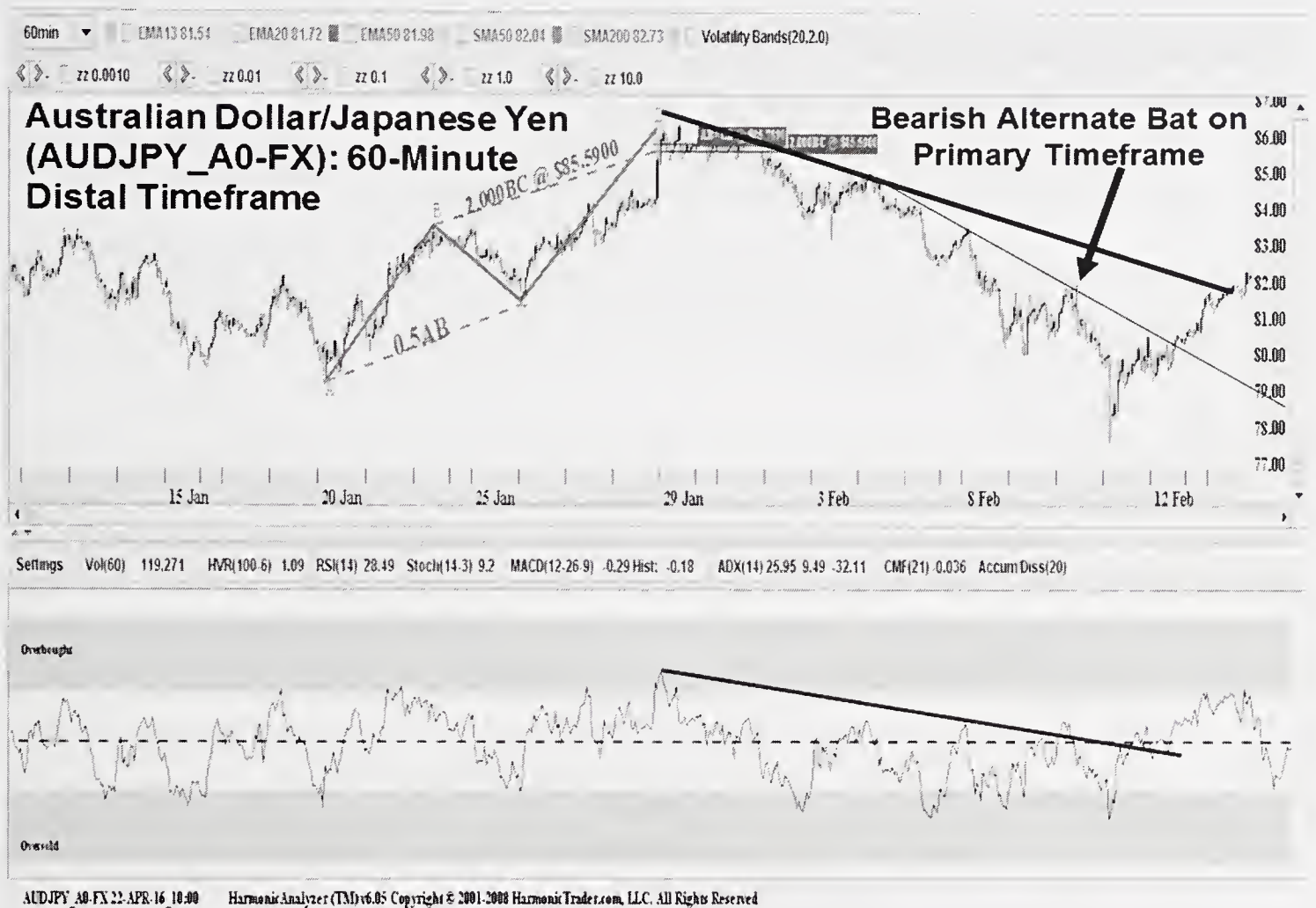

It is important to note that not every harmonic pattern opportunity requires the ideal scenario on each timeframe. This example demonstrates how shorter-term patterns within established trends can define excellent continuation opportunities. Although it is still essential to combine both the Distal and Proximate timeframes, the primary pattern will always be the minimum measurement basis for all trading possibilities. Comprehension improves with experience but the most important aspect of this coordination is to identify a harmonic pattern with an environmental element on at least to time frames for the most reactive conditions. In this example, the Proximate timeframe on the 5-minute chart possessed an ideal short-term Relative Strength reversal trigger. After breaking down these possibilities, the most important technical

event is a short-term extreme reading that reverses in the anticipated direction of the primary pattern.

Harmonic Trading Execution Timeframe Example: Swing Trade

A swing trade is a bit longer in nature and includes both intraday and daily charts. Typically, these positions will last anywhere from a few hours to several days. The best pattern situations will unfold on a 60-minute time frame and employ a Proximate timeframe that monitors the execution on a 15-minute basis.

- **Primary Timeframe = 60-minute interval**
- **Check Proximate (next shortest) Timeframe = 15-minute**
- **Check Distal (next longest) Timeframe = Daily**
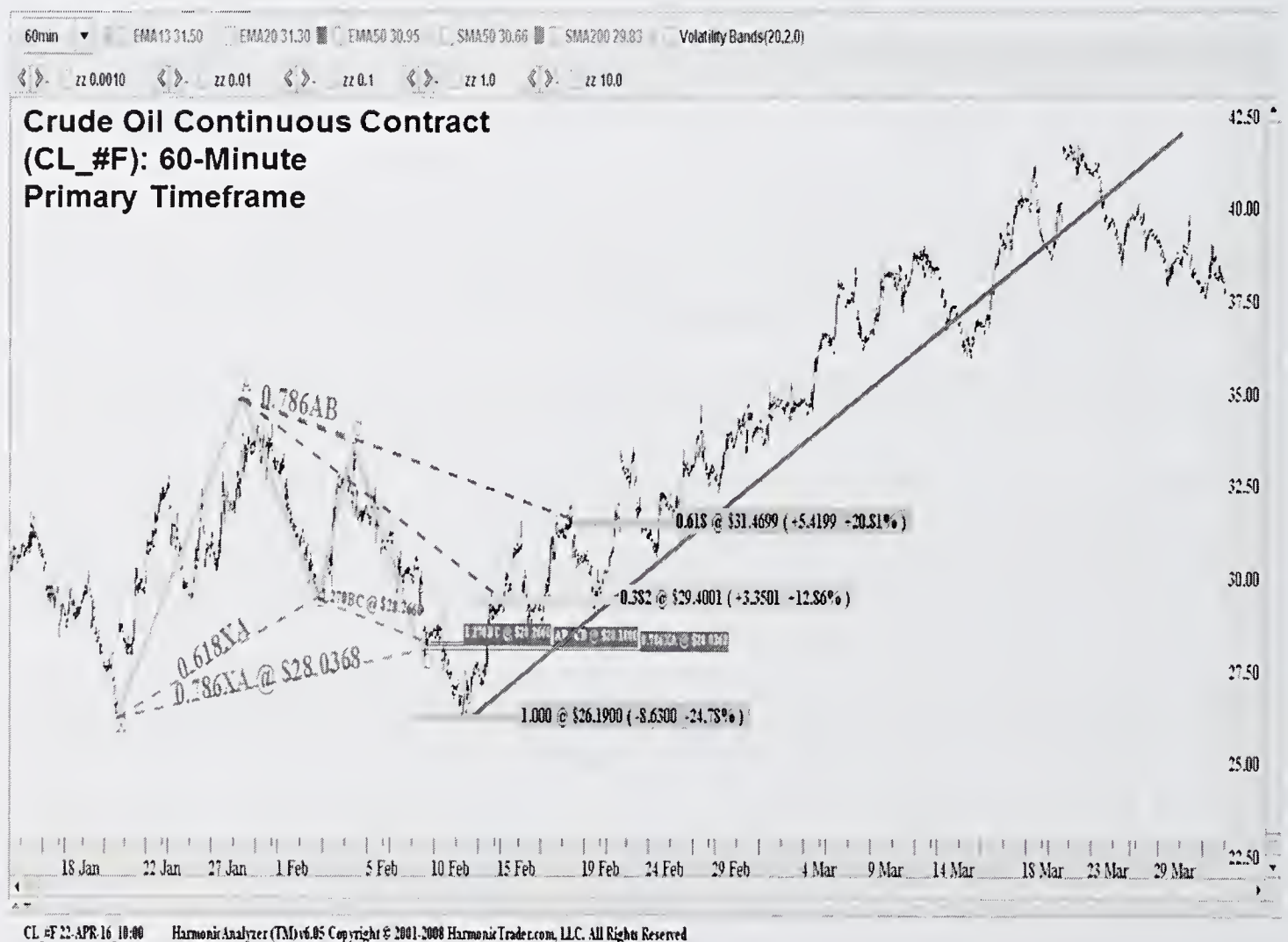
Swing Trade: Primary Timeframe

This chart of the price action in the Potential Reversal Zone shows a consolidation that nearly exceeded the stop loss limit under the 1.0XA level. I believe this is an excellent example because it reflects a common situation where price action can exceed the ideal measures. One way to optimize these situations is to coordinate execution strategies at the completion point of the pattern. Despite the extra time required to establish the reversal, the price action continued higher after stabilizing just below the Potential Reversal Zone under the $28 level.
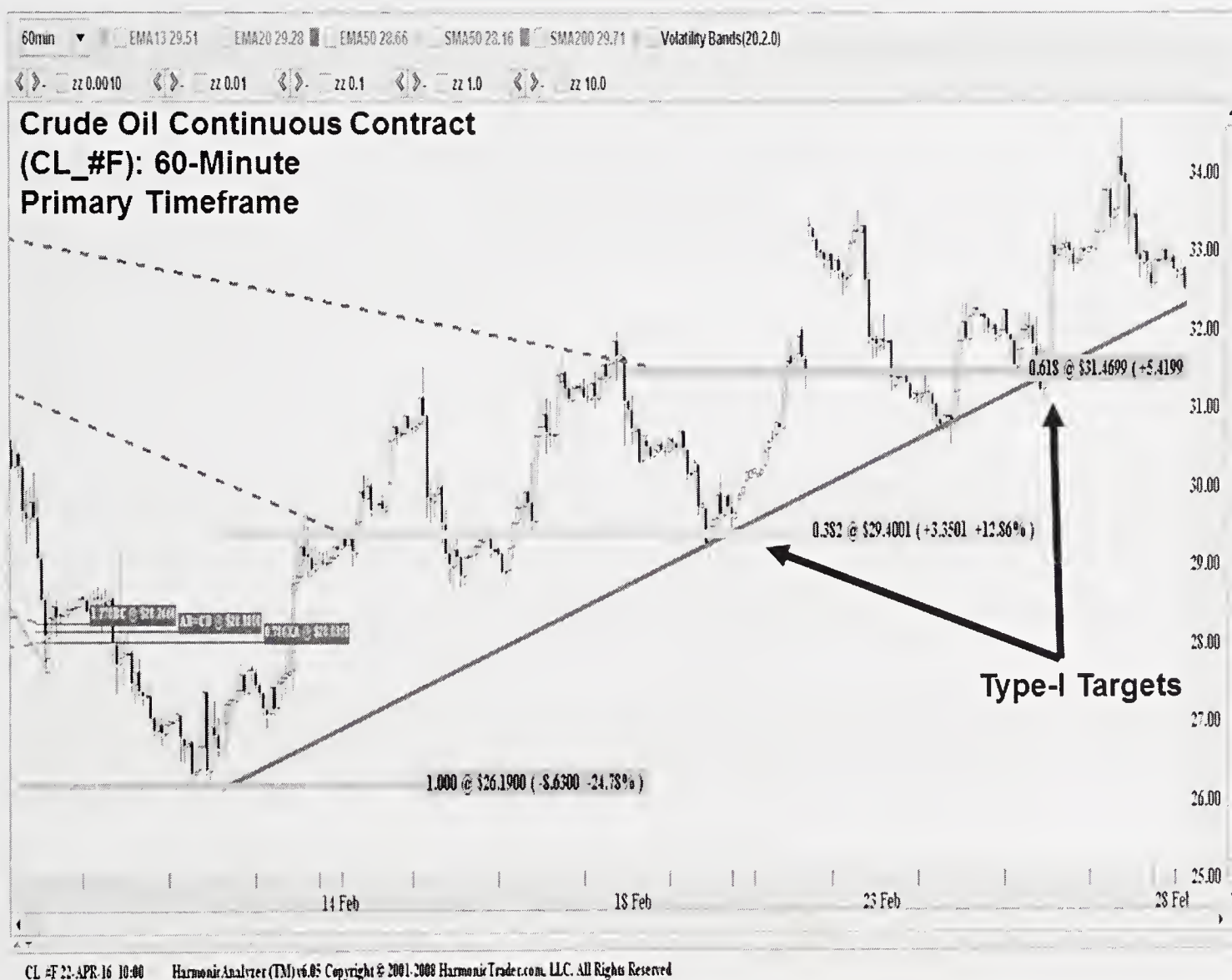
The Type-I reversal tested both profit objectives in short order while maintaining the primary uptrend throughout the next several days. Typically, some part of the position should be secured while simultaneously monitoring the reversal progress by staying in the trade as long as the primary trend is maintained.

Swing Trade: Proximate Timeframe

Analyzing the Proximate timeframe on the 15-minute chart, we see a clear RSI BAMM Complex Divergence that confirmed the primary harmonic support just under the $27 level. This is an excellent example of utilizing the Proximate timeframe as an immediate trigger in the price range of the Potential Reversal Zone. A short-term signal such as this within a longer-term harmonic price range is significant and represents an ideal trigger to confirm the execution.

Crude Oil Continuous Contract (CL_#F): 15-Minute Proximate Timeframe

RSI BAMM Complex Divergence
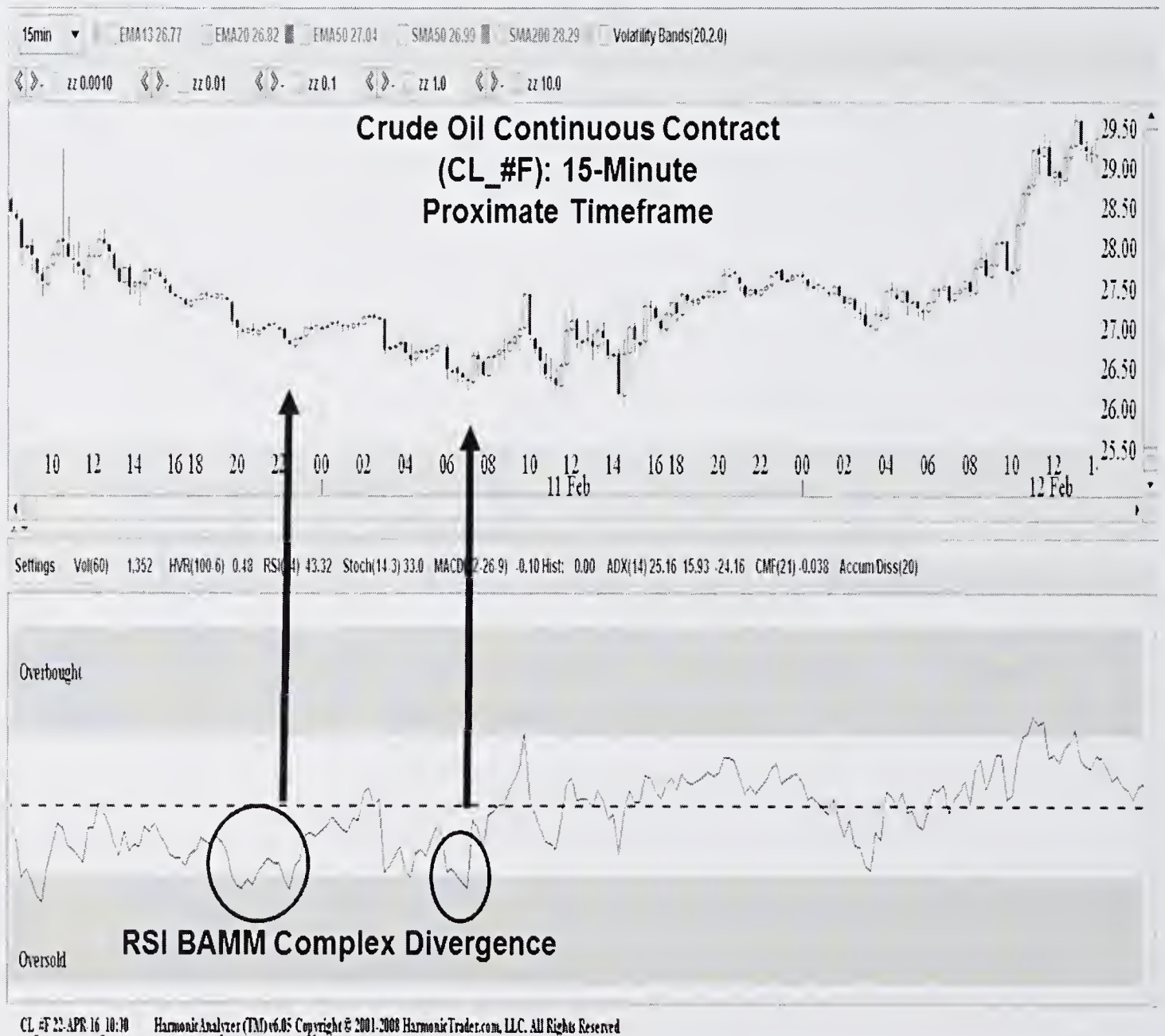
Swing Trade: Distal Timeframe

When we look at the Distal timeframe, the same pattern structure materializes that appeared on the 60-minute chart. Clearly, a distinct Bullish Bat pattern materialized on the daily timeframe however the size of the pattern did not satisfy the minimum 30 bar required. As we have discussed previously, it is best to revert to the timeframe that possesses at least 30 bars. This pattern was only 16 bars but we can clearly see that the secondary test established the $26 level and led to a demonstrative reversal. Furthermore, the price action on the daily chart manifested overwhelming continuation immediately after completing the pattern. As the reversal progress continued, each daily bar formed a successive pattern of higher highs and higher lows that indicate the strength of the support.

Crude Oil Continuous Contract (CL_#F): Daily Distal Timeframe
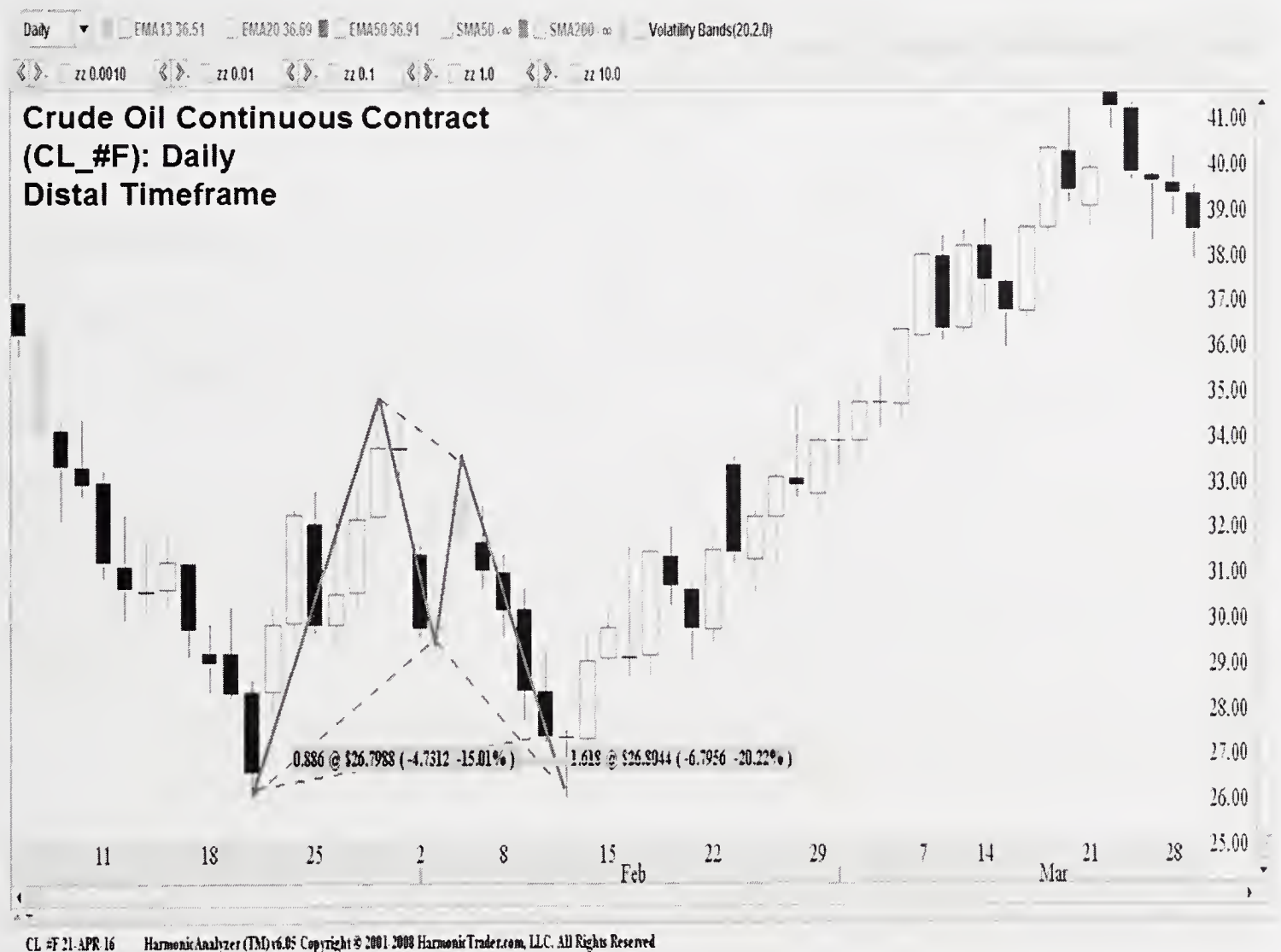
Although these situations take some time to coordinate the various time frames, each possesses some type of price or environmental confirmation measure that reinforces what the pattern structure is dictating.

Position Trade: Primary Timeframe

- **Primary Timeframe = Daily**
- **Proximate (next shortest) Timeframe = 60-minute**
- **Distal (next longest) Timeframe = Weekly**

The following daily Bullish Bat pattern in Cisco Systems represents an ideal situation, especially for opportunities in the stock market. I believe that stocks can be great trading opportunities. However, it is best to stick with the most liquid with the highest volume. However, stocks do possess ideal conditions of harmonic pattern opportunities because they exhibit the same properties short-term patterns but they allow more time to handle the situation and manage the position,
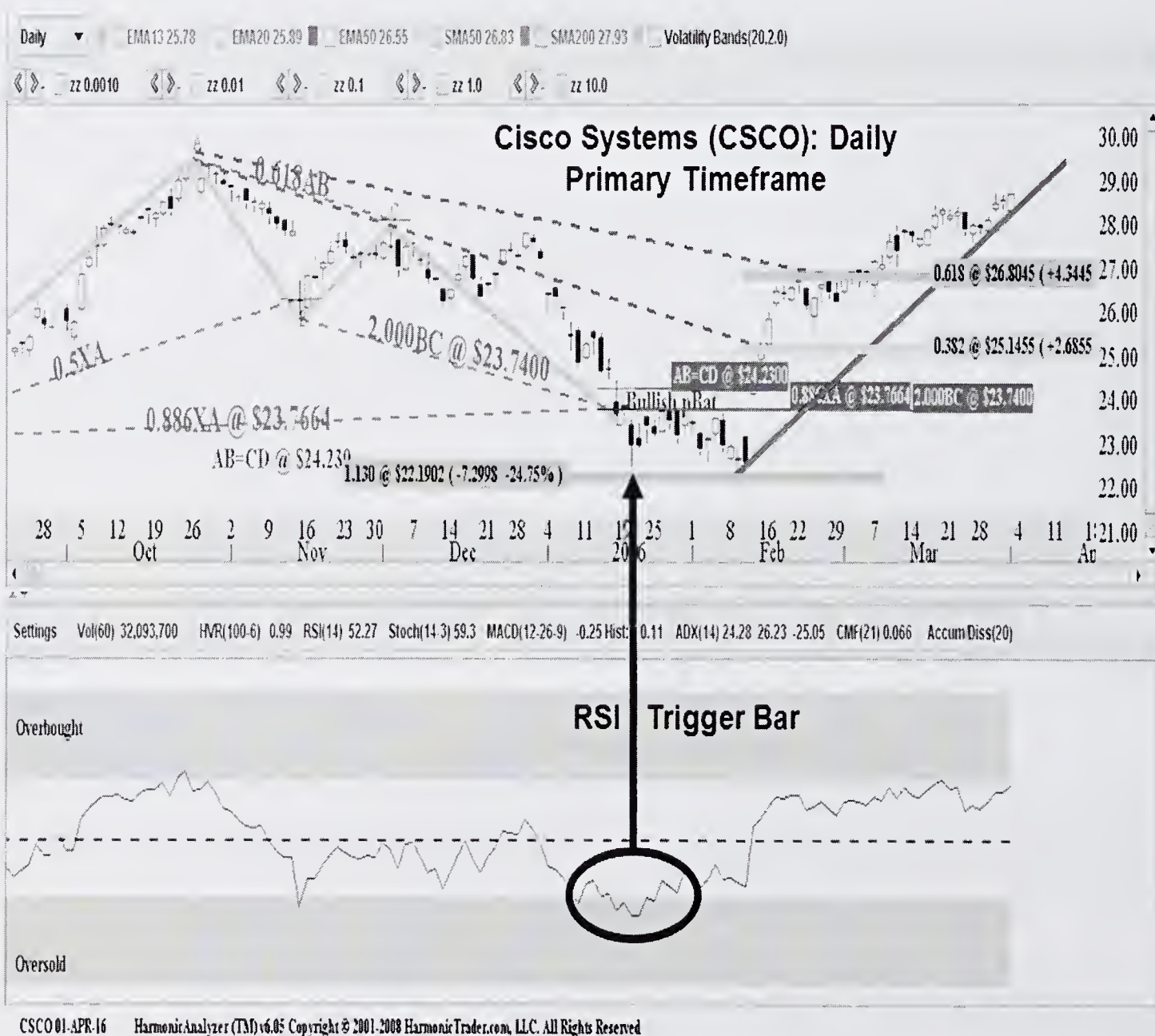
Position Trade: Proximate Timeframe

On the Proximate timeframe, Cisco Systems formed a distinct Bullish Gartley with Harmonic Strength Index confirmation that confirmed the primary pattern. This 60-minute structure possessed a Type-I and Type-II retest before the larger reversal ensued. It is interesting to note how the intraday pattern still followed the basic trade management model but it was critical in optimizing the execution of the position. Although the intraday opportunity was distinct on its own, this example demonstrates how the comparison of multiple time frames is extremely effective in the overall assessment of any opportunity.
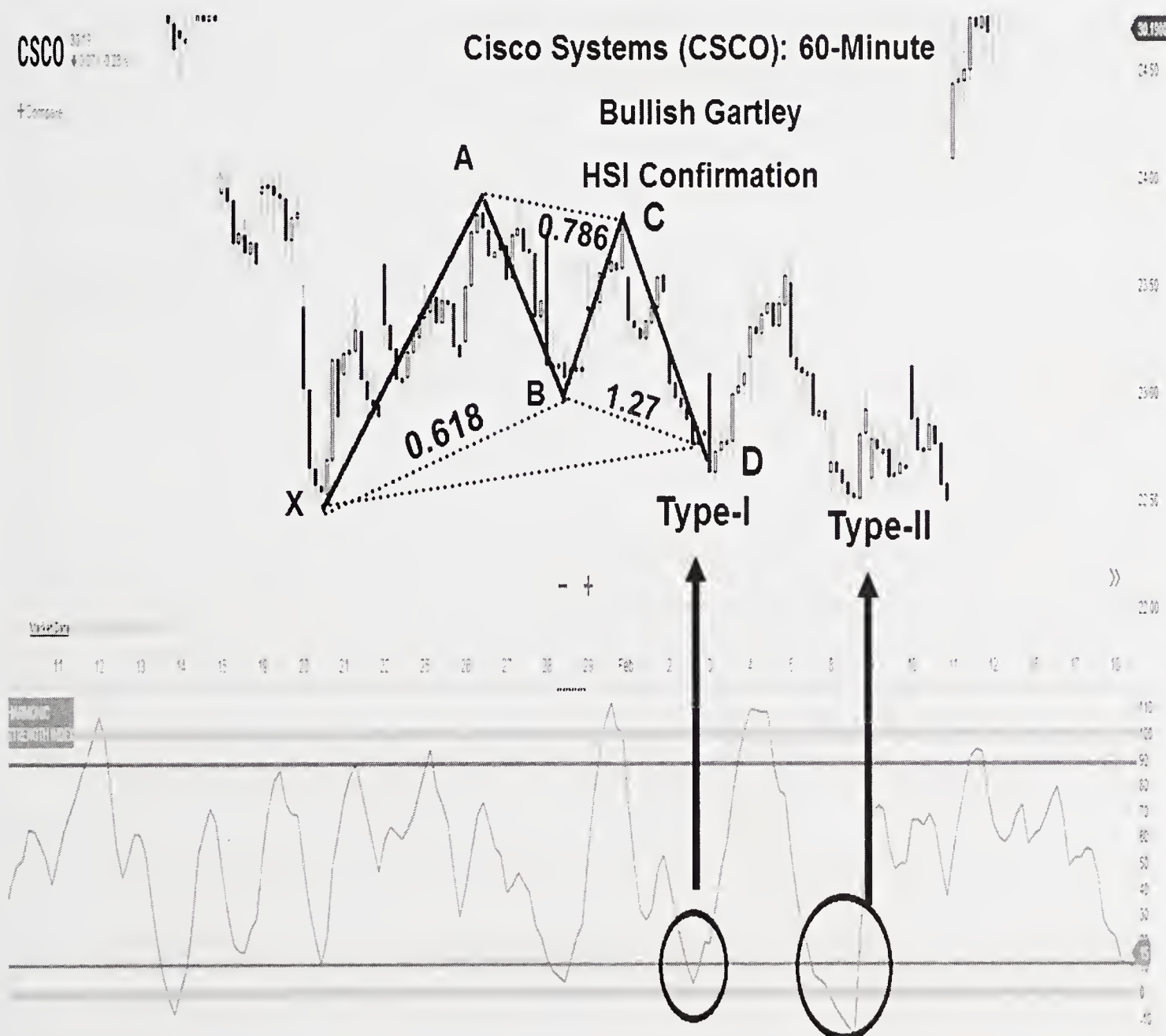
Harmonic Trading Volume 3: Reaction vs. Reversal

Position Trade: Distal Timeframe

The daily pattern completed at an important 38.2% retracement on the weekly chart. This is another situation where the Distal timeframe provided a simple but significant measure that confirmed the smaller structure. Such long-term reversal phenomenon is vital in identifying exactly where primary patterns have the most potential. The weekly trend was overwhelmingly bullish. Therefore, shorter-term structures provide excellent continuation patterns that have the potential of accelerating beyond nominal reactions to become larger reversals.

Again, it is not essential to have patterns and indicator readings on every timeframe. The key is to coordinate the Proximate and Distal timeframe with an overwhelming harmonic opportunity on the primary basis. Of course, situations that have multiple harmonic measurements converging in the same area on multiple time frames will be more ideal. However, the primary focus should be to discover those conditions that confirm the primary pattern. Clear confirmation structures and indicator readings that develop on these time frames clarify expectations and optimize price parameters.

Harmonic Trading Timeframes Conclusion

For the purposes of Harmonic Trading, I have classified each timeframe with unique descriptions and expectations. My attempt to label these categorizations more specifically speaks to a larger effort to create a discipline around this understanding. I have replaced general terms for specific references that better describe the situation on that specific time interval. The key in this comparative timeframe analysis is to identify the harmonic measurements and environmental indicator phenomena that are unfolding simultaneously. Simple comparisons such as a harmonic pattern completing on a shorter timeframe in the same area as a larger harmonic pattern would represent a meaningful additional signal to confirm the trade. There are many combinations like this but the key is to identify what is happening on the longer-term perspective as well as the shorter-term timeframe.

Conclusion

Tying it All Together

I want to emphasize that my starting point in all of this was unlocking the harmonic price relationships that are exhibited in the market's structural price movements. Although pattern rules are standardized, the most profound ratio relationships in combination with the environmental indicator analysis optimize the market conditions with greatest probability. The most important aspect of tying everything together is to understand that these measures define high probability expectations of what can happen within a finite market universe. In my opinion, any methodology must be able to consistently "get in the right ballpark" where risk is defined and profit objectives are understood before any trade is executed. Since we are employing ratios that are manifested throughout the universe, the natural harmonic model of cyclical behavior creates a framework that automatically eliminates errors. I believe that 80% of all mistakes in trading are eliminated through proper identification of market conditions first and foremost. The other 20% is reduced through proper coordination of execution confirmation and a clear understanding of profit possibility.

We have covered many new techniques and advancements that build on the basic pattern foundation. The entire methodology creates an understandable framework and trading skill set that provides the following:

- WE NOW HAVE A DEFINED PROCESS to identify, execute and manage trade opportunities.
- WE NOW UNDERSTAND how to interpret price action and confirmation signals to optimize trade decisions.
- WE ACCEPT FULL RESPONSIBILITY to follow the Harmonic Trading Plan to capitalize on the opportunities the market's signals provide.
- WE WILL NOW FOLLOW THROUGH to improve trading skills through further study and regular review of trades.
- WE ARE CONNECTED TO THE GLOBAL COMMUNITY OF HARMONIC TRADERS to help others while we help ourselves.

All of the strategies are geared at explaining market behavior consistently and defining those situations that highlight those price moves with the greatest potential. Throughout this book, I have presented those strategies that can separate harmonic reactions from larger reversals. No matter what the end result, it is important to understand that there are absolute and finite strategies that must be implemented properly to capture the phenomenon. Regardless of a brief reaction or home-run reversal, the essence of Harmonic Trading is the fact that we can and do measure all parameters of the opportunity. Instead of trying to be a trader who relies on "artistic" abilities, success depends upon refining their entire plan in advance. Why would you risk money with unproven concepts? Yet, I see this happening time and time again. In particular, other harmonic educators suggest that their students try to learn with real money. Nothing could be more prone for utter disaster. I strongly recommend that all traders new to this approach take the time to review the concepts, practice trading with these strategies and integrate these improvements methodically.

The Future of Harmonic Trading

The goal of this book was to present the strategies that offered consistent variables that defined clear situational opportunities. Over the past 20 years, this harmonic framework – that started with simple price differentiation of M and W structures - has evolved into an entire optimized process. The long-standing challenge of knowing which patterns possess greater potential has been the motivating factor throughout my research. My continued focus on measured trading environments has been the key component that has unlocked these relationships.

I feel that this material has advanced the foundation of Harmonic Trading to enable a larger comprehension of this phenomenon as it relates to new measures. Clearly, we are not just focusing on harmonic patterns anymore. I believe that my Harmonic Trading *Volume 2* book started this process of discovery. Although price patterns unto themselves are extremely effective, the larger comprehension garnered from environmental harmonic measures have distinguished themselves as a unique perspective on their own. However, in the same manner that harmonic patterns are not a singular decision variable, the most important concept of strategic integration is the process that Harmonic Traders must master. I believe this material will facilitate this advancement and enable early initiates of harmonic patterns to grasp the deeper comprehension.

Although I have been conducting private research for decades, the most profound future direction for this material will encompass a greater statistical research that assesses definitive market classifications. Much of my work has been market dependent, where time intervals, pattern specifications and other filters have provided exact parameters to assess statistical results. The challenge within my own research has caused me to define all parameters of the Harmonic Trading process exactly. Each situation must be defined according to market, pattern type and other situational variables that distinguish it is a unique technical entity. Otherwise, the results will be

comparing those situations that possess different variables. As I have mentioned previously, this is a concern for most of the results that are being presented currently and general statistics about harmonic patterns. To further enhance the general understanding of Harmonic Trading probabilities, results must be derived from those parameters that can classify both price and environmental variables consistently. This is the number one challenge for harmonic patterns and for most trading strategies currently promoted today. Therefore, the future for this approach and all trading strategies that analyze the market will be a precise statistical framework to assess their overall effectiveness.

Many of the strategies that were presented in this book were derived from those relationships that yielded remarkably consistent results. Concepts such as RSI BAMM, reversal types and other complementary measures must be measured relative to pattern structures to further substantiate these conditions on a detailed statistical basis. Clearly, the empirical evidence of the importance of harmonic ratios to define market mechanisms that yield reliable and consistent information of future probable price action is overwhelming even in the hands of the novice trader. I believe this is the immediate appeal of these measures. Harmonic Traders are able to experience some predictive capabilities with the application of simple pattern measurements. Although there are many other strategies that must be incorporated to experience success, the inherent advantages of these measurements can be easily incorporated. However, the more precise situational opportunities represent the future of Harmonic Trading and the continued optimization of those variables that most reliably guide decisions throughout the process.

Market Mechanisms Review

I previously talked about market mechanisms through this material, in particular the chapter regarding Relative Strength. The collection of technical events comprised by population of price data that exhibit and manifest these important signals define the overall trend direction. Market mechanisms such as pattern structure direction, RSI BAMM combinations and other distinct categorizations provide the analytical tools to interpret price history for accurate assessment of future prices. Ever since my earliest interest in Technical Analysis, I have always suspected that the market expresses various types of trading conditions that encompass more than a single move or individual price bar. In fact, I associate various moves in the financial markets in the same way that the weather can change. A rainstorm that is on the horizon does not happen at once. A decline in the market usually requires a formation phase that possesses consistent variables to signal potential of a change in trend. As clouds develop and storms take shape, the pace and duration of bad weather goes through various stages in its completion.

My awareness of these stages of trading was shaped by my initial impressions as a CRT operator in the options pits of the Philadelphia Stock Exchange. In the late 1980s, the market maker would bark out the changes in price but it was not automated. Although rather mundane especially when the market was quiet, I was one of the people responsible for punching in the changes in price into the computer. When a flurry of activity was about to begin, I noticed a series of market fluctuations that preceded the larger price acceleration. Interestingly enough, various local traders would initially circle the market maker pit and probe the scene to assess the opportunity. Most of the companies that were traded in this pit were Tech-related and were actively traded throughout the day. The most interesting aspect of watching this process unfold was the unique capitulation phases that were frequently compressed in time as price accelerated. We were dealing with option prices that fluctuated frequently, especially when premium collapsed to the point where the contract was worthless. This is a unique issue to options in general. However, the sheer magnitude of losing an entire contract value over the course of a few hours was remarkable. As I began to comprehend the larger monetary implications, I realized that there was enormous opportunity fluctuating in a short period of time. I learned that any price value in the market has a short-lived equilibrium and the changes that exhibit consistent characteristics. The entire process is quite fluid but it requires a dynamic degree of flexibility that takes experience and discipline to capitalize on opportunities.

These early experiences were instrumental in developing my perspective and understanding of how markets function. My ability to develop my first impressions from the floor of a real exchange at such an early age has been a primary reason in my ability to connect price analysis on charts to the real-world process that unfolds. In doing so, I believe that I have been able to maintain a realistic set of expectations to refine only those relationships that provide reliable measures in any market environment.

The Promise of the Harmonic Trading Process

The promise of the Harmonic Trading process provides a framework to measure and analyze any market condition. Outlining most of the critical trend environments and technical triggers that facilitate the trading opportunity at the pattern completion point execution, this material moves from the analysis of zones that was previously presented to the exact price bar. With the basic understanding of all harmonic patterns at this point it's more about focusing on the execution triggers and management skills.

One of the reasons Harmonic Trading has been widely accepted is due to its ability to be consistently effective and provide step-by-step model that considers only the most relevant technical information. I believe it's essential to memorize the harmonic patterns and understand the subtle differences that distinguish each situation. Many of the basic concepts that are derived from the measurement strategies are common knowledge within the Harmonic Trading community but not understood well outside of this discipline.

Beyond Pattern Identification

As the awareness of harmonic patterns has grown, the identification measurements have provided people with an ability to understand price action in a unique and new manner. The common experience is that most individuals who take the time to investigate harmonic patterns and ratio measurements should not ignore the confirmation strategies that explain the optimal context for the entire methodology. I believe the advancement of software technology has enabled traders to learn more quickly and focus on selectivity to define the best opportunities. After I created the first harmonic pattern program, the Harmonic Analyzer, I was able to focus on the strategies that helped define valid reversals. The technology alone was an enormous advantage, as I no longer had to spend time searching for situations that satisfied identification rules. For new Harmonic Traders, they have an advantage in that they're able to learn the identification guidelines more readily while incorporating advanced execution and management skills to effectively handle each opportunity.

It is important to note that these strengths must be coordinated to become a complete Harmonic Trader. It does not matter what market is traded, timeframe referred or size of the account. With today's technology, it is possible to integrate harmonics in a way that was not possible 20 years ago. The majority of the material in this book is dedicated to those particular situations that provide the next level of clarity, insight and definition to any harmonic pattern trading opportunity. I encourage everyone to focus on execution confirmation and management strategies as much or more than the identification of patterns. These considerations are frequently overlooked and problems arise after the execution is initiated. Many harmonic patterns can provide an excellent initial reaction but a common dilemma for most is to not understand how to manage expectations and optimize profit targets automatically. Simply stated, most people will ride that initial reaction and let it become a loss. Although I have addressed this dilemma – as I have referred to it as the Profit Protection Zone, this is a critical decision of when to take aggressive profits or when to allow the position to develop further.

Trading is an Imperfect Process

Regardless of the methodology, I focus on harmonic patterns and readily admit that "Harmonic Trading is an imperfect process." In fact, all trading of the financial markets is an imperfect process. The understanding of this one concept will serve to justify all emotional responses and clarify mental confusion regarding any missed opportunity. It is important to note that the means by which success is measured in the market is relative. As Harmonic Traders, it is important to understand that the world in which we are operating is not perfect. When we relate this basic acknowledgment to our actions, it is possible to understand that our performance will never satisfy the best-

case scenario. Simply stated, we cannot expect to be 100% correct 100% of the time. There will be missed opportunities. There will be money left on the table. There will be trading decisions that could have been maintained more effectively. However, we are human. Our advantage and clear comprehension are derived from the basic understanding that we need to be right not perfect to succeed to be profitable traders.

Any extreme emotional influence that distorts trading abilities must be dealt with but understood that nothing is perfect or even fair in the financial markets. I always believe that the mantra that "*Trading is an Imperfect Process*" does not permit excuses. Win, lose or draw, the end result of any trading opportunity is only relative to be consistently on the right side in most situations and generate ideas that have a track record of profitable results. Sometimes, personal mistakes or misunderstanding can lead to substantial issues in applying even the basic strategies to define opportunities. However, this is most effectively handled by reviewing past decisions and future opportunities within the measured pattern.

Focus on the Process

Despite the fact that it is an imperfect process, all considerations regarding trading can be resolved through definition, responsiveness and clarity of one's trading plan to guide decisions before they are encountered. Although I understand why emotions can be troublesome to certain individuals more than others, I would always argue that one's ability to be successful in the markets depends upon the effectiveness of their trading plan. If that is a Harmonic Trading plan, an automated robot or a long-term 401(k) investor who is riding the ups and downs for the long haul, I believe the satisfaction of one's endeavors in the markets comes down to process employed. Is the market frustrating? Are you able to identify those price levels that consistently define important inflection points or trend continuation areas? Do you have confidence in the analysis that you put forth – in advance – to execute with real money? If the answer is not a straightforward yes, your entire trading process must be mastered and improved until more consistent results are obtained.

Standardization of Measurements

The initial ideas of pattern differentiation presented in *The Harmonic Trader* led to a wider focus of providing measurement guidelines for each step of the process. As I mentioned previously, I feel this is more a framework with respect to harmonic patterns but I have seen a number of other additional technical methods that have provided excellent confirmation signals. I'm always curious to see how people integrate harmonic patterns but I do believe that most respect the alignments and rules that validate opportunities. However, more than any other principle that should be emphasized, there must be standardization to each pattern that has a prescribed set of measurement requirements to validate the trading opportunity.

The standardization comes from my decades of work that has categorized these structures as specific technical measures. Much of the clarification was thoroughly presented in the earlier material regarding the Potential Reversal Zone (PRZ) for each pattern. For example, is designed to clarify framework of these measurements and define the limits relative to the real-world action in the markets. Other concepts further the understanding of these limits to add natural parameters to the perspective of the environment in which patterns complete. Most important, Harmonic Traders understand the importance of applying only those measures that can be defined consistently and provide reliable insights into any market condition.

Define Your Own Success

Throughout my career, I have met people in every aspect of this industry. I've had the pleasure to get to know retail traders from around the world. Also, my work has enabled me to confer with some of the top professionals in the industry. I'm grateful for all of these experiences. Some of these individuals are worth hundreds of millions of Dollars while most of the people I encounter are regular folks. To me, it does not matter how much money any person has.

My involvement with the financial markets has been rewarding on many levels. I share the same passion to learn and profit from these endeavors as most, if not more. The common trait that I have seen in most successful traders is that they define their own success. This is important because the most confident traders who truly know what they're doing understand all parameters of the situation they are operating in. They know what they want. They know how to get what they want. And they do it. The most successful traders are self-determined individuals who accept no excuses in the face of the pursuit of their goals. It's not an easy task but those who persevere eventually win.

The problem has been the promotion of unrealistic ideals about trading and the perceived Wall Street culture in general. In the past few years, movies such as "The Wolf of Wall Street" idolize less reputable individuals who care nothing for knowledge of the market and focus on manipulation of others to earn their money. Incredibly, the main character in that movie is now revered as a great salesman, despite a few years in jail. I won't even mention his name because I have no respect for him nor the taint he has left on an industry that I hold in high regard. Yes, I hold the trading industry in high regard but I have very low expectations.

Why do I say this? Simply stated, money makes people do crazy things. However, over the course of a few decades in this industry I have learned that those who persevere and stick to their guns are the ones who make it. Other manipulators and bad actors whom seem intent on hurting those that truly want to learn has created a bad situation for the industry – an ethical dilemma – that lingers to this day.

My Fiduciary Commitment to Harmonic Traders

As a former Registered Investment Advisor, I have always upheld a fiduciary responsibility to be of serious mind and intent when conferring about potential opportunities in the market. I believe who intends to represent themselves as a market professional must do so in the highest of ethics with the sincerest of intentions. Unfortunately, the norm today is for internet marketers and less credentialed individuals to focus their time on promotion of incorrect ideas. My focus has always been about the work. I care about the ideas that are presented in public and I have decades of experience with the strategies that I teach. This is my life's work. I have literally spent years in front of a computer refining and researching those ideas that consistently define probable future price behavior. Countless traders have studied these methods and started to expand the knowledge beyond the initial foundation of measurements. I encourage this! However, I strongly recommend that any new ideas that are put forth be thoroughly tested and proven before they are sold is the next best thing. I am working with many partners to promote the ideas and to expand the knowledge to be a more integrative approach. For me, the answers that I have presented in my books were derived from this pursuit. In fact, it is only through such experimentation can we unlock the secrets of the financial markets.

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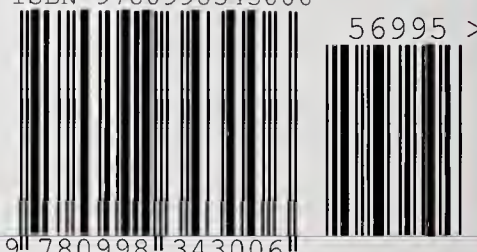
Harmonic Trading Volume Three: Reaction vs. Reversal

Scott Carney, Founder of HarmonicTrader.com, created the harmonic patterns that comprise the Harmonic Trading approach. The harmonic patterns that Scott has defined comprise a system of price pattern recognition and Fibonacci measurement techniques that pinpoint consistently accurate opportunities. Scott coined the phrase Harmonic Trading and he has advanced these strategies to incorporate proprietary trade execution and management measures. Author of four books, _The Harmonic Trader_ (Harmonic Trader Press 1998), _Harmonic Trading Volume One_ (2004), Harmonic Trading Volume Two (2007), (_Volume One_ and _Volume Two_ Second Editions Republished by Financial Times Press 2010), and now _Harmonic Trading Volume Three: Reaction vs. Reversal_ (Harmonic Trader Press 2016), Scott's presents his first new material in nearly a decade. In _Volume Three,_ he builds upon the existing foundation of Harmonic Trading to introduce unprecedented strategies that distill complex market environments into clear analytical scenarios.

- Origin of XABCD Structures: _"Market Sine-ature"_
- Three Elements that Validate a Harmonic Pattern Opportunity
- From Potential Reversal Zone (PRZ) to Permissible Execution Zone (PEZ)
- Importance of Probability Distribution and The Central Limit Theory with Harmonic Patterns
- The Defined Trading Realm
- Advanced Calculations and Limits of the Terminal Price Bar
- Serial vs. Divergent Reversals
- Exact Price Limits, Stop Loss Limits of Every Harmonic Pattern
- Type-I and Type-II Reversals
- Price vs. Environmental Technical Measures
- Advanced RSI BAMM Strategies
- Harmonic Trading Timeframes
- *NEW - The Shark Pattern & Harmonic Head and Shoulders Pattern

As a former Registered Investment Advisor, Scott successfully passed the Series 7, 63 & 65 (66 combined) securities exams. Scott is a full-member of the Market Technicians Association (www.mta.org) and the American Association of Professional Technical Analysts (www.aapta.us). He has been a regular columnist on several well-known websites such as StockCharts.com, NinjaTrader.com and eSignal.com, a featured guest on CNNfn and presents seminars internationally. Scott can be reached at: HarmonicTrader@HarmonicTrader.com