5 Technical Signals You Cannot Trade Without
Contact Information
Published by Bastiat Group
http://www.tonihansen.com
Email: info@tonihansen.com

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About Toni Hansen

Toni is one of the most respected technical analysts in the industry with a high reputation for accuracy in both bull and bear markets. She began her trading career as an equity swing trader and has since expanded to position trading, long term investing and Day Trading eMini futures.

Throughout the boom and bust of the last decade, Toni has been consistently trading and educating new traders. Her students include money managers, professional market analysts and traders, as well as those simply wishing to hone their market skills. Toni has pioneered unique strategies that adjust with the changing markets. Toni is a frequent presenter at the trade shows and trading expos. Toni recently co-authored of Online Trading by Stocks, Futures & Option (SFO) Magazine. Toni is also the author of three widely distributed trading recommendation newsletters.
Foreword

Knowledge is not enough.

The business of trading has boomed in recent years. Websites and bookshelves now offer a wide variety of commercial products, all designed to help you trade like a pro. But much has been lost in the rush to build state-of-the-art technical trading tools. The truth is the market will never give up its gifts so easily.

Contrary to popular opinion, you can't make money with technical analysis. This venerable art presents only a passive view of rapidly changing information. Neither a candlestick pattern nor a moving average crossover can tell you where to buy or sell. Only skilled execution and risk management will actually yield the fruits of a profitable trade.

Technical knowledge by itself has little value. Learning price patterns or memorizing setups is only a baby step in trading education. But many students stop there, thinking they've learned enough to succeed in the trading game. Unfortunately, they don't recognize their considerable danger. Limited knowledge has lulled them into a false sense of security. They misinterpret their ability to see as the power to trade.

The more difficult but successful path lies in the application of perfect market timing and skilled trade execution. Actions speak much louder than words...or even price charts with lots of trendlines.

Few trading educators these days teach their students to approach the markets from this seat of power. Yet this is the path that opens the door to consistent trading performance. Perhaps teachers have become so enamored with multimedia and high tech that they're forgotten the markets have not really changed at all in the past century.

Toni Hansen is one of the few trading mentors to speak from this seat of power. Her depth of understanding rivals the greatest educators of our day. Her methods are simple, yet profound: she teaches students to study the markets from the inside out. She also shows them how to overcome the knowledge game, and trade successfully.

Toni’s unique point of view opens the door of opportunity for the serious student of the financial markets. She takes her readers well beyond simple concepts, and into the realm of understanding and trade mastery.

Study her CD Course and profit from it!

Alan S. Farley

Author – The Master Swing Trader
Editor/Publisher – Hard Right Edge
www.hardrightedge.com
How to Use the Course

Each section of this manual corresponds to a video tutorial found on one of the DVD disk that is included with your complete course. We recommend you watch the video tutorials in order while using manual to supplement your learning experience and allow for easier review of the material presented.

To watch the video tutorials, simply insert the DVD disk into your computer’s DVD drive and double click the title to start the video.
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Course Introduction & Overview

Welcome to the world of online trading! My name is Toni Hansen and I will be your guide as we explore some of the most simple, yet often overlooked tools for extracting money out of the market.

Someone once said that a mentor is “someone whose hindsight can become your foresight.” This course is based upon a compilation of my own experiences in becoming a professional in this field, as well as those of the many traders I have had the pleasure of working with over the years, without whom, I probably would not still be here today.

Everyone who comes into this field does so for different reasons. Maybe you are here because you’ve been interested in the financial markets for as long as you can remember and you want to make a career in this field. On the other hand, maybe you are looking for a way to supplement your income or manage your own investment or retirement funds. Then again, maybe you are tired of your current career path and are looking for a job where you can work from home on your own hours and your own terms. No matter what your objective, one thing remains certain: without a solid foundation, your trading career will be short-lived and costly. So, my goal in creating this course is to help provide you with that foundation.

My own introduction to the trading world came about quite by happenstance in the mid-1990s. At the time, I was finishing up college and working in the field of archaeology. I had very little interest in the stock market and didn’t even know what the Dow Jones Industrial Average was. Circumstances, however, led me to a small sum of money which I decided to place in the hands of, quote-on-quote “a professional” to manage for me. I quickly became disillusioned with the results my broker was producing, or rather failing to produce, and figured, “why not just give it a try myself?” After all, I would hardly do worse… right?

My significant other was completely obsessed with the market. For as long as I had known him, he had no other goal than to become a professional trader. He began trading electronically shortly after we met and it was through him that I finally began to learn some of the ins and outs of the marketplace, including what the Dow was! One of the first things he did was give me a number of popular trading books to read, however, I found most of them to be completely out of my league and perusing them left me baffled. It appeared at first as though it would be an impossible task to learn to master all of the indicators, systems and ideas that permeated this profession. Out of frustration, I put down all of those books and decided to take what I learned from my own field and apply it to the market.

My field, archaeology is a subfield of anthropology. Simply put, anthropology is the social science that studies the origins and social relationships of human beings. Much of my time was spent unearthing, studying, and categorizing patterns of living and human behavior. One of the concepts that I had latched onto in my brief foray into financial literature was that of technical analysis. Now this was something that I could relate to: charting crowd reactions to different market stimuli.

There are a lot of books that have been written on technical analysis. They range from the basic “Technical Analysis for Dummies” type to the astrophysics level. Neither
quite fit what I was looking for when I attempted to actually apply them. I am sure you are familiar with Thomas Edison’s famous quote, “Results! Why, man, I have gotten a lot of results. I know several thousand things that won’t work.” Well, I very quickly learned a number of ways how to NOT make money trading.

There was, however, an underlying theme in technical analysis that all of the literature focused on: how price movements could be broken down into patterns, which can give you insight into which direction the market, or a specific stock or index, is going to move. There exists a wide array of indicators and strategies that fall into the category of technical analysis and even this specific sector of market analysis can become quite complex. So, the question became, “How can I make this knowledge actually work for me?”

The answer was something rather unorthodox. I decided to “go it on my own.” Ignoring all outside sources of market information and education, I set up my charts and began to build upon the foundation of analyzing price movement, keeping indicators to a minimum. In time, I learned that many of the concepts I stumbled across were those that some books actually did cover. By finding them myself, however, I learned a lot of the ins and outs that the books do not cover. I made a lot of wrong turns along the way, but the end result was one of my own making and I was able to avoid many of the more costly mistakes of my counter-parts who would jump from one idea and strategy to the next in the hope of finding the elusive Holy Grail.

My approach to technical analysis was to think in terms of “the bigger picture.” In much the same way that human behavior can be broken down into a number of different categories, so can the markets. In time, I have broken these down into 5 major technical indicators or tools inherent to every pattern and setup that forms in the market. The primary focus of this course is to share these tools with you and to provide you with a solid foundation for your own education as a trader. I will be going over each of these five technical tools in detail in this course. I will also discuss how to compile these tools into workable formulas and techniques and show you how to use them to judge the odds on a trade, as well as the risk:reward potential on each and every position you are looking at entering, including how to manage these positions once they are open.

One of the things that I find very exciting about trading is that I love to solve puzzles, and the market is certainly one example of an ever-evolving puzzle. To this day I continue to learn and refine my skills. It is one of the things that keep me coming back day after day. Even after a tough trading day, I cannot wait to get back in the game. While I cannot possibly compile everything I have learned over the years into one CD, let alone one course, my goal in creating this one is to share those basic concepts and truisms that I wish I had been able to learn from the get-go. They would have certainly saved me a great deal of time and money! The tools and strategies discussed in this course are not ones that will become obsolete at any point in the foreseeable, or even unforeseeable, future. The bare bones have been studied in one form or another for hundreds of years. They are concepts that you can rely on and develop into the sustenance for a lifelong career, no matter which market or time frame you wish to focus on, whether you trade stocks, EMinis, Forex, other commodities, etc.. I began my career as a swingtrader, focusing on 1-5 day moves in equities, but I have since moved on to apply my skills to daytrading, scalping, position trading and investing. I have also branched out into other marketplaces, most notably the EMini futures.
The ability to transcend time and markets is just one of the reasons these tools are so useful and can create long-lasting success. Another is the fact that I like to keep things simple. There are no intricate tools or indicators that you need to learn. Every indicator I use is widely available to anyone with a computer and internet connection and the techniques are such that I was able to teach them to a particularly enthusiastic 7-year-old. As Walter Chrysler said, "The real secret to success is enthusiasm." So, it is up to you to bring that to the table.

All my best,
Part 1: Understanding ‘Pace’

The first, and perhaps most important, albeit least emphasized, aspect of any pattern or scenario in the market that can be utilized to enhance one’s trading is one that I refer to as “pace.”

I am often amazed when long-time traders will approach me after one of my expo presentations in which I briefly discuss this technique and remark upon how they have never come across it in anything that they have ever read about technical analysis. Albert Szent-Gyorgyi, (Saint-Georgi) who was a Hungarian physiologist and Nobel Prize winner, once made the comment that, “Discovery consists of seeing what everybody has seen and thinking what nobody has thought.” Although I’ve never personally seen it mentioned in any of the literature either, I don’t know that there is much about technical analysis to really be discovered at this point. Nevertheless, despite the fact that this is one of the easiest technical tools to master, it is apparently not one that gets much word-play. Nevertheless, it’s one of the two most important tools in my repertoire for determining an upcoming directional bias in a security.

The term “pace” could also be referred to as “momentum.” It is the amount of time it takes for a security to make a price movement in a given time frame as compared to prior moves in the same quantity of time. Each of the moves back and forth within a stock is called a trend. Trend development, which is more complex than pace, is the other technical tool that I give the most consideration to when I am considering a position. I’ll be tackling it a bit later on in this course.

Types of Pace

There are three ways to look at how the pace of a move in the market compares to prior price activity. It can either be more gradual than an average move, it can be stronger than an average move, or it can be somewhere in the middle.

If XYZ moves $2 in 1 hour and then takes 2 hours to move $1, then the pace of the second move would be considered to be more gradual than in the first move. (Figure 1)
Part 1: Understanding 'Pace'

If XYZ moves $1 in 1 hour and then takes 30 minutes to move $2, then the pace of the second move would be considered to be more rapid, or stronger, than the first. (Figure 2)

If XYZ moves $2 in an hour and then moves $1 in the following 30 minutes, then the pace of each of the moves would be said to be comparable. (Figure 3)
Measuring Pace

Although each of the prior examples show a move in the market as compared to the one which came directly before it, it is also necessary to compare how each of those moves develops in relation to those preceding them. For example, while a movement may be stronger than the one which came directly before it, it can still be slower than the majority of the other moves back and forth.

One of the things that attracted me to technical analysis is that I am a very visual person. I studied art in depth throughout my school years and seeing market activity represented in chart form appeals to me more than written market analysis or audio from a trading floor. Pace is very much a visualization technique, more so than any of the other of the tools I’ll be discussing.

One of the most important things to keep in mind when utilizing pace as an indicator, is that a comparison can’t be based upon the angles between each of the moves being examined in a security. If the charts are too tall, all of the moves may appear very strong, whereas if they are too short and wide then most of the moves will appear to be more gradual than they really are. It can take a bit of experimentation at times to get the scaling and size of a chart at a setting where an accurate analysis can be made.
The two charts in Figure 4 of Millennium Pharmaceuticals Inc. (MLNM) provide an example of how the same price action on the same time frame, in this case a 5 minute chart, can look very different. In the top chart it is easy to see how each move on this time frame compares to each of the other moves. It is clear that the correction off the morning highs on the 26th is more gradual than the rally into those highs. The move out of that correction is not as strong as the one that took place the morning of the 26th, but neither is it as gradual as it appears on the second chart.

One of the challenges for traders is how to really visualize the pace of a particular move in the market. I have found that the most accurate method for doing so is to transect a move instead of connecting the highs to the lows on a move. That way it is easier to avoid a lot of the extreme ticks or “tails” within a move that can distort it.

Figure 5 displays two examples of how one might measure pace on a three minute chart of the QQQQ, which is an investment trust designed to correspond to the NASDAQ-100 Index. In the chart on the left I have connected the lows to the highs on each of the upside moves. As a result, when comparing the moves to each other, they each appear to be very similar. In the chart on the right, however, I have transected each of the upside moves. While the difference is not that extreme in this case, it demonstrates how the upside move labelled #2 is actually stronger than the move in #1, although #1 and #3 remain very similar.
This technique can be the most helpful in a trading range. The 5 minute NQ (Figure 6), which is the NASDAQ 100 EMini futures contract, shows a typical range in action. On the left I have again shown the move by connecting the lows to the highs of the move. This only shows the activity from 10:45 ET to 11:30 ET, however, and ignores the fact that the NQ actually continued in a longer trading range after 11:30 ET. By transecting the move, it becomes more apparent that the overall correction off the lows is really much more gradual than the drop off the early morning highs, hence allowing for a stronger breakdown into 13:00, or 1:00 ET.

The Rules of Market Pace

There are several basic rules that apply when it comes to pace. Figure 7 illustrates the first of these rules, whereby a slower than average move, marked here as “A” in Figure 7a will tend to correct via a more rapid than average move in the opposite direction. This is represented as “B”.

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The second rule is that a stronger than average move, shown on Figure 7b as “A,” will typically attempt to correct via a slower than average move in the opposite direction, as seen with “B.”

Figure 7a: Slower Than Average Move  Figure 7b: Faster Than Average Move

Figure 9 displays a 5 minute chart of Union Pacific Corp. (UNP). UNP provides a number of picture-perfect examples of these first two rules in action. When comparing move “A” to move “1,” notice that “A” is much slower than “1” was. The breakout, #2, is then more rapid. This repeats with another more gradual correction in “B”, where there are also smaller moves at play within the larger 5 minute base. By transecting the correction, it is easy to visualize the overall pace of this correction into 13:00 ET. Once again, this slower, sideways base allows the stock to break more quickly out of the range to new intraday highs.
This same series of slower and then more rapid moves continues into the close, although the downside is slightly greater in “D,” and hence the upside is slightly slower on “5,” as the stock ends the trading day.

Lam Research Corporation (LRCX), shown on a 15 minute time frame in Figure 10, provides some slightly stronger back and forth action, although overall the more rapid, followed by more gradual moves in each direction within the uptrend itself are still apparent.

Initially there is a bit of congestion on LRCX. The pace moved back and forth a lot before it began to show these slower and then stronger than average moves. Finally LRCX stalled in the zone of the prior highs on the move marked #1, just shy of $45. The stock began to base along that price level into the next day and that slower correction off those highs allowed the stock to break strongly through them soon after the open.

The extreme upside made it more difficult for LRCX to correct too strongly off its newest highs on the morning of October 4th, and it took a slightly slower upside move on #3 for it to pull back a little more strongly that afternoon on “C”. Although the pullback was still slower than average, the result of the fact that it was a bit more rapid than on "A" was that the new breakout on #4 was slower than the breakout at #2.

Initially, LRCX reacted to the #4 rally with a bit more rapid of a pullback. It was unable to make a new high, however, on the bounce and this forced the stock into a longer trading range, where the overall pace then became one that was more
sideways in nature and once again allowed the stock to break to new highs after that range gave way.

This takes us to our third rule in regard to pace. When a move in the market has similar momentum as compared to the one that preceded it (Figure 11), particularly if it retraces 50% or more of the prior move, then a trading range is likely to develop.

Figure 10

![Slower than average moves will often lead to continuations of the prior trend. Stronger than average moves will tend to correct via slower moves.]

Figure 11: Comparable Moves

By stepping back to look at Figure 10, you can see this action on the 5th of October on LRCX, marked as “D”. It pulled back about 50% off the highs of rally #4 at a pace that was comparable to the prior upside move. This made it easier to hold those highs mid-morning, forcing the stock into a longer trading range heading into the late afternoon before it was able to resume the trend.

Figure 12 is another example from LRCX. This is a classic example of a trading range. It began after a sharp upside move attempted to correct. Because the pace on that morning move was so extreme, however, it was not able to put together a strong corrective move in terms of price. It pulled back quickly initially, but then fell into a
base into the afternoon. That base broke lower with the first move of what would become the trading range.

Notice that “A” was neither as rapid, nor as gradual as the moves that had taken place up until that point in the day. By falling somewhere in the middle, it gave the first clue that it could turn into a range.

As the stock bounced around 14:30 ET, it retraced nearly the entire prior move and did so with a very similar pace. It was slightly slower, but the difference was evened out by a bit of a pop at the end. The result was that when it came back into the prior lows on the “B” drop, it held them pretty well. Again, the pace was similar to the prior descent, and this allowed the range to continue.

It was only on “D” where the stock retraced the prior move to a much lesser degree in terms of both time and price, that the range was finally able break higher to resume the uptrend from the morning of the 23rd.

Figure 12

Moves that are neither exceptionally slow nor exceptionally rapid, which retrace more than 50% of the prior move, tend to lead to a trading range.

The Evolution of Market Pace

As we have seen with some of the prior examples, pace evolves as a trend evolves. For instance, it may begin with a stronger downside move, but can then become more bullish as the trend progresses and vice versa. While each of the charts shown so far deals with intraday trading, this same concept applies to daily, weekly, and even monthly charts as well.
This template in Figure 13 shows very common examples of how pace can develop and progress from one bias into the next. To keep things simple, I will just refer to this template as a stock, although it could just as easily be any other market vehicle. The first move that is labelled on this template is “A”, which is actually the second move on the chart. There was not much of an indication of the action which occurred a bit further back, but it’s obvious that “A” is a lot more gradual than the first upside move. This comparison alone can allow one to conclude that a breakout in the direction of the prior trend is liable to be a decent one.

When the breakout move, shown as “B,” begins to correct, notice that the pace on that correction is somewhat stronger than the “A” correction. This is an initial indication that the momentum is beginning to change.

The result of this increased interest on the downside is that the subsequent continuation move, shown as “D,” is now even slower than the prior two upside moves. Since it is similar to the pace of the prior correction (“C”), it could actually be considered at that point to be slower than average. This opens the door for a more rapid counter-move, allowing the bears a bit of an opening.

As the drop off highs comes to an end, the bounce, labelled “F”, is similar to the prior drop, retracing nearly the entire move from “E.” Since neither of the moves could be considered as “slower than average”, it pushes it into a trading range. It is only when the pace within the stock changes following “I” and going into “J” that it again begins to favor a strong directional move. In this case, the slower than average upside, following a decent downside move, indices a greater propensity for a breakdown, which occurs on “K”.

Let’s look at a few examples of how pace can develop in the marketplace.

Figure 14 is a chart of National Semiconductor Corporation, whose symbol is NSM. It has a lot in common with the template that we were just looking at. I have pasted that template in the upper right hand corner for comparison. NSM kicks off with some strong upside momentum. That pace begins to change, however, as the day
progresses. The earlier a trader can catch a trend move, the better, because then they are less likely to get caught in such a change of momentum.

By mid-afternoon, the upside moves from “1” to “3” on NSM have slowed not only in terms of the pace of each move, but also the magnitude. Each move in the direction of the uptrend breaks by a lesser degree than the previous one. In fact, the third upside move is not even able to clear the prior highs and it takes a bit longer to retest those highs than it did to retrace from them.

This rounding off at highs opened the stock up for a strong reversal. This began in NSM near the end of the day. The fact that NSM then based into the close helped the bears continue their takeover into the next morning.

After the third move off highs, NSM managed to bounce more strongly into the next morning. As on our template, shown as “E” and “F” in the upper corner, the moves “E” and “6” on NSM have become more similar. This pushes the stock into a trading range, so that when it retests the morning lows on “F”, it is unable to break them.

It is only at “7” that the upside once again slows, forming a more gradual than average move. The fact that it also retraces less than 50% of the “F” decline aids it in breaking lower and continuing that selloff into the next morning. These moves correspond to the type of action that took place from “E” to “K” on the pace template, with the only difference being that the range broke lower after the third test of lows on NSM, as opposed to the fourth test on the template.

Figure 14
Another example of how pace can evolve is shown in Abercrombie and Fitch (ANF) (Figure 15). The stock kicks off the day with a very sharp downside move, but still manages to correct rather strongly out of 10:15 ET. When it comes back into the zone of the morning highs, however, and starts to pull back off those highs, it does so at a slightly more gradual pace. So, each of the three waves is somewhat less extreme than the prior one. On the move marked “B”, however, notice that it once again held within the upper half of the prior upside move. The slower pace combined with the lesser degree of retracement aided in a strong breakout. This upside move was more substantial than the prior two moves and similar to the pace of “A”.

Although ANF attempted a similar reversal as had occurred off the morning lows, getting off to a strong start initially, the pace slowed on “3” and created a bit more congestion into the afternoon. It allowed the stock to take a bit longer to make it back to the 11:30 breakout zone.

The pace evened out into the afternoon with “E” and “5” mimicking each other and allowing the stock to hold a range a bit longer, until it experienced more of a sideways range and slowing pace on “6”. This change from average to slower than average again resulted in a stronger drop on “G”, which was similar to the afternoon breakdown that took place in NSM.

As we’ve seen with the last couple of charts, as the pace slows with each wave of buying or selling, a bias develops which can either create favor for a strong momentum move, or limit that potential. In UBS (Figure 16), the pace within the trading range begins with similar back and forth moves from “A”, to “2”, to “B”, to “3”. After “3” that pace again changes.
Sometimes the pace will not give a strong indication as to which direction the range will break until the last move within the range itself. In “C”, UBS finally starts to hug the upper end of the trading range and this allows for the momentum to pick up going into the afternoon, particularly after a second gradual pullback at “D.”

**Figure 16**

*Slowing downside pace as compared to upside pace indicates a bullish bias.*

**Figure 17**

*Pace turns bearish as upside slows*
Titanium Metals (TIE) (Figure 17) also shows pace within a trading range and how it can provide an indication as to the direction the range will break. Even though TIE gapped higher into the open, the pace within the range that began to form following the open quickly became more bearish. Between 10:30 ET and 11:15 ET it formed an even more narrow range within the larger one and it was here that the pace on the upside slowed even more as compared to the downside momentum, allowing the stock to very quickly close the morning gap after the range broke lower.

Diebold Inc. (DBD) (Figure 18) has another great example of how pace plays into breakout patterns. DBD experienced a strong breakout pattern early in the morning when the pace within the trading range, following the upside move of “1”, begins to slow on each wave of downside, shown from “A” to “C”. When it breaks higher, however, it’s unable to resume the same momentum it had on the move heading into the trading range. This made it easier for the third attempt at a continuation into noon fall short of both of the prior upside moves.

Utilizing Pace to Manage a Position

While pace can be a strong indicator to assist in determining a breakout direction, it can also be very helpful in avoiding a false trigger for a breakout, as well as assist in adjusting stops on a position a trader may be in already.

Let’s look at this chart of Apple Computer (AAPL) (Figure 19) in terms of those two scenarios. In the first scenario, assume that I am looking at AAPL for a continuation
move on the upside into the afternoon. As the stock pulled back over noon, however, each of the upside moves within the pullback remained more gradual than the downside moves. Even though the trend channel of the pullback broke higher just before 14:00 (2:00 ET), shown here at #2, the pace was unable to pick up. This made it very easy for the stock to break down again before the end of the day.

Figure 19

On the other hand, if I had been able to catch the morning breakout at #1, and was holding onto some shares with the objective of seeing a larger breakout move again in the afternoon, then the change of pace into the afternoon could be used to tighten up my stops. A stop is the amount a trader is willing to let them go against them before s/he consider her/his original premise to be incorrect and s/he exits the position for a loss.

I will often use a break in a trend channel that is more gradual, such as on “B” or the one that is circled into 15:00 ET as my trailing or adjusted stop level. A trailing stop is one that is designed to allow a trader to remain in a position long enough to give it a chance to provide her/him with larger gains, but at the same time protect much of the profit that s/he had already gained.

Another term that I have introduced here, “trend channel”, is something I will cover in much more detail in the segment dealing with trend development.

This template in Figure 20 takes away a lot of the clutter that may have been a bit of a distraction on AAPL and shows more clearly how to use this change of pace to adjust stops on a breakout position.

Typically a stop is placed under a low point with a trading range. When the upside breakout from a range takes place on significant decreased momentum, however, it
often becomes more prudent to tighten up that stop. If the pace continues to decrease on the upside, such as into “B”, then a trader can use a break in that more gradual move as the new stop trigger. I will usually drop down to an even smaller time frame and take a look at the momentum moves within that move itself so that I do not have to chase a breakdown in order to get a decent fill.

Figure 20

"A" followed by slower upside and then stronger downside = higher odds of a stop, esp. if "A" breakout is on light volume... Break in "B" base triggers adjusted stop.

Figure 21 of AXA which provides a great example of this adjusted stop method on a swingtrade setup. A typical stop on AXA would have been under the $33.47 low from April. Adjusting the stop to under $34.15, based upon the break in the more gradual base that occurred just above that stop level, would have resulted in a stop that was only more than 40% less than it would have been otherwise. While this method can increase the chances of a false stop slightly, the savings more than make up for it.
Conclusion

Understanding the pace on any move in the market is one of the strongest tools I have for discerning an upcoming move. This category of technical analysis is something I use at all points of a trade’s development and one in which I place a great deal of emphasis. It takes practice to utilize it efficiently, but most of the traders I work with on an individual basis have been able to take the concepts shown here and apply them with immediate results.

In the worksheets which follow, take some additional time to open a charting platform to locate examples of the types of pace movement such as in those illustrated. Always remember to compare the current price movement in a security to the action which occurred earlier on, not only on just the past move or two, but the past dozen or so to gain the most accurate perspective.

Worksheet Questions

Putting your knowledge to the test!

Answer the following questions to the best of your abilities. Once you have completed this section, turn to the answer guide to double check your work.
1) Another word for “pace” is “momentum”. Please provide a description of what pace represents in a security and how to measure it.

___________________________________________________________________
___________________________________________________________________
___________________________________________________________________
___________________________________________________________________
___________________________________________________________________

2) What type of pace action typically indicates that a trading range or congestion period is about to occur in a security?

___________________________________________________________________
___________________________________________________________________
___________________________________________________________________
___________________________________________________________________
___________________________________________________________________

3) Explain the development of a typical bullish trading range prior to a breakout.

___________________________________________________________________
___________________________________________________________________
___________________________________________________________________
___________________________________________________________________
___________________________________________________________________
___________________________________________________________________

4) Pace evolves as a price move evolves. If the pace of a move in increasing dramatically on a price decline, how would the security typically correct from that price move?

___________________________________________________________________
___________________________________________________________________
___________________________________________________________________
___________________________________________________________________
___________________________________________________________________

5) The following two pages contain a number of examples of how a price move can develop. Follow the instructions provided to guess the most likely outcome of each of the price moves shown. Afterwards, open your own
charting platform and find three examples of each of these price moves which also display the outcome of each of these moves. Print out the charts and describe the impact that pace played in that outcome. #8 and #9 are more difficult and may require you to answer them only after completing the remainder of this course.
UNDERSTANDING MARKET PACE

Complete the chart patterns with the most likely outcome. Then give your reasons. Include pros and cons for your anticipated results. The arrow indicates volume. Review these worksheets again upon the completion of the volume segment of this course.

Example:

Given the faster pace of the initial drop, the slower rally off support as volume declined suggested that the market would continue lower.

1)

2)

3)

4)

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UNDERSTANDING MARKET PACE

Complete the chart patterns with the most likely outcome. Then give your reasons. Include pros and cons for your anticipated results. The arrow indicates volume. Review these worksheets again upon the completion of the volume segment of this course.

5)

6)

7)

8) Draw the next two moves:

9)

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6) The next two images show price patterns that are under development. Complete the charts by drawing in the most likely outcome of each of the two patterns. Next to each chart explain the reason behind each of your decisions.

Reason:

Reason:

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Real Tick charts provided by Townsend Analytics, Ltd.
Worksheet Answers

1) Another word for “pace” is “momentum. Please provide a description of what pace represents in a security and how to measure it.

Pace is the amount of time it takes for a stock or commodity to make a price move in a given time as compared to prior moves in the same quantity of time. For instance, if ABC moves $2 on one day and then takes only half a day to retrace that entire move, then the pace of the retracement is increasing on the downside as compared to the upside.

To measure a pace move, it is good to transect the move instead of just connecting the highs to the lows. That way it takes into account the average pace of the entire move, as opposed to any extreme tails or ticks (odd trades) which occur within the larger price move itself.

2) What type of pace action typically indicates that a trading range or congestion period is about to occur in a security?

Typically the pace will start to mimic the prior price move as a trading range kicks off. So, if ABC moves $1 in an hour and then $0.75 in the following 45 minutes, the pace of each of these moves is similar and a trading range or congestion period is likely to develop.

3) Explain the development of a typical bullish trading range prior to a breakout.

As a trading range begins to turn bullish, the pullbacks off the upper end of the range become more gradual than the upside, whereas the upside pace will start to increase. Often the security will form a smaller range near the upper end of the larger congestion just prior to the upside breakout.

4) Pace evolves as a price move evolves. If the pace of a move in increasing dramatically on a price decline, how would the security typically correct from that price move?

When a security is forming a stronger than average price move, it generally takes much longer for it to correct in terms of price. So, if ABC fell $2 in an hour, when an average move in the security takes 2 hours to make such a move, then it will likely take even longer than two hours this time around to recover the ground that it lost. A strong move either up or down is often followed by a trading range, although it might just mean the pace of the buying or selling needs to slow before a stronger correction or reversal can occur.

5) Guess the most likely outcome of each of the price moves shown.
In each of the following examples of pace development, there are a number of outcomes that may take place. The ones shown, however, indicate the direction that the move is likely to take, even though the actual it takes may vary. For instance, in #1 it might rally to the highs of the range, base, and then continue higher instead of moving directly through the highs as shown below.

**Example:**

Given the faster pace of the initial drop, the smaller rally off support as volume declined suggested that the market would continue lower.

1)

After falling into a trading range, the second pullback off the highs became slower than the initial pivot from highs. Since the volume was also declining, it indicated that sellers were also less abundant on the second move lower and that a continuation of the initial upside move was most likely to occur.

2)

This is a series of higher highs and higher lows, completing a three wave trend move, which will be discussed in a later segment. Each correction is slower than the prior buying. After a third wave of buying, however, the correction will also tend to take longer than before and can be somewhat stronger as well.

3)

In this image, the security attempted an upside continuation move, but it was unable to maintain the prior momentum and the pace of the second upside move was much more gradual than the first. Typically the result is a reversal of the trend and a stronger move in the opposite direction.

4)

Even though the selling pace was stronger to begin with, on each downside move it became more gradual and was nearly sideways on the third move. The slower downside created the odds for a strong upside continuation of the correction off the lows and hence a reversal on the price action overall.
**REASON:**

RIMM initially began its correction off highs with an above average pullback, but the selling slowed into 11:45 and the buying increased significantly on 1. It then based sideways for about 10 minutes, showing a change of momentum to favor an upside breakout.

**REASON:**

EOG initially began with stronger selling than buying, but the upside in June and July was nearly identical in pace as the prior decline. When the pace on two moves are almost the same, then a trading range or trading channel is likely to develop. That is what happened on EOG for the remainder of the year.
5) The upside and downside pace of each of these moves made it probable that a trading range would develop. Often the third move is similar to the first, although the pace can change a bit more after that as the range begins to favor one end over the other for a breakout.

6) Even though the buying was stronger than the selling to begin with, the upside momentum slowed dramatically as the congestion at highs wore on, reversing the bias in favor of a break lower as opposed to a continuation of the uptrend. Since the last upside move was slower than average, it allowed for a much stronger break lower.

7) After a strong price decline, this security began to base at lows. Within that range itself, the buying became more and more gradual until it started to hug the lower end of the trading range indicating a higher potential for a breakdown and a continuation of the earlier selling.

8) Draw the next two moves:

After a strong price decline, this security began to base at lows. Within that range itself, the As will be discussed in the segment on trends, a security typically forms a longer correction after three waves of selling. The 2 most likely outcomes of this move would have been a somewhat longer base, breakdown and then a reversal, or else a slower move lower and then a more rapid move higher.

9) In this trading range, the downside was slower than the upside pace. In order to continue lower and not trap those looking to short, an even more gradual upside move or base along the lows would likely be necessary. If the upside remained strong, however, a slower sideways move would help break the range higher.

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Part 2: Understanding Volume

The second of the five major tech tools that I utilize in my trading is volume. It is also one of the most commonly used indicators by traders. While most of the traders I know have their own preferences for the styles of charts that they use, the types of markets that they trade, as well as the indicators that they study, every single one of them will pay attention to the volume.

As it relates to the market, volume is the number of shares or contracts that are traded during a given period of time. It’s a function of supply and demand. The higher the volume, then the more shares there are trading hands, hence the more liquid the marketplace. This also means that it’s more competitive as well. If someone buys 1000 shares of XYZ from another market participant on a certain day, then the volume increases by 1000 shares during that session, thereby increasing the stock’s liquidity.

Volume can refer to a daily time frame, as will commonly be referenced by CNBC, Investors Business Daily, etc., but it could also refer to the activity on a 5 minute chart intraday. In this case, it would mean the volume reading for each segment of 5 minutes. This may be the opening volume of the day from 9:30 to 9:35 Eastern, or some other 5 minute segment later on in the day, such as 12:00-12:05 ET.

There are a number of advantages for stocks that can be considered to be high volume, particularly over 750,000 average shares over day. I will discuss some of the finer points of selecting a stock based on average daily volume a little later in this course. Higher volume in a security, however, will typically result in narrower spreads, less slippage, and less volatility... all of which are very favorable to traders and investors alike.

Spread

A spread is the difference between the bid and ask price. The bid shows the prices traders are trying to purchase a security at. Think of the bid as the same way you would if you were trying to make a purchase at an auction, hence the name. The ask price, also called the offer, shows where traders are posting how much they are willing to take in exchange for the one they are trying to liquidate.

The spread is the difference between these two prices. A bid of $50.25 with an ask of $50.28 would mean that the spread is $0.03. The narrower the spread, the easier it is to enter and exit a position quickly and at the prices they desire.
Slippage

Slippage refers to the amount a stock moves adversely against a desired entry or exit price before an order can be filled. In a higher volume stock, there will tend to be more shares available at a given price level, so getting a fill is not as difficult as in a light volume stock where I might be trying to acquire a position of 1000 shares $50.25, but there are only 200 shares offered at that price. As a result, I would have to pay more at a higher ask level where more shares available in order to get into the position at that time.

Volatility

Volatility refers to the amount of risk, or uncertainty, connected to the size of change in a stock or commodity’s value. High volatility means that the price can fluctuate dramatically in just a short period of time. When volatility is low, then changes in price are steadier.

Reading Volume

When I first began compiling the material for this section of the course, I initially assumed that it would be nearly as simple to discuss as pace. It soon hit me, however, that there are quite a few different ways in which I will view volume. How to read volume is not as easy as just looking at whether it is stronger than average or if it’s drying up.

Each of these is like running into a word which has several meanings. If I said the word “cause”, for instance, how can anyone know right away whether I mean the reason for something to occur, such as, “The cigarette that Tommy threw out the window was the cause of the forest fire,” or if I mean the interests of some group attempting to change something in a way which strongly appeals to them. To run with the cigarette’s theme, maybe this time Tommy is campaigning for a smoking ban in public parks to prevent said forest fires and has asked you to “join his cause”. The word “cause” could be substituted for “stronger than average volume.” While both versions of “cause” might look the same when taken at face value, the implications may be radically different. “Stronger than average volume” can also have several meaning. It can occur at both highs and lows on a price move. It can also occur as a move is just beginning. As a result, it can be difficult at times for newer traders to grasp that sometimes subtle difference between volume indicating buying in the one instance and strong selling in another.

One of the tenets of using the style of technical analysis that I do, is that each of the five technical tools should not be used as stand-alone indicators. The greater they correspond to one another, the higher the probability is for success on a position. Throughout my discussion on volume, you will see how it reacts in relation to “pace”. In this segment I will also tread lightly on the topic of trend placement, also known as trend development, in regard to its relationship to volume. I’ll save many of the
specifics on it on that particular technical tool, however, until I get a chance to delve into that topic in greater detail later on.

Types of Volume

The major types of volume development that I will be discussing in this section are increases, or influxes, of volume and decreasing, or lighter than average, volume activity.

Increases in volume can be caused by several factors, most noticeably news events, as the confirmation of a price move (aka “trend”), or as an indication of an exhaustion move.

Light volume can be caused by holiday trading, diminished pressure/interest/concern, or diminished supply.

News and Volume

Let’s first look at the major causes on an increase in the volume of a security. One of the most obvious is news. News events are the most highly recognized instigators for volume influxes in stocks or commodities, as well as the overall market.

One common news event that will provide a boost is a company’s earnings announcement. Ciena Corporation, whose symbol is CIEN, provides an excellent example in Figure 1 of how such news can affect a stock’s volume. On December 14th they announced that they had beaten their adjusted profit expectations for the fiscal fourth quarter, pulling it out of the red. On the 13th, the volume in CIEN was just under 2 million, 700 thousand. On the 14th, however, more than 12 and a half million shares exchanged hands. Some of the reasons for such strong news-driven volume are increased activity by institutions, such as mutual funds and insurance companies, greater investor confidence, or those who are caught in the opposite direction covering their positions, such as those who are short heading into a gap higher or folks selling their shares on a gap lower on news.

Volume can increase dramatically intraday on news as well. On December 19th, for instance, Northfield Labs Incorporated (NFLD) in Figure 2, plummeted just after 2:00 Eastern when it was announced that its PolyHeme red blood cell substitute missed its late stage trial goal. Share holders quickly panicked, and volume surged as they tripped over each other to cover their positions. After trading at $14.40 just prior to the news, NFLD hit lows of $9.41 well before the closing bell. Volume went from just over a million the day before, to over 6 million, with nearly all of occurring after the news hit the wire. After being downgraded following the news, volume increased even more dramatically the next day when the stock opened at $5.80. By the end of the week it was trading as low as $4.03, although the volume began to dissipate since those trading the news now had several days to react.
Figure 1

CIEN gaps higher with strong volume after beating adjusted profit expectations for the fiscal fourth quarter, pulling it out of the red for the year.

Figure 2

NFLD plummets on high volume after its PolyHeme red blood cell substitute misses its late-stage trial goal.

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Accumulation

Volume can also increase considerably following certain technical triggers and end up serving as a confirmation tool. This is particularly true of patterns such as bull or bear flags and other types of breakout patterns.

Typically, when a security is starting to gain volume after a correction to a price move occurs, it’s a sign of accumulation, or the building of a position, whether it’s individual or institutional buying. When a stock or commodity closes higher on the day and does so with an increase in volume, it’s referred to as an accumulation day. By itself, a large jump in upside volume is not a reason to buy or hold a stock, but it can serve as a heads up or a confirmation of strength. As the prices continue to move higher on increased volume, the upside move will likely continue. This it limited, however, to the early stages of a new price move, since extreme volume on an extended move, as I’ll discuss here in a few minutes, can have an entirely different meaning.

Here is one example of a stock showing accumulation. On both August 11th and September 1st, U.S. Global Investors, Inc. (GROW) (Figure 3) broke free from daily congestion on accelerated volume, closing significantly higher in each session.

Accumulation days are also very common within a trading range itself and can give a good heads up as to the most likely breakout direction. In this chart of Entertainment Properties Trust (EPR) in Figure 4, the stock fell into a sideways channel at the beginning of July and continued to consolidate into the first of August. On July 19th, while still in the trading range, EPR saw its strongest trading since the end of June and
closed higher on the day. The second accumulation day took place at the very end of the range, on August 1st, and led directly into the breakout, which confirmed the following day as volume remained the highest since June. It is most common that a range such as EPR’s will break after the second accumulation day within the range. The same would apply to an accumulation bar on an intraday chart.

**Figure 4**

*Accumulation Days Within a Trading Range*

**Increased Volume**

The higher the relative volume is on a price move, the more significant that move becomes. Notice on this chart of Amgen Inc. (AMGN) in **Figure 5**, the strongest of each of the high volume moves also directly correlate to the strongest price moves. As AMGN rose throughout the morning ("A", "B" and "C"), the volume remained much higher than during the upside moves over noon which occurred at noon (marked “D”) and 12:45 ET. The overall volume again increased in the afternoon, particularly after 13:30 ET (marked as “F”) when the stock broke to new intraday highs, hence confirming the renewal of the bullish bias.
Even though the volume did increase at 13:10 ET ("E"), the fact that it was not extreme compared to the other high volume bars brings up a very important point. Using an influx of volume as a reason to enter a position is not always the wisest choice. On breakout types of patterns, whether they are a triangle breakout, such as on AMGN, or a flag, etc., the influx of volume tends to be a lagging indicator, meaning that the best entry trigger is before that volume has spiked.

Big Lots Inc. (BIG) in Figure 6 gives a very good example of breakout volume as a lagging indicator. According to the section on pace, BIG had been in a trading range for well over a year heading into the end of 2005. From early May into the end of the year the pace began to turn over and the downside momentum within the congestion slowed dramatically as compared to the upside momentum. This was most evident in November and December, when the stock based along the upper end of the price channel and held the upper half of the range into the New Year. Volume remained rather light even as the stock gave a buy trigger in January ("A") by breaking out of that end of that Nov-Dec base. Even though the stock continued to creep higher after that trigger, it wasn't until May ("B") that the volume provided a confirmation for the breakout. It remained strong throughout 2006, however, supporting the price move from that point onward.
The ideal entry trigger on the breakout occurs over $12.38, when BIG breaks the smaller range within the larger one.

**Distribution**

Increased volume can also represent distribution within a security. When a stock, commodity, etc. closes lower on the day as compared to the prior day and does so on higher than average volume, then it is referred to as a distribution day.

The chart of EPR in **Figure 7**, which we looked at earlier in terms of accumulative action, also has a great example of distribution. On December 19th the stock sold off sharply on more than double the prior day’s volume. The wide range on the day marked a clear departure from the bullish bias that had been underway since the middle of the summer. While not shown here, the stock continued to sell off in the days which followed.
Part 2: Understanding Volume

**Figure 7**

Distribution Day = Increased Volume & Lower Closing Low

**Figure 8**

Distribution Days Within a Trading Range
Distribution can also occur within a congestion zone. While not higher than the average volume from June, Stone Energy Corp. (SGY) in Figure 8 showed an increase of volume on July 8th after it had fallen into a congestion zone. The lower close on this higher volume created an initial distribution day. It is often a second or third distribution day that will lead to a breakdown of a congestion zone.

In SGY, that second distribution day on August 28th was assisted by news, which we’ve already looked at as a strong impetus for surging volume. Woodside Petroleum of Australia (WOPEY) offered to buy the independent oil driller Energy Partners Limited (EPL), but the deal was contingent on EPL shareholders rejecting a merger agreement with Stone Energy.

The extreme volume in August was also an example of an exhaustion move in the stock, which led to the congestion in the days that immediately followed.

**Exhaustion Activity**

Exhaustion moves are marked by stronger than average increases in volume, indicating panic or extreme euphoria as positions are rapidly acquired or offset by other market participants. They are most common as prices move lower. When prices are falling on increasing volume, then there is typically more downside ahead. An exhaustion bar occurs when the exhaustion move reaches a climax. An exhaustion bar is one that has an above average price range and opens near the highs of the bar, followed by a close near the lows of the bar. In candlestick analysis, this bar is in the form of a black marubozu candlestick.

In the chart of the E-Mini S&P 500 futures contract in Figure 9, the exhaustion move begins at about 14:50 ET and continued for the next several minutes, culminating in a sharp spike at lows after an exhaustion bar.

Exhaustion moves are the most effective as a tool for giving a trader or investor a heads up that the security needs a chance to catch its breath. Sometimes it will be followed by a reversal in the price action, where a selloff turns around and begins to move higher, but it can also just serve as a temporary slowdown, which was the case of the exhaustion bar on SGY, where the selling can continue, although typically at a more gradual pace. The more extended a price move is on the downside, the more likely it becomes that an exhaustion move will lead to a correction or reversal of that trend or bias.

Northfield (Figure 10), which had been the subject of that unexpected news intraday, has several nice examples of exhaustion on the 1 minute time frame. As in Stone Energy (SGY) from Figure 8, the initial exhaustion hit quickly after the announcement, at 14:15 ET.

A second exhaustion move, and exhaustion bar as well, occurs just before 15:00 ET after the second congestion zone breaks lower.

The third, and strongest, exhaustion move begins at 15:18 ET. This followed the most extreme price move of the day and also displayed the highest volume since the initial shock hit earlier in the afternoon.
Sharp volume following an extended downtrend & the most rapid wave of selling indicates an exhaustion move.
NFLD plummets on high volume after its PolyHeme red blood cell substitute misses its late-stage trial goal.
It is not uncommon to see one or more exhaustion bars form before an absolute low hits. In this example in Figure 11 from the Mini-Sized Dow futures (known as the YM) the exhaustion move is nearly textbook. Each bar on the downside increased in range as compared to the one which preceded it. Volume grew slowly following the breakdown, culminating in the highest volume of the day just ahead of the lows.

It is fairly common that an exhaustion move such as this, where the selling builds upon itself, will not hit the absolute low of the move with the influx of volume, so the volume alone should not be used as a buy trigger. Due to the extreme pace of such a move, it will often take a change in pace before the prices can truly reverse. In the YM this meant a new low just prior to 11:00 ET, but at a slower pace than the one that took place into 10:30.
A similar exhaustion move also occurred on Newmarket Corp. (NEU) in Figure 12 on October 10th. In this case, however, the volume spike WAS directly correlated to the lows. Notice that it still took a retest of those lows into 11:00 ET before the stock was able to pull higher, and even then the momentum was not as strong as it had been on the stock’s decline.

**Upside Exhaustion on High Volume**

Volume spikes in an uptrend after significant appreciation are not always a good thing, however. They can also occur as an upward move in a security runs its course. While they can still be favorable for a short-term trader, such as a daytrader, they are often disastrous for a position trader who holds a stock for several weeks to several months. The chart of Starbucks Corp. (SBUX) in Figure 13 shows one such example of upside exhaustion accompanied by an influx of volume. After steady buying throughout most of the year, the selling pace in SBUX had begun to increase into the end of April and an increase in the stock’s average daily volume corresponded to this price move. Despite both of these bearish signals, the stock made one last attempt to hold onto its gains after it announced that its second-quarter earnings rose 27%, beating expectations.
The stock failed to honor its promise to the bulls when it quickly gave back all of those gains over the course of the following week as volume remained strong and the pace again turned over with an increase in the selling pressure, forming a short-term exhaustion bar on May 11th. It wasn’t until August and the release of the company’s third-quarter earnings, that the stock finally found a foot-hold once more and was able to turn back around to retake the highs made in May.

Heavy volume associated with very little net price change after an extended run or near a strong resistance level, can often represent churning and signal a top. I will discuss resistance in greater detail later on. Simply put, it’s a level that can cause a move in a security to pause or reverse. A prior high or congestion zone, such as on the Nasdaq Stock Market Inc. (NDAQ) in Figure 14 is a good example of it. On the daily chart, notice that the volume increased as the stock came into that resistance zone and it continued to remain high for a number of sessions, despite being unable to make any significant price gains other than on November 22nd when hedge fund manager Samual Heyman took a 9% equity state in the London Stock Exchange (LSE), which the NASDAQ had been attempting to acquire, although its initial bid at that point had been rejected. As the LSE continued to reject the NASDAQ’s subsequent bids, however, the buyers backed away and NDAQ fell more than 25% in the following month.
Holiday Trading

It is not just identifying higher than average volume that can help a trader or investor identify and understand price action. Lower than average volume can also provide substantial insight on the current stage of a security’s price development.

Perhaps the most obvious example of declining volume is ahead of extended holiday weekends or during major holiday seasons. Volume tends to be particularly light on the day before the exchanges are closed for a holiday. This is especially true at the time of Thanksgiving and Christmas.

The daily chart of the Spider (SPY) in Figure 15 shows the end of the year holiday trading from 2006. Not only was the volume lighter the day before the exchange holiday, but notice that it declined steadily beforehand as well.
Volume and Strength

One implication of diminishing volume during a price move during normal trading activity is that the supply of shares or contracts that are available for purchase at a given price may also be diminishing, even though demand may remain high. This is common when those holding a position in a security, such as the shareholders of a stock, are happy to just hold onto it in anticipation of greater upside.

This can be risky for investors who wish to hold a position for six months or longer, since it often will occur once an upside move is already well-developed on the larger time frames, but it can have much less of an impact for those who are trading on a shorter time frame, such as setups that have formed on weekly or daily charts.

When dealing with a situation such as this, volume can briefly increase immediately upon the breakout from a trading range, serving as confirmation of the move, like I discussed earlier, but then decline once again as the uptrend progresses, indicating a shortage of buyers, but without indicating any concern of an immediate correction or pullback.
Inverness Medical Innovations Inc. (IMA) Figure 16 provides an excellent illustration of diminishing supply. IMA had been climbing steadily throughout the year, but after a strong upside move into the beginning of August, it fell into a trading channel, unable to break through the $34-$35 zone. At the end of September, however, after once again testing the highs of the range, the stock finally managed to close above $35. Volume was 4 to 5 times higher than average on that day, but instead of remaining high, it began to return to normal heading into October. One implication of this type of volume activity is that the subsequent price movement will often be more gradual than had occurred previously. It was not until November that the volume once again began to accelerate, but as on Nasdaq Stock Market Inc., that volume represented a great deal of profit-taking and right afterwards IMA began to retrace on the weekly charts.

Developers Diversified Realty Corporation (DDR) Figure 17, a stock that I had been holding in my position trading account since September also has a nice example of this type of volume activity. Although the stock had been climbing steadily for a number of years, at the end of 2005 the activity began to increase dramatically and it was not long before it went from trading under $6.50 in the summer of 2005 to breaking past $50 just a year later.

DDR rose throughout the fall and into the winter of 2006, but a lot of the increase in price was accompanied by a decrease in volume. Volume spiked in August as the stock began to try to break free from a 6 week range, but as the buying continued, the volume slowed. At the end of September another small range at highs again broke with increased volume, and this time the volume dried up even more until the pace increased once more at the end of October.
An upside exhaustion bar formed on December 5th after hitting all-time highs of $66.36. The stock gapped substantially lower that morning following an announcement the prior afternoon that they were selling more than 11.5 million of their common shares at market value in a public offering underwritten by Goldman Sachs. It took the stock from an average daily volume of about 500,000 shares a day to nearly 3.5 million that day.

As we have seen in many of the previous examples, it is often news that will turn the tide of many of the market’s high fliers. It took approximately two months for DDR to finally recover and once again break to new highs.

**Unconfirmed Buying**

Unfortunately, another explanation for light volume on an attempted price move to the upside is that there is simply a lack of motivated sellers as opposed to an abundance of enthusiastic buyers. This is typically accompanied by a slower than average-paced move into highs. Such a move is risky for buyers because it is very easy for the price to reverse or correct. It is not uncommon that a slower upside move on light volume can retrace several weeks’ worth of gains in just a few days.
Sepracor Inc. (SEPR) Figure 18 experienced an example of an upside price move that occurred on December 18th. Even though the stock was making new highs and higher lows well into the afternoon, volume declined the entire time. Notice that the move was also punctuated by several stronger-paced moves lower and that the overall upside, particularly from 12:00 to 2:00 ET was much more gradual than normal. The volume at this time was also the lightest of the entire day. This allowed for a very rapid reversal that took back nearly all of the day’s gains in just under an hour. High volume came into play when the stock returned to lows made in the first 30 minutes of the day and the sellers became exhausted. The 15 minutes that are circled just before 15:00, or 3:00 ET, experienced the strongest volume of the day, taking us back to the earlier discussion on exhaustion moves and how extreme volume at an extreme pace on the downside will typically occur as a security is readying itself for a correction to that selloff.

When the upside move is made following a breakout type of pattern and the volume remains light, it can also signal that the breakout or setup is premature and it will either be more likely to pull back into a trading range or congestion zone and develop on a larger scale, or fail completely, so even though increased volume on a range breakout often lags the actual entry trigger, a lack of volume can serve as a heads up for the possible need to alter the management of the position by being either more aggressive or more patient than initially deemed necessary.
In late November, the QQQQ in Figure 19 fell into a triangle pattern that began to develop on the 28th and continued into the early afternoon of the 30th. On the 30th, it actually formed an even smaller triangle within the larger one and volume dropped off significantly from 10:00 into 1:00 ET as the smaller triangle formed. This led to a sharp upside move intraday just after 13:00 ET, but the volume remained relatively modest despite the increased pace. After failing to attract interest in the the last hour of the day with a pattern called a "Cup with Handle" going into the close, the NASDAQ began to plummet. The momentum accelerated in the first hour of the next trading day. Hence, even though the triangle created a great opportunity for the shorter term daytrader, those looking to capitalize on the larger pattern were sorely disappointed!

Declining Volume at Lows

While volume can decline into highs as the pace slows, declining volume at the lows of a price move can also serve as an indication that a reversal looms on the horizon.

Baidu.com Inc. (BIDU) in Figure 20 is a stock that commonly experienced strong price movement, both higher and lower. Heading into the fall of 2005, BIDU was also experiencing its own fall, moving from highs above $150 in August to about $60 in October. The stock took back some of its losses heading into winter, but the volume dried up as it moved to new lows early in 2006. This selling was slower than the prior year. Even though the volume picked up a little in February, it was not until BIDU broke strongly higher in May that the volume really began to increase. It remained higher than the prior 6 months throughout the rest of the year, providing a
confirmation for its renewed bullishness. Even though the pace of the move lower in December and January was slower than the prior selling, it was not significantly slower than average. This accounts for the longer time it took for the volume to return, although I suspect that news also played a role at the beginning of May.

**Figure 20**

I2 Technologies (ITWO) in **Figure 21** has two examples of volume declining into lows. The first took place on a second wave of downside following a large bearish gap in May of 2006. Another occurred in July when the stock fell under $12.00/share. In this second low volume decline the price action was choppier than the one in May. There was greater overlap from one day into the next. As on BIDU, volume only increased when the upside momentum increased coming off the lows.

This low volume decline is a favorite pattern of mine, particularly when combined with the other 4 technical tools. This can be a more difficult strategy to master due to a tendency to initially trap eager buyers such as in mid-May, but powerful reversals such as those into August are common. The main drawback is that they can get off to a slow start and will often require a bit of patience initially before providing more than ample rewards. I actually prefer to see a trap where an initial attempt to reverse fails before entering a position like this, or to wait and time a setup on a smaller time frame, such as on a 60 minute chart when the daily chart is the one that is forming this type of volume activity.
Volume & Trading Range Biases

Although volume can decline during a trend move, another popular method for utilizing declining volume is to monitor its progress during a trading range or congestion zone. Volume often declines as a trading range forms, indicating hesitation by market participants as a stock or commodity corrects from a prior price move, either up or down. This is another way of locating prime setups in the market.

This chart of Covance Inc. (CVD) in Figure 22 illustrates a stock which had broken sharply lower in the morning, culminating in an exhaustion move just prior to 11:00 ET, marked here as “A”, followed by congestion well into the afternoon. As the stock based along $60, the volume showed a dramatic decline as compared to the morning’s activity. This tells me that even though the stock is technically correcting from the selloff, buyers are not eager to jump on board and those who are short in the stock are not rushing to cover their positions either. It sets the way for another breakdown in the afternoon. Volume increased to confirm the move on the 5 minute time frame, and then spiked again after falling for more than a point to indicate exhaustion. This is shown as “B”.

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Celgene Corporation (CELG) in **Figure 23** had a great example of how I was able to use volume to time the entry on an intraday scalp setup. After gapping higher, CELG fell into a trading range for nearly the first 30 minutes of the day. Within that range, the volume began to slow on the downside and increase on the upside. The stock formed a smaller trading range just shy of the day’s highs. Within that segment of the range (marked “A”), the volume dropped off sharply. This told me to be prepared to jump into the stock at any time. As soon as it began to show any buying at all I executed my order. Notice that my entry was confirmed by the volume shown here as “B”.

The example of CELG provides a nice segue into a more detailed analysis of this type of volume decline. Although CELG was in a range since the open, it was only the last segment of that wider range that experienced the rapid decline in volume. I have found that the best breakouts will have the lightest volume just prior to breaking free from the congestion. When this occurs, it significantly increases the odds for success on the position.

**Figure 24**

Here is an example of this particular type of pattern development. Affymetrix Inc. (AFFX) in **Figure 24** experienced a strong upside move into the morning on October 26th. The price stabilized in the area of $26/share. As the selling slowed, so too did the volume. The lightest volume of the entire morning took place just before noon, meaning, just before the stock again broke higher and moved on to retest the day’s highs over the course of the following 30 minutes, creating a very substantial upside move as compared to the range it had been trading in from about 11:25 to 11:55. A typical stop on such a breakout would be placed under the lows of that segment of the range, leading to a healthy return on one’s investment in a brief period of time.
A more sloppy variation on this same theme took place in the Spider (SPY) (Figure 25), which tracks the S&P 500. I had been following the index throughout the morning and had taken note of the steady volume decline into the early afternoon. Heading into 12:30 ET, the upside pace increased and began to hold into 13:00 ET. The volume hit its lowest levels of the day and even when the smaller range pulled a bit lower into 13:30 ET, the volume did not increase to confirm any breakdown and the selling remained slower than average. It was only when the range broke higher after 13:30 ET that the volume increased to provide confirmation to the direction of the breakout from the mid-day congestion.

These last several charts embody what I’ve personally found to be one of the easiest methods for struggling traders to begin to incorporate technical analysis into their trading for immediate results. Locate a trading range or basing pattern where there is heavy turnover, or volume, on the upside action, followed by quite trading, or declining volume, on the pullbacks or corrections with a trading range. A more gradual pace would ideally accompany the low volume pullbacks while the upside moves experienced increasing momentum. Explosive volume on the upside coinciding with the price breakout would then serve as confirmation for the position.

**Conclusion**

Although I have shown a number of ways in which volume interacts with price action and pace and they may seem rather daunting, with a little practice you will soon be able to begin to discern the differences between them. When I was first learning about the markets, one of the things I did was compile a three-ring notebook with print-outs
of charts that showed similar patterns, such as volume development as it related to price movement. Whenever I then saw these same patterns repeated on live charts intraday, I would scroll back on my chart or cover up the most recent activity and then move forward bar by bar, uncovering the pattern bit by bit in order to get a feel for what it would look like real time. I would then print out a copy and add it to my collection. This simple learning technique can be applied to any of the technical stratagems that I cover in this course, as well as any that you find favor with on your own!

Worksheet Questions

Answer the following questions to the best of your abilities. Once you have completed this section, turn to the answer guide to double check your work.

1) Complete the following sentences:
   a) When a security closes higher on a day that is accompanied by an increase in volume, it is commonly referred to as a/an ______________________________.
   b) When a security closes lower on a day that is accompanied by an increase in volume, it is commonly referred to as a/an ______________________________.
   c) Volume often ______________________ as a trading range develops when a continuation pattern is forming.

2) In a security, how is volume measured?
   _____________________________________________________________________
   _____________________________________________________________________
   _____________________________________________________________________

3) List several advantages to higher volume in a security.
   _____________________________________________________________________
   _____________________________________________________________________
   _____________________________________________________________________

4) In a breakout type of pattern, how can volume be used to confirm the setup?
   _____________________________________________________________________
   _____________________________________________________________________
5) Explain the ideal volume development for a continuation breakout pattern, beginning with the move heading into the range itself.

___________________________________________________________________

___________________________________________________________________

___________________________________________________________________

6) If a security is moving higher on declining volume and the pace of the move is slower than the previous upside, what type of price action is likely to be developing? How will this affect the next correction to that upside move?

___________________________________________________________________

___________________________________________________________________

___________________________________________________________________

7) Explain the development of a downside exhaustion move in a security. Locate three examples of exhaustion moves.

___________________________________________________________________

___________________________________________________________________

___________________________________________________________________

Worksheet Answers

1) Complete the following sentences:

a) When a security closes higher on a day that is accompanied by an increase in volume, it is commonly referred to as an accumulation day.

b) When a security closes lower on a day that is accompanied by an increase in volume, it is commonly referred to as a distribution day.

c) Volume often declines as a trading range develops when a continuation pattern is forming.

2) In a security, how is volume measured?

Volume is the number of shares or contracts traded during a given period of time. It measures liquidity. The higher the volume, the more liquid the security traded is.
3) List several advantages to higher volume in a security.

Higher volume in a security typically results in narrower spreads, which is the difference between the bid (where traders are attempting to purchase a security) and the ask (where other traders are posting shares or contracts for sale). They also tend to have less slippage, meaning it is easier to get into or out of a position at the price you want as opposed to having to accept a less favorable fill. They are also less volatile on average, which means that there is less whip back and forth which can make it easy to get flushed out of a decent position or lead to greater slippage.

4) In a breakout type of pattern, how can volume be used to confirm the setup?

An increase in volume on a breakout confirms the breakout and gives it greater odds for hitting a larger price target. The volume may not increase by much on the first attempt of a breakout, however, and it might not increase much at all until the highs or lows of the entire range break. The momentum by that time is already increasing strongly in most cases, so a trader should not rely on a volume increase on a breakout before entering the position. Waiting will lead to greater slippage and significantly smaller reward for the risk. If volume doesn’t pick up at all though, it can alert a trader that the odds are increasing that the breakout will fail and can hence lead to more aggressive risk management to cut or prevent losses.

5) Explain the ideal volume development for a continuation breakout pattern, beginning with the move heading into the range itself.

On the upside move ahead of a correction or base for a continuation pattern, the volume is often strongest in the first half of the move, although this is not always the case. When the security then falls into the correction or range, however, it is best to have the volume drop off almost immediately on the pullback and then continue to decline ahead of the continuation trigger. The lightest volume in an ideal pattern would occur in the last segment within the base or pullback that moved in the direction opposite of the desired breakout direction. For instance, if a stock moved higher and then based at highs, the lightest volume would be on the final pullback from the upper resistance level of the correction. It will then increase as the continuation pattern begins to break the resistance. Often it will be a little slow still on the first attempt and then pick up a few minutes later.

6) If a security is moving higher on declining volume and the pace of the move is slower than the previous upside, what type of price action is likely to be developing? How will this affect the next correction to that upside move?

This type of activity usually indicates that even though a security is making higher highs, market participants are leery of initiating a new position in the direction of that price move. Each new high traps more people who bought over the previous high and when it fails to continue strongly, concern begins to set in. This can quickly escalate into panic and create a sharp pullback or correction off the highs.
7) Explain the development of a downside exhaustion move in a security.

When a security has had a strong upside move, often the reversal will start off gradually with slower upside while downside might remain average to less than average still. As an exhaustion move on the downside forms with this type of turnover, the pace begins to increase with larger price moves and wider ranges in shorter spans of time. Volume then begins to increase as well. When the volume reaches a point where it is the largest on the time frame being examined and the range for each bar on the time frame being examined (such as the 5 minute bars on a 5 minute time frame) is substantially larger than average, then it can be considered to be an exhaustion move. Correction off the lows of this type of exhaustion can take longer unless the pace rounds off at the lows.
Part 3: Understanding Correction Periods

When a price move exhausts itself and the buyers on an upside move are no longer as eager to purchase more contracts or shares, or the sellers on a downside move are no longer as eager to dump them, then a security will try to form a correction. This might mean that it attempts to fall into a range or it could mean that the price actually reverses. If a security is already in a trading range, meaning that it is trading sideways with choppier action, then at some point that range is going to usually need to break free. As it happens, there are particular times of the day, as well as times of the year, that these types of moves or corrections from the previous price action will begin. This is the subject of the third technical tool that I utilize in my trading: Correction Periods.

Figures 1-3

For many years I used to refer to these only as “reversal periods,” which was the lingo that I had picked up on from fellow traders when I first became introduced to technical analysis. These are times of the day, or even of the year, when a security or the overall market is most likely to correct from the previous price action. Over time, however, I have realized that the term “reversal period” is not only inaccurate, but that many of the actual times that I was noticing “reversals” taking place were more abundant, as well as consistent, than I’d initially thought. Had I not been following the market closely full-time, who knows how long it would have taken me to recognize them.

Intraday the correction, or reversal, periods abound. The ones that I first learned about included one shortly after the market opens, another at about 11:15 ET and a
third major reversal period at 14:00 ET. What most folks don’t seem to realize is that these so-called “reversal periods” actually take place nearly every 30 minutes.

Why does the market tend to move in 30 minute swings? I have no idea. Maybe it means that is the extent of our attention spans. Since childhood our lives have been regulated by 30 minute or one hour increments. Maybe we can blame television for part of it. The average sitcom, for instance, is on for thirty minutes. In essence, we’ve been programmed to view spans of time incrementally. But hey, this is just a theory!

In regard to the name itself, the term “reversal” carries with in the implication that price moves, such as a rally to new highs, will actually reverse at these times. In other words, that a steady upside move could turn around and become steady selling. The problem was that I would also notice that when the price moves did not actually reverse, they would often still correct to a prior move, usually by falling into some form of a trading range. Alternately, new price moves regularly begin at these times. For instance, a trading channel or congestion zone will commonly break out at one of these points in time. As a result, I prefer to think of these as “correction periods”, because they are times in which a security or the overall market is “correcting from” a prior price move.

Intraday the reversal periods are somewhat different in the morning as compared to the afternoon. The morning reversal periods fall most commonly 15 and 45 minutes past the hour, while the afternoon ones fall most often on the hour and half past the hour.

There is a tendency for a security to reverse from a prior afternoon’s move right away out of the 9:30 ET open for the primary session at the exchanges. This session ends at 16:00, or 4:00 ET. Trading outside of that time frame is referred to as afterhours, or premarket trading. 9:45 ET is when many of the earliest intraday corrections begin, but sometimes they can take place around 9:35 to 9:36 ET. As a result, I will almost never enter any new daytrade right away out of the open and will wait until about 6 to 7 minutes into the primary session before I place such a trade.
On swingtrades, which are positions that are typically held for several days to several weeks at time, or on position trades which are held several weeks to several years, this does not matter quite as much. Although when I am looking to enter swingtrades which have experienced a strong price move the prior afternoon in the direction I’m interested in, then I will often hold off a bit as well in order to allow for an intraday correction.

At 10:00 ET, a number of economic reports are often released. These will include wholesale inventories, home sales, factory orders, construction spending, and consumer confidence data, just to name a few. As a result, the overall market can show a strong reaction to the news on some days, although it’s not unusual to see the reaction turn back around at the next correction period if the news is not very unexpected.

This next correction period is at 10:15 ET and is more common than one taking place at 10:00. It’s then followed by another at 10:45 ET.

After 10:45 ET the correction periods begin to change from their tendency to occur at 15 and 45 minutes past the hour to taking place on the hour and half past. One of the stronger morning correction periods is at 11:00 sharp, but the area between 11 and 11:15 is still fairly normal, so there are often reversals or corrections that begin at 11:00, as well as 11:15.

After that, it is not until 12:00 noon that the next correction period hits. This isn’t much of a surprise since many people will take their lunch at this time. For this reason, the 12:30 area is not as strong of a correction period as 12:00, nor is it as strong as the other ones throughout the morning or the afternoon. At 13:00 ET, or 1:00, they again gain in significance. Of course, this is also when many folks get back from lunch. The time period between 11:00 and 13:00 is often referred to as the “mid-day doldrums” since the volume during this time of the day will often decline and trading ranges or choppy trading are more common.

At 13:00 many of the afternoon moves will begin. 14:00 (or 2:00 ET) is even more common. I tend to begin scanning most diligently for afternoon setups shortly before 14:00 in order to take advantage of the setups and patterns which trigger at that time. Those in the central time zone, another hot financial realm as a result of the exchanges located primarily in Chicago, namely the Chicago Board of Trade, but also Minneapolis, Kansas City, etc. are coming back from their own lunch periods at this time as well.

One thing to keep in mind with correction periods is that they are not absolute. Not every single correction period intraday will hold, nor will they always hold perfectly when they do. These times are simply the MOST LIKELY times of the day that correction will occur.
Correction Periods in Play

Now let’s look at some examples of correction periods at work. I have switched over to another type of chart called a line chart for this segment of the course (as opposed to the charts in the previous segments, which have been candlestick charts) because it makes it easier to focus only on the correction periods without any other distractions.

The indices, such as the S&P 500, NASDAQ Composite, and Dow Jones Industrial Average tend to have the most prolific examples of corrections out of these time periods, while individual stocks or commodities may react strongly to only a couple of them intraday. As a result, the first examples I am going to discuss will focus on several of the indices and then we will look at some of the most lucrative correction periods in the other markets.

This particular chart is of the YM (Figure 5), which is the mini-sized Dow Jones Industrial Average futures contract. The YM began the day with a decent upside gap into the open. Within about 5 minutes, however, the buying began to stall. Between 9:35 and 9:45 ET it rounded off at those highs and this correction zone was the lead into a pullback in to the gap zone. The decline first stalled at 10:00 ET when the existing home sales data was released. It then continued into 10:15 ET, where it reacted slightly to this correction period. A third wave of selling finally brought it into what would end up as the day’s lows at the 10:45 ET correction period.

The YM bounced off the lows at a pace that was similar to the previous selling. This is common as a security falls into a trading range. This range held into the early afternoon and the 11-11:15 zone was not as perfect as the ones earlier in the day. 12:00 ET, however, is a very significant correction period for a security that finds itself
in a morning trading range. It hit that one pretty much on the nail and the buyers soon began to return.

The upside pace increased, stalling at the 12:30 ET reversal period before continuing into the 13:00 one. As I mentioned earlier, this tends to be more important that 12:30 and the result was that the YM found itself pushed into another trading range lasting for about an hour.

Within the range itself, the 13:30 ET correction period held as the first low and the 14:00 ET one led it into a breakout to new intraday highs. This move resumed at 14:30 but then found itself at a brick wall heading into the last hour of the day. The 15:00 correction period can get off to a little bit of a late start and that was the case on this day as well. 15:30 ET, on the other hand, had very little impact this time around and the YM slowed there for only a couple of minutes before resuming its selloff into the close.

This second index chart (Figure 6) is of the NQ, which is also an EMini futures contract. This one tracks the NASDAQ 100 index. On this day the NQ found itself in a narrowing trading range early on in the session after moving lower during afterhours trading. As the 10:15 ET correction period rolled around, it began to turn over at the highs of the range and was then able to break free of the triangle, finding initial support back at the day’s lows, which hit with the 10:45 ET correction period. As on the YM, the selling continued. It stalled at support at both 11:00 and then again at 11:15 ET, where it began to round off at lows to kick off a bounce into noon.
Once more, the 12:00 ET correction period held extremely well. The NQ was back into the early morning congestion and the choppy trading continued into the early afternoon, but found smaller reactions at 12:30, 13:00 and 13:30 ET.

14:00 is one of the stronger correction periods and on this day it corresponded to the afternoon breakdown from the trend channel that had been in place since the 11:15 ET reversal period. Within 30 minutes the NQ was back at morning lows where it fell into another range on the smaller times frames before making new lows.

Volume increased a bit at the 15:00 ET correction zone, which again came slightly after the hour, as the NQ found support and bounced strongly off the lows. When the final correction period hit, the above average pace on the upside pushed it into another area of congestion to finish off the session.

The third chart I created for this section is from Lam Research Corporation (LRCX) (Figure 7). It shows a number of perfect examples of the many ways in which a security can react to a correction period. At 9:30, 10:45, 12:30 and 15:00 the correction periods served to stall the price moves that had been in place heading into those times of the day. In each of these LRCX was forced into sideways congestion following a move higher.

At 10:15 and 12:00 ET the correction periods corresponded to upside breakouts from two of the intraday congestion zones. The first lasted from 9:30 to 10:15 and the second began at the 10:45 ET correction period, lasting until 12:00 ET.

Another range break came out of the 14:00 ET correction period, but this time was followed by a break down out of the range as opposed to a continuation of the prior trend.
The correction periods also held true to their reversal tendencies at 14:30 ET when it formed a pattern called a “Reverse Head and Shoulders” and bounced sharply off the morning lows. The low on this type of a reversal is often called a pivot. Another pivot took place the next morning. The correction at 10:45 that pushed LRCX into a trading range also began with a pivot and usually if you drop down to the smaller time frames you will see them, even when the larger pattern is a range.

Hess Corporation (HES) (Figure 8) shows some of my favorite correction periods as they play out throughout the day.

After selling off following the open, HES formed a choppy correction off lows until 11:00 ET. At this correction period that sloppy upside move began to break, leading a strong reversal once more into new intraday lows. I am particularly fond of patterns on the 5 minute charts intraday that trigger at this time because they will often follow-through well into the mid-day trading.

The 11:00 ET decline in HES took it into another of the strongest correction periods: noon. Notice how well it held here. The rapid pace on the decline helped keep the stock from bouncing quickly off the lows, however, and instead the stock congested along the day’s lows before busting through them with the 13:00 ET correction period. It’s very common for mid-day trading ranges to break out at this time and the 13:00 ET decline on HES is very typical of such a tendency.

The volume increased throughout this early afternoon decline. In an attempt to mimic the late morning selloff, the breakdown out of 13:00 ET also lasted for an hour, reversing only as the 14:00 ET correction period hit. From there it bounced for another
hour until dropping again out of 15:00 ET. The range narrowed into the close and HES held the final correction period at 15:30 ET perfectly.

**Figure 9**

Repetition can be a great way to learn how to read the markets, so here is another example of correction periods intraday (**Figure 9**). This is a chart of Cymer Inc. (CYMI). While the stock showed small reactions to most of the correction periods all day, such as out of the open where the stock began to pull back, and at 10:45 ET and 11:00 ET where it stalled briefly within a larger decline, etc., only a couple of them really led to larger intraday corrections.

These larger moves came at 10:00 ET after pulling back to $44, 10:15 ET when it pivoted off $45, 11:15 ET when it bounced off morning lows, and then 13:00 when it reversed and pulled higher into the close.

So far we’ve been looking at these correction periods intraday and one day at a time. This next chart of Hansen Natural Corporation (HANS) (**Figure 10**) illustrates them on a larger scale. The two that are marked here deal with the early morning trading as a correction zone. After selling off strongly on September 6th, HANS held the opening lows and fell into a range for the next two days. That range broke down on Sept. 11th and the selling quickly resumed. It continued until the 12:00 ET correction period on the 11th when it experienced an increase in volume and pivoted off the lows, holding them throughout the remainder of the session.
Another great example of correction periods leading to significant trading range breakouts can be seen on Research in Motion (RIMM) (Figure 11). On August 3rd this
stock fell into a channel early on in the day and continued to hold it until the 13:00 ET reversal period hit. Notice how the volume also declined throughout the morning and into the early afternoon. It increased once the range broke to confirm the setup. Even though the momentum slowed as the afternoon wore on, RIMM was still able to close at the highs. Whenever I run across a stock like this that has fallen into a range on declining volume over mid-day, it catches my attention. You can often bank on the fact that these will tend to attempt a breakout at 13:00 or 14:00 ET, so whenever I am looking to take advantage of a late day trend move, it’s a strong pro to have one of these correction periods in my favor at the time of my entry.

So far all of the charts that I have discussed have been looking at in this section have been line charts, I also wanted to show you how the correction periods will often look on a candlestick chart, which is my preferred style of charting. The chart in Figure 12 is another one of the YM. It is of a 5 minute time frame, meaning that each bar represents 5 minutes of trading.

At 10:00 ET the YM broke strongly higher out of an opening range. That rally stalled at the 10:15 ET correction period. When it tried for the highs a second time it also held a correction period at 10:45 ET. A second pullback from those highs led to the 11:00 ET correction period, after which the YM pushed forward until noon.

At 12:00 ET the morning buying came to a close. The YM slowly retraced into the early afternoon. After stalling around 13:00 ET, the Dow began to climb at 13:30 ET. The 14:00 ET correction period had little impact on price, but notice that the volume did not pick up until that time. After 14:00 the volume remained strong into the close. 15:00 and 15:30 again affected the price, first with a continuation of the rally at 15:00 and then a pullback into the close at 15:30 ET.
Monthly Correction Periods

Even though I have been focusing on intraday correction periods, there are also correction periods on the larger monthly time frame. The two months that will experience the greatest corrective action are January and especially October. Some securities, however, are also cyclical.

I find that I both enter and exit long term positions most often in January and October. Of these two, October is my favorite. Figure 13 is of the QQQQ, which tracks the NASDAQ 100. I have displayed both the January and October price levels over the last several years. The red spheres indicate when the correction period either stalled a rally, reversed the market at the end of a rally, or kicked off a breakdown. The green ones indicate increasing momentum, pivots off lows and breakout continuations on the upside.

The first correction period shown here takes place in October of 1999 in Figure 13. Even though the market was heading higher throughout much of the year, notice that the momentum did not increase until October. In that regard, this correction period really was one that led to a type of breakout. In January the market stalled at the end of this rally, pulled back, and then was able to form a continuation pattern into February, so the reaction in this case was more of a corrective one in terms of price.

One of the most substantial correction periods displayed here was the one in October of 2000. The type of pattern that had been forming throughout the year is one that I call an “Avalanche” pattern. This occurs when there is a sharp reversal off highs, followed by a gradual bounce or correction along support. At that time the price action
is choppy and volume declines. The setup triggers when that choppy trading range breaks lower. This corresponded to the October correction period in 2000.

In January of 2001 the NASDAQ formed a similar correction as the prior January, only this time on the downside. The selling stalled and formed a continuation pattern, which was followed by continued selling into October. Volume increased to indicate exhaustion and the market bounced into January of 2002.

The NASDAQ held the January correction period very well and the selling continued, albeit at a more moderate pace, until October of 2002. The pace of this selloff in 2002 was more gradual than the prior declines, indicating a change of pace that slowed for more monumental turnaround out of this correction period. Although it doesn’t look like much on the chart of the QQQQ shown here, it was this pivot low that held the market and was eventually followed by new all-time highs in the Dow Jones Industrial Average in 2006.

The NASDAQ also held onto these lows exceedingly well, stalling only slightly into early 2003 without any real correction at that correction period. Even though the rally slowed again the following October, the market did not pivot again until January 2004. This correction found support again in October and was able to push back into the prior highs in January of 2005. This action was repeated again into October 2005 and January 2006.

**Conclusion**

Out of the 5 technical tools covered in this course, I consider correction periods to be the least imperative in determining the success or failure for a setup. To get too stuck on them and only take patterns that triggered at times where they accompanied a correction period would mean that many otherwise great opportunities would be passed over. Nevertheless, they can still notably increase the accuracy on a position and should by no means be ignored.

**Worksheet Questions**

Answer the following questions to the best of your abilities. Once you have completed this section, turn to the answer guide to double check your work.

1) A daily chart of XYZ catches my eye when it displays a modest gap higher into the open. I begin to watch it for a small base on the 1 minute chart for a continuation breakout in the direction of the gap. What is the minimum amount of time that I should wait for a 1 minute base before it breaks higher to take the position with the highest percentage chance for success.

   a. 4 minutes  
   b. 6 minutes  
   c. 15 minutes  
   d. 50 minutes
2) Which of the following is not one of the most common correction periods intraday?

   a. 10:45 ET  
   b. 12:00 ET  
   c. 13:45 ET  
   d. 15:05 ET  
   e. 15:30 ET

3) Which of the following intraday correction periods is least likely to lead to a strong price move?

   a. 10:45 ET  
   b. 12:00 ET  
   c. 13:00 ET  
   d. 14:00 ET  
   e. 14:30 ET

4) Which two months are most likely to lead to a larger correction in a security that would be likely to affect longer term positions?

   a. January  
   b. May  
   c. August  
   d. October  
   e. November

5) What does the term “correction period” refer to?

   __________________________________________________________________________
   __________________________________________________________________________

6) Why is the term “correction period” more accurate than “reversal period”?

   __________________________________________________________________________
   __________________________________________________________________________

7) If a security has based near the highs of the day since 11:00 am and throughout the mid-day, when is that range most likely to break out of that range in the afternoon? There are two answers that will apply.
8) Mark the correction periods on the chart below. Indicate which ones had the most significant affect on the price activity.

Worksheet Answers

1) A daily chart of XYZ catches my eye when it displays a modest gap higher into the open. I begin to watch it for a small base on the 1 minute chart for a continuation breakout in the direction of the gap. What is the minimum amount of time that I should wait for a 1 minute base before it breaks higher to take the position with the highest percentage chance for success.

   a. 4 minutes  
   b. **6 minutes**  
   c. 15 minutes  
   d. 50 minutes

2) Which of the following is not one of the most common correction periods intraday?

   a. 10:45 ET  
   b. 12:00 ET  
   c. **13:45 ET**  
   d. 15:05 ET  
   e. 15:30 ET
3) Which of the following intraday correction periods is least likely to lead to a strong price move?

- a. 10:45 ET
- b. 12:00 ET
- c. 13:00 ET
- d. 14:00 ET
- e. 14:30 ET

4) Which two months are most likely to lead to a larger correction in a security that would be likely to affect longer term positions?

- a. January
- b. May
- c. August
- d. October
- e. November

5) What does the term “correction period” refer to?

Correction periods are certain times of the day or of the year when the market or a specific security is most likely to correct from a previous price action. For instance, if the S&P 500 has moved higher throughout much of the morning and then hits a late morning correction period such as the one at 11:00, then it has a stronger likelihood of either pulling back off those highs or falling into a trading range over mid-day.

6) Why is the term “correction period” more accurate than “reversal period”?

The term "reversal period" implies that a price move will actually reverse at that time. Not all corrections take the form of a reversal though. A correction in the form of a trading range may develop instead. Likewise, a security may already have a trading range under development and when correction period hits it breaks out of the range.

7) If a security has based near the highs of the day since 11:00 am and throughout the mid-day, when is that range most likely to break out of that range in the afternoon”? There are two answers that will apply.

The range is most likely to break at either 13:00 (1:00) or 14:00 (2:00) eastern.

8) Mark the correction periods on the chart below. Indicate which ones had the most significant affect on the price activity.

The first chart has each of the correction periods marked on it, while the second chart displays the ones which had the most significant impact on the intraday price activity.
Part 3: Correction Periods

**Correction Periods**

12:00 leads to a breakout from the morning range

9:45 ET pushes NQ into a range

13:00 leads to a pivot off the highs

14:00 reverses the early afternoon drop
Part 4: Understanding Support and Resistance

Out of each of the technical tools or signals that are covered in this course, support and resistance is the most multifarious. As such, I will be spending a great deal of time on it.

Support and resistance (known as simply “SR” for short) are levels in a stock, commodity, or index that can easily stall or end a price move. If resistance were the ceiling and support is the floor, then the closer a person is to the ceiling, the closer they are to resistance and vice versa. While these levels may seem rather concrete, with time and continued pressure, support and resistance levels will begin to break down. In a house, this might have the assistance of rot, termites, or a sledgehammer, but overall they are places where you can expect a person to typically have a more difficult time breaking through. Some, however, will be easier to bust than others, just as rotten wood or glass is easier to break than concrete.

When trading, it is very important to keep an eye on what support or resistance levels are near at hand. They are instrumental in all aspects of locating, executing, and managing positions in the market, no matter whether a person is a scalper or an investor. The closer one is able to buy into a security off support and the further they are from resistance, the better!

This seems obvious and rather straight-forward right? Well, the confusion tends to set in when traders begin to try to actually identify and measure those support or resistance levels. There is such a plethora of types support and resistance and specific indicators designed to alert a trader to a support or resistance level that it can be difficult at times to trust that the one which is hitting right now will hold or not, and if it does, will it mean the end of a price move, or is it just a temporary setback, soon to be broken with a move to new highs? Well, don’t worry, I’m not going to confuse you with a lot of new-fangled, highly convoluted, proprietary strategies for identifying support and resistance and ascertaining the value of those levels. Instead, we’re going to keep sticking to the basics.

Support and Resistance “Zones”

To start with, how exactly do these so-called support and resistance levels work in the first place?

One of the most important features of support and resistance levels is that they must be thought of as “zones” and not exact price levels. For instance, let’s say that we are looking at $100 as resistance on XYZ. It might only hit $99.89 and then turn around, or it might hit $100.28 and then reverse. In both cases, it was still at the $100 resistance zone. Simply because it traded over $100 does not mean that the resistance zone of $100 has broken. This false sense of security has trapped many an unsuspecting trader long even though their entry is at the highs of a price move.
Let’s look at how this idea may display itself. In Figure 1, we are looking at a template for a support level. For the time being, it does not matter what type of support it is. I will get to types in just a bit.

As I said at the beginning of this segment, support and resistance levels are prices where a movement in a security is likely to begin to falter. Several things can happen. It might hold that level and reverse, it might halt a move and then fall into a trading channel along the S/R level, or it might not show much reaction at all, breaking through what may have seemed initially as though it would be a significant support or resistance level.

Let’s go back and review what we have already learned about pace. The slower a move, the more likely the correction to that move, such as a reversal, is going to be stronger than the initial move. A more rapid move will have a more difficult time correcting, so the pace on the reaction will tend to be more gradual.

Pace also plays an important role in how well support or resistance levels hold and the types of reactions a security will have to those levels. In Figure 2, the support level is shown in green, while the price moves are in blue. On the left, notice the very pronounced selloff into support. When that support level hit, it was able to push against it in a way that led to some trading just under the exact price of the support level. This is what may have happened on the opposite side of the spectrum when XYZ traded past $100 and hit highs of $100.28 before turning around. In essence, the more rapid a move is as it heads into a support or resistance level, the more “give” that support or resistance level has.

In the image on the right, however, the support holds perfectly. This is because the security had a long and steady move into the support and the momentum or pace of that move was fairly gradual. Although some support or resistance levels will hold to the cent or to the tick, most do not and will treat it with a bit of leeway. When basing entries and exits on support or resistance levels, it is very important to take this into account. Think of them a bit like you would a trampoline. The fabric of the trampoline is your support level. If you are just bouncing on it, the trampoline may only move slightly lower than its resting state. If you jump onto it, however, that support level will show its greater elasticity. With too much use or too heavy of a load, it will break.
Categories of Support and Resistance

There are two categories of support and resistance that I will be discussing in this course. The first is price support and resistance, while the second is indicator support and resistance. Each of these can also be subdivided. While price support and resistance levels tend to be fairly straightforward, there are still 6 different types that I will be covering. When one starts looking at indicator support and resistance, however, these are mathematical calculations that are based on a security’s price and/or volume and there is a veritable smorgasbord of these types of tools available to choose from.

Price Support and Resistance

First I’m going to start by covering the different types of price support and resistance that one will come across while trading or investing. These include

- (Whole) Numbers,
- Prior Highs and Lows,
- Prior Congestion Zones,
- Gap Zones,
- Trend Channels or Trend Lines, and
- Equal or Measured Moves.

Number Support and Resistance

The first of the six types of price support and/or resistance deal with some form or another of price support and/or resistance, such as whole numbers.

Examples of whole number support and resistance levels are $1.00, $5.00, $10.00, $50.00, $100.00, etc. These are pretty obvious support and resistance levels because most people think in terms of whole numbers. It’s rather unusual for an investor to call up their broker and say, “Hey Joe, when AAPL gets to $102.26 can you get me out?” Analysts and market personalities also set price targets at whole numbers for the most part. At the time this course was compiled for instance, JPMorgan, had just issued a price target on Apple Computer Inc. (AAPL) of $100/share, while Goldman Sachs issued a $68 price target on Target Corp. (TGT) and an $18 target over the following 12 months on Motorola Inc. (MOT). Notice that each of these is given in terms of a whole number. Goldman Sachs didn’t give a target of $67.86 on Target. It was $68 exactly.

Many times traders also place their trades based upon these whole number levels. How many times does someone hear something like, "Oh, when XYZ breaks above $50 then I will buy it."? Fewer would say, “Well, I know it has a high of the day of $50, but when it breaks over $49.90 then that is when I’m going to buy it.” Never mind the fact
that the second trader will often have the advantage, and can do so without added risk when he or she uses the tools from this course.

I’m going to show you this more specifically later on, but the general idea is that if a stock rallies into $50, and then falls into a range just under that resistance, then it’s the last segment of that base that should be used as a trigger for a breakout, not the $50 whole number itself. If I wait for that whole number to break, then I often have to chase and my reward compared to my risk gets cut in half. Something that could have given me 4 times my risk will easily end up only rewarding me with only twice what I had risked, if not less, although the odds on getting stopped out on one versus the other will often be very comparable.

When looking at the cheaper stocks, often those trading under about $30/share, then 20 to 50 cent increments will also experience support and or resistance as they hit. A good way to tell which it will try to hold is to scroll back and check out the past week or two of trading, paying attention to the average price moves as well as the average ranges or corrections. If a stock tends to stall most often every 50 cents, then if it is trading $27.00, it could be reasonably assumed that it will stall again, if not reverse, at $27.50. Other stocks will like the whole numbers and then the 20¢, 40¢, 50¢, 60¢, and 80¢ price levels and stall most often as they hit. More expensive stocks with a larger intraday range may only gravitate towards increments of $5 or $10, such as is the case with Google (GOOG).

Of course, the number price support and resistance applies to other markets as well, such as oil prices. An example I came across the day I compiled this segment of the course was a discussion regarding oil trading down to $50/barrel. Technically it fell to $49.90 intraday and then closed at $50.48, even though $50 is the number they focused on. Analysts then went on to identify $48/barrel as the next key support level for crude prices.

This type of price support and resistance also applies in the indices themselves. The Dow Jones Industrial Average, for instance, often gets a lot of attention. Since 1999 the 10,000 and 11,000 have served as both support as well as resistance.

Additionally, the index futures contracts react well to this type of price support and resistance. In the NQ, for instance, it is common to see this NASDAQ E-Mini contract react to prices in 5 point increments, such as 1810, 1815, 1820, 1825, etc. I have a great example of this that I will be covering in a few minutes.
The first chart in this segment which illustrates price support and resistance in the form of whole number support and resistance is one of Alliance Data Systems Corp. (ADS) (Figure 3). It shows some great examples of how whole number support works when a trend is under way. Initially the whole numbers in ADS served as resistance on attempts to break higher, first at $54 and then again at $55.00, which held into the next morning. On July 20th ADS fell quickly out of the open. That selling continued until about 10:00 ET when it hit $52. The stock then began to congest along that price support before breaking down again into the 11:00 ET correction period. A second correction off lows began at that time and ADS bounced back into the $52 zone.

ADS resumed its selling in the afternoon, again forming several waves of downside on the 5 minute chart. $50 is an obvious whole number support level and ADS formed a small bear flag into 14:30 ET as it reacted to that support, breaking down a final time into the 15:00 ET correction period where whole number support once more played a significant role. The term “bear flag” refers to a very gradual counter-move within a larger move lower that represents a continuation pattern on the downside and when it broke lower the $49 level held very well. Notice that the stock traded under the exact whole number by a few cents more this time than at the prior whole numbers. The increased pace on somewhat elevated volume into 15:00 ET played a roll in this.
When dropping down to look at this same type of activity on a cheaper stock such as Ultra Clean Holding, Inc. (UCTT), then the 50 cent increments can be just as compelling as the absolute whole numbers as a reason for a stock to react. As 2006 wound to a close, UCTT found itself in a congestion type of move along $12. On December 29th, the stock was trading in the upper end of that range and $12 served as support throughout the mid-day.

When the $13.50 level broke...
following afternoon, that level then became support.

On January 8th the congestion once again broke on UCTT, leading to new highs on the year. $14.50 stalled the move initially, but the stock was soon trading at $15.00 and the $14.50 level became support. That last channel shown here from the 8th to the 10th broke higher on the afternoon of the 10th, leading to the final test of this form of number support at the 50 cent levels. In this case it was the $15.50 level which held throughout the afternoon on the 10th.

The highs and lows of the days which followed, as well as over the previous year, also tended to gravitate to within a few cents of these 50 cent barriers. Since some stocks will favor the 20 cent increments over the 50 cent ones, it is important for me to just take a second to check recent trading to see what increments of number support are most favored by the stock I am examining.

The concept of number support and resistance is not limited to stocks alone. Many other securities also react to prices in this manner. For instance, in trading the NASDAQ EMini contracts, I quickly realized that the NQ often tends to move in 5 point increments. Highs and lows are often made within a tick or two of these levels and the prices often fall into a period of congestion resulting from a stall at one of them. A tick is the smallest move a security can make. In stocks it is a penny. In the NQ it’s a quarter of a point, which is worth $5.00.

The chart displayed in **Figure 5** illustrates how the NQ reacts to the 5 point increments between 1845 and 1860. These include 1845, 1850, 1855, and 1860. At the beginning of the time period shown here, the NQ is rallying strongly higher out of
the 1840 zone. It barely pauses at 1845, stalling for only a minute before moving into the 1850 level. At this point the NQ also pauses only briefly, but it is more noticeable than at 1845, creating what is referred to as a "narrow range bar" right after 11:00 ET, marked here as "1". The fact that the middle of that narrow range bar and congestion is divided almost perfectly by the red line indicating 1850 shows how it gravitated to that number even though the price fluctuated slightly back and forth when it hit.

The next locale where the NQ ran into price resistance of this sort was only 10 minutes later at 1855, marked as "2". The momentum into this resistance was very strong, with the sharpest upside pace of the entire morning rally. This resulted in more "give" as the 1855 level hit, allowing the NQ to move above 1855 for just a minute before rebounding. This is similar to as if someone had jumped from a great height onto the trampoline I mentioned earlier. It pushes the support from the fabric of the trampoline closer to the ground, increasing the support zone from the fabric that is acting as the actual support. In the 1855 example of the NQ, the increased momentum pushed against the resistance level to increase the zone of that resistance.

After reacting to the 1855 level, the NQ pulled back for the remainder of the morning. The momentum was lost during this time and the 1850 level held perfectly at "A", corresponding to the 12:00 ET correction period. The pace was also slow heading back into the second test of 1855 at "3", which held with a correction period as well. This time it was the 13:00 ET one when many traders returned from their lunch break.

The pace within the mid-day range turned over as the NQ consolidated. Initially the bounce off lows at "A" was just as strong, if not stronger than, the move into them. After pulling back, however, the continuation on the upside within the range itself was significantly slower than that previous bounce and it was this last move within the range that spelled its doom. It does not take much notice for a market bias to turn and the drop at 13:00, marked "3" was simply too strong for the index to uphold its previous support level of 1850. Even though it did have a nice reaction to that level at "B", where it hugged the support for a good half an hour, that support broke as the afternoon wore on.

The example of price support at "B" when the NQ came back into the 1850 level was very similar to when it hit it for the first time earlier in the session. Even though it pushed the limits of the support zone briefly after it retested it, the congestion dissected that price almost perfectly, breaking lower just before 14:00 ET.

As the market closed in on the 14:00 ET correction period, it also closed in on the next price support at 1845, marked "C". The price support held within a mere tick of that level, bouncing back strongly into the 1850 zone. As in "1" and "B", the NQ formed a small congestion zone that was dissected by the price level before continuing.

The return to the prior highs of 1855 at "5" again held within a tick and again corresponded perfectly to a correction period. This time it was the 15:00 ET correction period. Notice that tests of 1855 at both "3" and "5" were less flexible than the first time it hit at "2" and held almost exactly. This is very typical and confirms the 1855 level as the real resistance from number "2" because the subsequent tests of that level were more subdued, yet held it exceptionally well.
The first time a resistance level hits heading into congestion is typically when that resistance has the most “give” to it. Subsequent retests become mellower up until the point that the resistance breaks. Often the final tests of the resistance zone may not even hit the exact price, but will fall slightly short of it, such as hitting $49.92 instead of $50 when $50 is the whole number resistance, or 1854.5 in the NQ instead of 1855 when 1855 is the true resistance.

The sharpest downside move took place between 15:00 and 15:30 ET. This momentum move again pressed hard against support at 1845 at “D”, pushing it the furthest before bouncing back again into the last half hour of trading. Unfortunately, many traders will set orders several ticks on the opposite side of a support or resistance level, assuming that is enough to conclude that it is broken. This works fairly well if the security has been pressing up against that level for awhile, but does not work as well when it has had a decent-sized move already by the time that level hits. For instance, if I were wishing to buy XYZ over $50 on an intraday setup and it’s been trading at the $50 zone for an hour, then placing an order to buy at $50.07 has a good chance of being a successful entry point for a breakout setup. If, on the other hand, I am looking to buy that same security over $50 and it runs from $49.25 to pierce $50, then my order to enter at $50.07 is at a much greater risk of executing near at least a moderate intraday high, since it may simply hit highs of $50.17 or even $50.23 and then reverse.

Let’s look at these same types of scenarios on this chart of the NQ. In the first scenario, instead of basing along $50 in a security and then breaking, letting me put a buy order in at $50.07 or even better and be reasonably confident in the success of the breakout, the NQ based along support in the early afternoon from where it hit the 1850 support just after 13:00 until it broke it just before 14:00. If I drew a line connecting the lows along that support, I could take a short after that support broke by half a point and feel strongly that the breakdown would work out well.

In the second scenario the security moved from $49.25 and through $50. The NQ equivalent to this was the late afternoon descent from 15:00 to 15:30. If I had placed a short order under the 1845 level by half a point, I would have quickly been regretting my decision. This is because the move into that support was much more exhausted than on the previous break of that same support level earlier in the afternoon.

On the second day of trading displayed here, the NQ did not hold the price support and resistance levels quite as well as on the first. The NQ continued its previous afternoon’s buying out of the open, stalling only briefly in the 1855 zone before continuing onward, finally breaking that resistance level that had plagued the index throughout the prior session. It fell just a hair shy of 1860, however, (marked “7” here) before falling back into the larger trading range. There were momentary reprieves in the correction at each of the price support levels as the NQ made its way back to the lower end of the range, but after making new highs, it found it unnecessary to strongly test the lower support of 1845 before turning back around with the 10:45 ET reversal period and making its way higher for a better test of the 1860 level, marked “8”.

I am often leery of trading reversals that do not securely test a significant support or resistance level. There is a more substantial risk that the security will come back and attempt a stronger test of those price levels before committing to a true price reversal.
It is very important that there are a lot of other pros working in my favor in the times that I do not wait for that stronger test. Otherwise I will either enter with a smaller position, looking to add when I can and thus guaranteeing that at least I do not miss the setup. On the other hand, I might just keep a wider stop to prevent me from getting flushed out easily if it does come back to try the support or resistance level to a stronger degree.

It should be noted (and this very important), that when a security falls just shy of a support or resistance level initially and then corrects slightly before retesting it more strongly, that the next test will often push the price support or resistance more than if it hit it solidly the first time. So, if XYZ hits $49.87 and then pulls back to $49.50 before trying the $50 price resistance again, it might hit $50.17 easily before reversing. On the other hand, if it goes directly to the $50 zone without stalling prematurely, then it will be more likely to only hit move to something closer to $50.04 or so before reversing.

**Prior Highs and Lows as Support and Resistance**

The next type of price support and resistance is when a security reacts to a prior high or low that was made at an earlier point in time. It may be as little as a few minutes earlier to be of importance to a scalper, or as long as several years ago for the position trader or investor. To a scalper, that zone of prior highs or lows as support or resistance may be only a few cents or a few ticks, but on a larger monthly or yearly time frame the “zone” of the support or resistance could be $5 or more. If a stock has a high several years ago of $309/share, then it could be considered to be in the zone of that resistance when it is trading $295/share, with the assumption that the price it was attracted to was $300/share and it’s not uncommon for a stock to stall just shy of the absolute high of a previous high.
This chart of the NQ (Figure 6) shows a combination of the number price support and resistance as well as how prior highs and lows will affect a security’s price action. First take a look at the price level labelled “A”. This is number support and resistance at the 1590 zone. It hits that zone at the lows at the left of the chart at the 15:00 ET correction period. The NQ plunged through that level when it tested it again into the 15:30 ET correction period. After hitting lows around 1565 (“D”), the NQ bounced back. It hit the 1590 level around 10:00 ET. This previous low, which had once been considered a support level, now became resistance. Even when it tried again to break it just half an hour later it was not able to.

The NQ finally gave up and began to reclaim a large chunk of the morning gains. A mid-day lows was established at about 11:30 ET (“C”) and another high was made with the 12:00 ET correction period at “B” as the morning range narrowed dramatically. These pivots would continue to provide support and resistance throughout the remainder of the session.

Now let’s back up and look at each of these levels one by one.

First there is “A”. The first example of this form of support and resistance occurred when the low at 15:00 ET was hit the next morning, serving as resistance, but it didn’t stop there. The NQ held that level that time around, but it tried it once more later in the day, just before the close at 15:45 ET. As before, the price level continued to act as resistance. This time it held the absolute price resistance even more closely as well.
The second pivot was the one near the open on the 24th in the 1565 zone, marked as “D”. This was hit for a second time at about 12:45 ET. While the price did ultimately break, it took nearly 45 minutes of testing and retesting the support before it was able to do so. It only took a few minutes, however, for it to pop right back over that support. It hit that level again around 14:30 ET and held it perfectly for the remainder of the session.

The mid-day low at 11:30 ET at “C” was the resistance later in the afternoon when the NQ hit the support from “D” and fell into a range. It slowed the move back upward around 14:00 and then as support at 15:30 ET.

Finally, the 12:00 ET pivot highs made at noon at “B” stalled the late afternoon rally back into that price level at the 15:00 ET correction period, halting the rally until the final correction period at 15:30.

Bonds respond very well to prior highs and lows as price support and resistance as well. Figure 7 is a chart of the 10 year note spanning from late August to mid-December 2006. The 10 year note started off in a trading range in September. The support begins with “A” and as the range continues, those lows are tested again at “B” and hold to the tee. Even after the range breaks higher, when the 10 year comes back into those lows in the second half of October, they continue to hold.

The highs of the late August-early September range also serve well throughout the remainder of the year. The third test of the highs breaks the range, but serves as gap resistance again in mid-October, a temporary high in late October, and support in early November.

When the 10 year broke higher in late September, the highs made on that rally continued to plague the would-be bulls for the next two months (at “5, 8, 9 and 10”). It finally managed to shake free at the very end of November, but got stuck there again in December (“E”).
Congestion Zones as Support and Resistance

Prior congestion zones are similar to prior highs and lows, but there is often greater leeway, with a much larger zone involved, so a trader has to use more caution in deciding how to approach them. Essentially, what I am looking for when I am using this type of support or resistance are areas where a security fell into a trading range and bounced back and forth for awhile before breaking out.

The intraday chart of Ashland Inc. (ASH) in Figure 8 demonstrates just how sloppy a congestion zone can be and how the reaction to it can also be more hesitant. The congestion zone itself is shown in blue and takes place throughout a large chunk of the first day. That congestion broke higher late in the day and continued into the open of the second day before the bias reversed and the price began to fall. The pace of the selling slowed right as the upper end of the congestion zone hit around 11:30 on day two, but the middle of a congestion zone is actually the best support or resistance and it continued to press lower until that hit around 12:15 ET.
The fact that the middle of a congestion zone is the strongest part of a congestion zone is extremely important. Many traders will take breakout types of patterns, buying a break higher out of a trading range or congestion zone. They will then quickly move their stops to breakeven. So, think about this for a minute... Let's say I bought a breakout from a trading range in XYZ where the range was from $49.50 to $50 and my target is $51. It then rallies to $50.25 and I begin to panic and think that I should not take a loss at this point. After all, I've covered half my risk, so I move my stop to breakeven. What potentially fatal error in judgment did I just commit?

Well... First off, there are actually two of them. For one thing, $50 is whole number support, so if I got into the position at $50.03 and move my stop to $50.03, I am placing my stop right at a substantial support level. I'm practically begging to get flushed out. Even if $50 breaks, it's likely to see some sort of reaction to that price level first.

Secondly, that support level could very easily bust before the buying resumes. Since the middle of a congestion zone is often stronger support than the upper end of the zone, XYZ may easily stall for a bit at $50 and then break lower into $49.75ish before bouncing back strongly and moving non-stop from that point straight into my target of $51. This is where I used to be frustrated time and again for getting out at EXACTLY THE WORST POINT POSSIBLE! Only now I finally know why! Once a trader reaches that point, it's much easier to avoid the same mistakes the next time around... and there is ALWAYS a next time!
Now, that said, let’s look at another example of congestion zones as support and resistance. **Figure 9** is also from Ashland Inc. (ASH). In this example there are several areas of congestion to explore. The first takes place for about an hour from 14:00 to approximately 15:00 ET on day one. That congestion breaks briefly down following 15:00 ET. The lower end of the congestion zone waylaid the reversal off lows around 15:15 and then the middle of it slowed the reversal a bit after 15:30 ET. Neither was exceptionally significant in that they had very little impact on the outcome since the congestion zone provided only minimal resistance for the stock as it rallied. It became more important, however, when the stock retraced the next day. After two waves of selling the following morning, ASH once again came back into that previous congestion zone at about 10:30 ET. This time the stock reacted very well to the support zone provided by the earlier congestion, creating a bear flag before it was able to manage a break of the support into 11:00.

The second congestion zone singled out on this chart is briefer than the first, but is easier to follow in real-time since it is closer to text-book perfect. It lasts for only about 20 minutes at the end of day one. ASH moved sharply higher out of the range the next morning. After rounding off at highs, it pulled back into that congestion zone just as quickly as it left it, hitting it at about 10:00 ET. Notice that it pulled back into the middle of the congestion before bouncing. After the pattern, known most commonly as a Head and Shoulders, broke lower, that same congestion zone which served as support became resistance at about 11:35-11:40 ET.
Gaps and Support and Resistance

A fourth type of support and resistance deals with gaps and gaps zones. In order to understand this type of support and/or resistance, however, a trader has to have to have a solid understanding of what a gap is.

A gap is break between prices, either higher or lower, whereby no trading occurred between the two price levels. Gaps vary greatly in terms of both their size and the reason behind the gap itself. For me, a typical gap would be one that is less than half an average day’s range in a security, although in some cases it might be slightly larger. These will tend to fill more easily than a gap which is 1.5 to 2 times an average day’s range, unless it’s in the indices (such as in the S&P 500 or Dow Jones Industrial Average), in which case the more extreme gaps will typically fill prior to the afternoon on the day of the gap.

Gaps are very common overnight when a stock or index closes at one price only to open at another. The majority of the trades that I take intraday in equities are based upon a gap which occurs overnight in individual stocks. The chart of Redback Networks Inc. (RBAK) in Figure 11 has several nice examples of gaps on a daily chart. The first one is fairly average, but the gap leads to a breakout from a trading range on the daily chart and thus holds very well. That momentum from the breakout then follows through with a more substantial gap into the next morning. Another breakout gap, this time on the downside, took place a few weeks later. It also led to a multi-day move in the direction of the gap.

Gaps can take place intraday as well. One way in which this happens is when trading is halted due to news and then resumes trading at a different price. In Figure 12, Expedia Inc. made a mid-day announcement for a 30 million share buy back.

Trading was halted just under $19/share and resumed at $20.00. This is a dangerous gap to play for most traders in the immediate aftermath of the announcement because obtaining an execution at a desired price is extremely unlikely due to the obscene volatility which follows such a move. It is much safer to play the secondary reactions to the news.
A third type of gap is also one that can occur intraday, although it can also be seen on exceptionally thin stocks on the daily time frame as well. It happens when a thinly traded issue trades with a wide spread. The spread, which is the difference between the bid price and the ask price, can lead to trades at both levels with very little in between. Figure 13 contains this type of gap on OYO Geospace Corp. (OYOG), a stock most of you have probably never heard of and will never look at again. It went from trading just over $53/share to trading over $53.50/share with the next posted
transaction. From a day-trading perspective, securities which trade in such a manner are best when avoided altogether.

Figure 13

Upside gap intraday due to wide spread (the difference between the bid and the ask)

Figure 14

Gap Zone Support
Gap zones work very much like congestion zones when used as support or resistance. In fact, this first example of gap support in Figure 14 is also one illustrating congestion support (as well as number support for that matter). On day one, the NQ spent most of the session revolving around the 1645 level. It gapped substantially higher the next morning. As with most of the above average gaps in the indices, however, that gap favored being filled. It spent most of the morning, as well as the early afternoon, accomplishing that feat. It finally succeeded at the same time as the 13:00 ET correction period hit. The combined support from the gap, the congestion and the 1645 price level led to a nice bounce as the afternoon progressed, pulling higher right out of that 13:00 correction period.

Cryptologic Inc. (CRYP) (Figure 15) also deals with gap support and resistance, and again displays how it goes hand in hand with the other forms of price support and resistance discussed thus far.

The first gap is a rather large one, taking place in March. The stock had been moving higher for several days and then gapped up by more than $2.00. There are a couple of ways that a gap will hold as support or resistance. The first is with an absolute return to the closing prices the day before the gap, and the second is a return to the highs or lows of the gap in the case of the more extreme gaps. Both work equally well and should be taken into account. The first gap here is more extreme, so when the stock pulled back into the highs the day before the gap, those levels held very well. It hit them initially three days after the gap, but then hit a second time a couple of weeks later (marked as “1”). Even months after a large gap occurs on a stock, that level continues to be viewed as significant and is reflected in the subsequent price activity on the stock.

Figure 15
A third larger-than-average gap on CRPT occurred within a week of the second one. It is marked as “4” on the chart and was the largest of the three. As time passed, CRYP experienced another significant upside gap (marked as “2”). This second one was in early May. Notice that the lows on the day of that gap were the same as the highs the day before the gap back in March. The congestion which followed throughout late May and most of June also corresponded to these gap levels. The closing price for the gap marked as “2” from early May went on to serve as support for the lows of the congestion which followed (“6” and “8”). The stock gapped smack into prior highs, hitting its head solidly on that ceiling with the $29 number resistance looming right there as well. As in the first gap, which was also following a several day rally, the gap soon began to fill, completing the closure on the third day (“5”). By this time, it should come as no surprise that this zone also served as resistance a couple of weeks later (“7”).

**Trend Channel and Trend Lines as Support and Resistance**

The fifth type of price support and resistance can get a bit trickier than the previous ones. This type deals with trend channels and trend lines. A trend channel is like a trading range… Just tip it over a little bit.

**Figure 16** demonstrates a nice uptrend channel. To draw the trend channel, connect the zone of the highs of a price move and then connect the lows of a price move. As a security approaches the upper zone of the trend channel, then it is considered to be at resistance, whereas when it moves towards the lower end of the trend channel, then it is hitting channel support.
Figure 17 shows a textbook downtrend channel.
Trend channel support or resistance should always be used in conjunction with another form of support or resistance to provide greater accuracy. Very few trend channels are as consistent as the one shown here. Notice that, as was the case of the uptrend channel, the pace of the moves back and forth within this downtrend channel are fairly similar from one to the next. When the pace within a trend channel changes, becoming either significantly weaker or stronger than the previous price action, then this form of support or resistance becomes less reliable.

A trend line is a bit more exacting than a trend channel. A trend line is often used to bracket a trend channel, but while the channel is focusing on the general range of the channel, a trend line technically should not pierce any price. In other words, you are supposed to connect one low to the next, including any tails, and extend those lines either upwards for an uptrend, or downwards for a downtrend. A picture-perfect example of this can be seen on the YM in **Figure 18**. The trend line that was in place from 10:45 to 12:00 ET held exceptionally well throughout most of the afternoon. Every single time that trend line hit, the YM bounced right off it. When it finally did break in the last hour of trading, the former uptrend line then became resistance.
Figure 19 offers another look at trend lines as support and resistance, showcasing them as trend channels as well. Even though the channels widened, the price levels when the YM hit the trend lines held almost perfectly. When the channels turned over, moving from an uptrend channel into a downtrend one, the prices began to favor the lower end of the uptrend channel before it broke lower and then that uptrend line served as resistance and the start of the upper trend line on the downtrend channel ("1").

As I mentioned earlier, though, even in a perfect trend channel, it’s better to have another form of support or resistance to help back you up. In the downtrend channel, the YM hit the lower downtrend line at “2” just after 13:30 ET, but it still broke that low before it was able to bounce into what would become the upper end of the downtrend channel at 14:00.

**Equal and Measured Moves as Support and Resistance**

The sixth type of price support and resistance that I use is based on the concept of equal, or measured, moves. I trade a lot of breakout and continuation types of patterns and over time I noticed that the continuation would often mimic the prior move, so much so that I could even predict the highs following an upside breakout
from a base or bull flag to within a few cents. This was done by simply paying attention to the type of trading that had taken place earlier on the time frame I was interested in and looking at how the current action was shaping up.

This first chart of SCHN (Figure 20) shows one nice variation of the equal move scenario that traders will come across. SCHN was a stock that I had been trading intensively at the time and after selling off strongly in the morning on October 2nd, it had reversed at 10:00, pulling higher and then falling into a congestion between around 10:30 and 11:15 ET. The correction had attempted a premature breakout around 11:00, but had fallen back before taking off to new highs after 11:15 ET.

The tool of equal or measured moves is one that I had never heard of before I stumbled upon it as a result of analyzing my trade journals and have still never read in any other venue, and it took me a bit of time to begin to use it successfully even after it caught my attention. Through trial and error, I discovered that using the second low within a congestion zone or period of range-bound trading and taking the move out of that low to compare to the move into the congestion zone is the best way to maximize my success unless the lows which follow are slightly lower. Then I will use those instead. If the first low is the lowest, however, I will skip that one.

In SCHN, this meant first measuring the rally out of 10:00, marked here as "A", and then comparing it to the move which began around 11:15 ET. The first low was at about 10:50. I then take the price of that low and add the amount of the price move from the original rally. The low of "A" was made at $31.03 and the highs of the move were at $31.39, yielding an overall move of $0.36. The low of the second move, marked "B" was at $31.29. Adding $0.36 to that level indicates an equal move resistance at $31.65.
It is here that the concept of pace comes back into play. In order for the equal move type of resistance to hold well on SCHN, the rally marked “B” would need to be nearly identical in terms of the pace involved in the move as it was on the first rally marked “A”. In other words, the buying on “B” could not be significantly stronger, or weaker, when it began than it was earlier in the session. On SCHN, it did not have that problem and the highs established just after 11:30 ET were at exactly $31.65... a perfect equal move. The impact this strategy can have on predicting targets on breakout and continuation types of patterns is indispensable.

As the day wore on, the morning equal move was not the only one to occur during the session. After pulling back sharply on the 5 minute charts into the 12:00 ET correction period, SCHN again began to fall into a zone of congestion. Shown here in Figure 21, this time the range was much narrower than before, not really offering the same type of pivots back and forth with which to use to measure a move. So for this case a trader can simply use the highs of the range itself for comparison.

The drop into the mid-day base took place from approximately 11:30 to 12:00 ET, moving from highs of $31.65 to a low of $31.35. This represented a decline of 40¢. The highs of the range just prior to the breakdown were established at $31.35. This meant that an equal move would be complete when the stock hit $30.95. Once again, the pace on the continuation move, marked “B”, was very comparable to the one off the morning highs, marked “A”. The second move in this case also managed to hold perfectly, bouncing at exactly the $30.95 level with the 14:00 ET correction period!
The concept of equal move support and resistance is also one that spans all markets, and it works just as well in the indices as in individual stocks. It also works well in FOREX and the bonds market. **Figure 22** is a 1 minute chart of the QQQQ, which tracks the NASDAQ 100 Index. On Sept. 28th it turned around off early morning highs and began a solid move lower as the morning progressed. After returning to the congestion from the prior afternoon it made a short-term low just after 9:50 am.

The NASDAQ retraced about 50% off the early morning lows. The congestion began to favor the lower end of the range from about 10:30 onward before breaking to new lows on the day. In order to guesstimate a target on this breakdown, a trader can step back a minute and re-examine the initial decline off highs. This began at 9:37 am at $40.89 and continued until 9:51 at $40.63. This was a move of 26¢. The range was a bit on the choppy side, but the third high was slightly higher than the second one, so this is the one that I used to begin measuring a second move in the direction of the earlier decline. It started at 10:25 with a high of $40.80. Subtracting 26¢ yields a price target of $40.54. The overall momentum of the breakdown was again extremely similar to the first and the equal move target again held perfectly at $40.54.

Not all price continuations will hold this equal move level as perfectly as on SCHN and the QQQQ, however, so it’s imperative for a trader to be able to identify the situations in which such a move is not as likely as early as possible in order to adjust their expectations and maximize their gains. In this endeavor, we must go back to our section on pace once more. I have already mentioned that for the equal move scenario to hold, the breakout or continuation must mimic the prior price move in terms of momentum. When that momentum is not comparable, however, then a continuation can yield either a larger or smaller move.

First let’s look at what will happen most of the time when the pace on a breakout is slower than the momentum heading into a congestion or pullback in a larger price move. **Figure 23** contains a chart of the SPY, which tracks the S&P 500 Index. It had a strong upside move coming out of the 12:00 ET correction period. This move itself on the 2 minute time frame took the form of two waves. An initial rally was followed by a continuation shortly thereafter. The continuation had the same pace as before and culminated in an equal move into the 13:00 ET correction period.

At that point it began a longer correction into the 14:00 ET correction period. After establishing a second low within the trading channel, the SPY broke to new highs. Initially the pace on the breakout was similar to the move heading into the range, but the SPY pulled back into the middle of the congestion again before continuing, breaking the momentum. The rally continued, but it was unable to maintain the strength of the morning rally. The pace slowed significantly after the 15:00 ET correction period and eventually turned over, selling off a bit into the close.

The morning rally from 12:00 to 13:00 began at $131.24 and hit highs of $132.37. This was $1.13. The low of the afternoon breakout was at $132.11. The afternoon highs were $132.85. The overall move was $0.74, only 65% of the prior rally. The inability for the SPY to hit that equal move was tied directly to the fact that the pace of the breakout was unable to sustain itself.
The same thing happened on the daily chart of PW Eagle Inc. (PWEI) in Figure 24. PWEI had a strong momentum move in December of 2005. Then it fell into a trading range until March. As the range broke highs, the pace once again slowed as compared to the rally from the prior year. That first rally was nearly 19 points ($19). By taking the third low of the range, which was similar to the second, and adding 19 points, it suggests a breakout target of about $37. Due to the slower pace, however, the stock fell short of that target, stalling instead at the $32 price resistance. This was less than 75% of the prior move.

Pace can also affect a breakout to the extent that a larger than equal move results. This happened on Abercrombie & Fitch Co. (ANF) on this 5 minute chart in Figure 25. ANF had broken lower to continue a larger downtrend in the early afternoon of July 12th. It then fell into a trading channel throughout the remainder of the session. That range broke lower with a gap into the 13th, kicking off a continuation move in the direction of the larger price move.

In examining the moves, the decline ahead of the trading range, marked “A” fell nearly a point before holding lows heading into the range. The stock put in a slightly higher high just before the close than the second high within the range, so this is the one which works the best for determining an equal move on the continuation. Hitting at just over $54.60, it implies a target zone of $53.60. The gap, however, increased the pace of the downside move dramatically, and the stock continued to fall until it came into the zone of the $53.00 whole number support. The decline on wave “B” was approximately 50% larger than the prior downside move.

The concept of an equal move is one that is highly valuable when accessing a potential target on a position, but when the pace of a breakout is either faster or slower than before, it makes it necessary to rely upon other forms of support and resistance to
assist in adjustments to the initial equal move target analysis. The whole number support and resistance in the last couple charts are great examples of that.

Advanced Micro Devices Inc. (AMD) in Figure 26 is a nice example of how varying pace can affect a price move as it develops. The first rally here, marked “A” is fairly average. The stock was followed by a triangle range which formed into the close. That range broke higher into the next morning on move “B” at a much stronger rate of change than on “A”. This led to a much larger price move than before. After a second correction, however, the momentum slowed. Move “C” was unable to mimic that initial rally of the day, yielding only about 50% of the initial run.

When the stock turned around following this third upside move, the pace was similar on the first drop, move “1”, as it was on move “C”. After falling into a small base in the zone of the earlier congestion, the selling resumed. This time around, that pace was very similar to the last one. So, the move labelled “2” held the equal move for the first time.

Obviously, taking the time to go back and do the actual calculations for one move and comparing it to the next can take a few minutes. When day-trading, there may not be time to do that. So, instead of actually taking the highs and lows of a move and manually calculating the difference, I tend to just eyeball them. Support and resistance zones, after all, are just that: zones. Nailing them down to the tick or the penny can actually cause a trader to hang on a little too long or not long enough by imbuing them with a false sense of security. Sure, many times the moves are exactly equal, but usually there is at least a tiny bit of difference. Combining the concept with other forms of support or resistance even when the pace is the same will help.
On every chart I come across, no matter what type of security I am trading, I am pretty much guaranteed to witness a wide variety of price support and resistance levels at work. The chart of Abercrombie & Fitch Co. (ANF) in Figure 27 begins with a trading range along $53.50 support and then a gap lower. The gap ran into price resistance at $53 before selling off steadily until the 11:00 ET correction period.

The correction period corresponded precisely with the $50 whole number support and the reversal took the stock into another whole number level at $51, which served as resistance. It pushed slightly past the exact whole number, but congested right at it before falling again into 12:30.

By basing along $53.50 earlier, ANF hinted at its preference for moving in 50¢ increments and once the stock pulled out of its extreme trend trading, it reverted to that norm. The $50.50 level held nicely at 12:30 ("F") and the stock based along that level for about half an hour. When it broke lower on a continuation out of the 13:00 correction period it made it back into prior lows at $50 again ("G"). This was also the equal move zone as compared to the drop from “B” to “F”. The pace of each of these moves was nearly identical, lending itself to the equal move support holding perfectly.

The prior highs in the $51 zone held on the bounce off the second test of $50. This second move back into that level was a bit more gradual than the first and hence the whole number resistance had less “give” to it. It didn’t even have to hit the exact price on the third test of the zone at “D”, but that was still the same resistance zone.

“H” at 15:00 was a combination of number support at $50.50, prior lows from 12:30, and the congestion from “F”.

The more price support or resistance levels that hit at the same time, the stronger that S/R level is going to be. So, when there is a prior low hitting at the same time as
whole number support is hitting or at the same time as an equal move level is hitting, then it gives greater weight to that support level. The security is thus more likely to hold that zone and form a stronger correction, either through a longer trading range or an actual pivot and reversal off the support.

**Indicator Support & Resistance Levels**

So far I have been focusing purely on the types of price support and resistance. There is an entirely different way to view support and resistance, however, and that is through the use of indicators. These include such popular tools as moving averages, Fibonacci lines, the MACD, Bollinger Bands, stochastics, and many more. Well, guess what? That’s the most you’re going to hear me say about all but two of them. Now why is that the case? Because nearly all types of indicators such as these are simply based upon various configurations of price and various infusions of volume and volatility. If you understand the underlying components, there is no need at all to muddy the waters.

Time and time again I have seen traders flip from one indicator to the next, saying “Toni, did you check out this??? It’s the Holy Grail! When your CCI is set like this and your MACD is trending this way and hits the upper Bollinger Band right here like this, see? Well that ALWAYS works.” And then it stops working and I never hear from them again. In truth, whenever someone asks me about this indicator or that and the strategy they use with it, it generally tends to go in one ear and right out the next. It is not that most of the most popular of these do not work, but rather that it takes time and patience to learn when they do not and when to ignore them in favor of just reading the underlying price and volume movements. I realized with time that the fewer things I had cluttering up my charts the better. I was more likely to avoid second-guessing myself and make the correct decision, hesitating less often and hence securing more favorable executions.

Despite these facts, there are still two indicators that I think are immensely beneficial, particularly to the newer trader or investor, and these are moving averages and Fibonacci lines. The first of these, moving averages, I still display on most of my charts. In some respects, moving averages are now almost like a self-fulfilling prophesy. They are so widely followed that as the most popular ones start to hit, traders react... either by entering a trade or holding off on doing so. For me, this is just another reason to pay attention. They may not be the Holy Grail, but they can still be powerful good luck charms.

**Moving Averages as Support and/or Resistance**

A moving average is a technical indicator that is used to show the average value of a security’s price over a set period of time. There are several types of moving averages, but the two that are the most popular are simple moving averages and exponential moving averages.

A simple moving average (sma), sometimes called an arithmetic moving average, is calculated by adding the closing price of the security for a number of time periods and
then dividing this total by the number of time periods. So if I am looking at a 20 day simple moving average, then it represents the total of the closing prices of the last 20 days divided by 20. The “moving” part of “moving average” is due to it being calculated over and over again, updating automatically on a continual basis.

The other popular type of moving average is the exponential moving average (ema). It is calculated by applying a percentage of the current bar’s closing price to the previous bar’s moving average value, giving greater weight to the more recent data.

Since there is a wider range of possible pricing methods various charting platforms can assign to create a moving average, the zone of the support or resistance at a moving average level should be treated with a bit more leeway. As in trend channel or trend line support or resistance, it’s advantageous to combine this type of support or resistance with another to give it more weight.

I personally use simple moving averages. This is not to say that they are any better or any worse than exponential moving averages, but it’s what I started with and I never felt a compelling reason to switch. The most common moving averages to use, and hence my favorite, are the 10, 20, 50, 100 and 200 period moving averages. I use each of these on my daily, weekly and monthly charts.

Sometimes a 40 day sma can be substituted for or used in conjunction with a 50 day sma. Some securities will just tend to hold one of these better than the other. If I run into a stock, for instance, that just never seems to quite hit that 50 day sma as it moves higher in an uptrend channel, then I’ll often try pulling up the 40 day instead. With time, however, one can get a feel for about where each of these will fall and it’s not necessary to physically flip back and forth when one moving average holds better than the other.

On my intraday charts I primarily utilize a 20 and 200 period simple moving average. Although the 50 and 100 sma also work, I have found that it doesn’t give me that much of an advantage as compared to the other two and just adds more clutter. This is just a personal choice, however, and many traders who use the same methodology I do will still display them. The 10 period sma also works intraday, but I limit its use to the extreme momentum trends. Otherwise it just acts as noise.

Showing pictures littered with moving averages would just get a bit redundant, so to keep things simple and straight to the point, I have selected two charts displaying typical reactions to moving average levels. The first, a daily chart of Nutri System Inc. (NTRI) in Figure 28 demonstrates the use of a 20, 50 and 100 day simple moving average, while the next chart of the ES (S&P 500 EMini) in Figure 29 utilizes the 20 and 200 sma intraday.

One of the key characteristics for moving averages on the daily time frame to pay attention to is the fact that the first time a security moves into a moving average after backing away from it for several weeks, then the more likely it is to hold the moving average that day. This is true of each of the moving averages circled on NTRI.
The first moving average I want to examine is the one labelled “A”. This is the 20 period simple moving average. NTRI had been trading under it ever since the gap which trapped the bulls back in the middle of July. This is the first time it was testing that moving average again after that descent. The stock gapped up that day after several days of buying and even though it didn’t hit that moving average right away at the open, it didn’t have much room to move before it did so.

The significance of this is that when I am looking at morning gaps for intraday setups, particularly in the direction of the gap, let’s say a buy setup on the day in question, then I am more likely to scalp the stock or pass on it altogether. The odds of it breaking right through it like it did when it hit the 100 day sma on the bull trap, are remarkably slim compared to the odds of it holding like it did at “A”.

Not only do I use more caution when a security is gapping into a moving average zone for the first time, but also when it’s running or falling into it after a several day move. This is what happened at “B” when NTRI returned to its 100 day sma. The stock had just broken free of its trading range in the $50 price zone (which was one reason it was able to bust the 50 day sma easily), and was pulling into the next significant price resistance zone of $60. The exhaustion from the daily run, combined with the whole number resistance, culminated with another near-perfect hold of moving average resistance at that 100 day sma. Even though it did trade above that level in the following two sessions, the pace of the buying was dramatically subdued and the stock was essentially falling into a congestion along that moving average resistance, which became more apparent in the days that followed.
The third moving average zone I’ve circled is at “C”. This is actually a combination of both 20 and 100 day sma support and is the third type of moving average support to keep an eye on. As with other types of support or resistance, the more that hits at approximately the same time, the stronger that level will tend to be.

Some trading strategies actually make use of moving average crossovers for timing entries or exits. I use them to some degree as a confirmation tool on some of the reversal strategies I favor. For instance, if I am looking to short a stock that has reversed off highs and is basing along a 20 period sma, then I know that my position has a much higher chance for success when the 10 period sma closes in on that 20 period sma. The closer the two are to converging by the time I get a short trigger, the better. If the two converge and I still don’t have a short trigger, then it tends to indicate that my risk is increasing and I may want to rethink my bias.

A fourth example of a reaction to a moving average takes place at “D”. This should trigger some flashbacks to extreme momentum moves in relation to support or resistance. This was another news-driven day of trading and the stock plunged from multi-month highs to engulf not only the prior day’s trading, but two weeks worth of trading. This initially flushed the stock right through its 20 day sma, but upon looking more closely, the stock still closed the day very near to the price of the 20 day sma and the following session was transected right through the middle by the moving average. This confirms the rebound as being, at least in part, a response to that same moving average zone, despite its initial appearance of nonchalance.

Although it was passed over the first time around, the 50 day sma did gets its chance to show its worth in late October and early November. After clearing the 20 day sma, NTRI continued on to this next level of support. It had the added benefit of hitting at the same price zone as “B” and “C”, giving it some added assistance. The stock hugged this support level for several weeks with prices moving higher to keep pace with the gradual incline of the moving average.
Intraday the moving averages work in much the same way as they do on the daily charts and larger time frames. If prices have been on the move for awhile before the moving average hits, then the more likely it is to hold that level well. The faster moving averages hit more often than the slower ones, which is abundantly clear on the 5 minute chart of the ES (Figure 29) displaying the 20 and 200 period simple moving averages. Even though the 20 period sma is not always followed by a reversal when it hits, it nevertheless displays some reaction or another to that support or resistance zone each and every time, starting the pivot off highs at “B”, to the stall in the buying at “C”, leading to congestion and a continuation into the 200 period sma at “D”. This second test of the 200 sma holds more firmly than it did as support and the prices turn over again. The 20 sma merely slows the selling at “E”, but holds as strong resistance at “F”.

As in the larger intraday reversal into the 20 sma at “E” off morning highs, the test of that same sma on the reversal off lows at “G” does not hold, thanks in part to the increased momentum into it. It congested along that resistance zone, clearing it shortly after 14:30 ET before pulling back into it as support at 15:30, marked “I”. The final sma level hit is the 200 sma, once again serving as resistance at “J” just prior to the close.

One of the advantages to using moving averages is that they move in the same direction as a price move, or trend. They can work well to help a trader let profits run, utilizing breaks in moving averages as support in an uptrend to help curb losses. In this regard, however, I would recommend combining it with another support level so as to not get flushed out by misjudging the “zone” of the moving average itself and...
placing a stop or trailing stop too close at hand. A trailing stop is one that tightens as profits emerge, helping to protect those gains, but still leaving room for further profits.

On the other hand, the fact that they do follow a price move or trend is also a significant disadvantage because the faster moving averages, such as the 10, 20 or 50 period sma, do not work as well in a choppier trading environment and other forms of support and resistance become more appropriate to focus upon. This is when many traders may turn to support or resistance based upon oscillators, such as the Commodity Channel Index (CCI) or the Relative Strength Index (RSI), which is quite popular. The Stochastic oscillator is favored by many in more of a range-bound or choppy market. I occasionally use the Commodity Channel Index (CCI) on a daily time frame as just another confirmation tool of overbought or oversold conditions, but rarely give it much more than a cursory glance and don’t utilize it at all on any other time frame. Many of my colleagues, however, have had great success with these tools, so they are worth mentioning even though they are beyond the scope of this particular course.

**Fibonacci Levels as Support & Resistance**

Another great indicator for traders, particularly those who are new to trading or who focus on trading the indices in one form or another, uses a mathematical series known today as the Fibonacci Series. I would wager that most people had never even heard of such a thing until a little book by Dan Brown titled *The Da Vinci Code* hit the shelves and the concept of Fibonacci Series spread like wildfire.

The Fibonacci Series was identified by an Italian name Leonardo Pisano. He was known for most of his life as Fibonacci, which was a contraction of “Son-of-Bonacci”. Obviously Bonacio was his father’s name. Now here you are beginning to wonder just where in the world am I going with all of this nonsense and how can some Italian who lived 800 years ago help me with my trading?

Well, Fibonacci also wrote a book and his book was instrumental in bringing the foundation of mathematics as we know it to the West, most notably the Hindu-Arabic numbering system, which eventually made the Greek and Roman alphabetic systems all but obsolete. The book, *Liber Abaci*, gained vast appeal because it was filled with practical applications to this new system.

Yeah, yeah... This still doesn’t explain how this applies to trading. Right? Well, putting aside the implications this “new” numbering system had on our ability to access risk, it was in another section of this book that Fibonacci introduced the series of numbers that now carry his name and it is that series of numbers that leads to a second, extremely popular indicator that carries mass appeal to a wide spectrum of traders and investors, including myself.

The Fibonacci Series is a series of numbers in which each number is the sum of the preceding two numbers.

For example:
1, 2, 3, 5, 8, 13, 21, 34, 55, 89, 144, 233, 377, 610, 987, etc...
In other words...
1+2=3
2+3=5
3+5=8

and so on and so forth...

In and of themselves they seem rather innocuous. There are specific characteristics of the Fibonacci Series, however, that have caught folks’ attention in many professions, including the financial markets.

For one thing, taking any pair of numbers after 89 which are adjacent to each other in the series, such as 377 and 610, and then divide the first by the second, the answer will be 0.618.

Dividing any number by its preceding number, after 144 the answer is always 1.618.

Additionally, skipping one number and then divide, such as 8 by 21, the result is 0.38.

These characteristic alone, while somewhat intriguing, still shed little light on why they are of interest to us as traders. What does peak one’s curiosity and admiration is the fact that the Fibonacci Series and the ratios derived from it, occur throughout the natural universe.

The ratio leading to 1.618 was known by the Greeks as “The Golden Mean”. It defines the proportions of not only the Parthenon, but also the U.N.’s General Assembly Building in New York. The length of the average human body from above the navel compared to below it holds true to this ratio, as does the length of each successive bone in our fingers. Leonardo da Vinci was introduced to this ratio through a friend who encouraged him to utilize it to master the concepts that he had been using intuitively up to that point, hence the connection between Fibonacci and Brown’s *Da Vinci Code*.

What is of particular interest is the fact that the ratios derived from the Fibonacci Series also serve as rather remarkable levels of support and resistance and can be used with great proficiency when trading securities, particularly when trading the indices.

The Fibonacci ratios have been translated into percentages representing the amount a security has retraced its prior price move in terms of the Fibonacci levels. The following Fibonacci levels are the ones most commonly used in technical analysis:

138.2%
100.0%
61.8%
50.0%
38.2%
0.0%
-38.2%
Fibonacci levels are nearly as reliable as moving averages for support and resistance levels. The first thing for a trader to do when choosing to use them is to identify the time frame that they wish to focus on. In the past, I have used Fibonacci levels most proficiently when day-trading the EMini futures contracts for the major indices. The chart labelled Figure 30 is an example of Fibonacci levels on a three minute chart of the mini-sized Dow Jones Industrial Average, which goes by the symbol YM.

A trader then needs to pick out a price move that they wish to use against the current trading activity. In this example the morning is winding to a close. Let’s conclude that I wish to use the morning rally as my primary price move, anticipating a correction of one sort or another into the afternoon. The first thing I will need to accomplish is actually adding the Fibonacci lines to my chart.

Most charting platforms will have the Fibonacci tool available with the ones listed above set as the default. I use Real Tick for my own charting and to add the levels to my chart I must make sure that Fibonacci is selected in my tool box and then point my cursor at my starting point, holding down the left-click button on my mouse as if I were highlighting a passage of text, and then moving to the end point on a price move before lifting my finger. These are the 0% and 100% Fibonacci retracement levels. The platform then fills in the others automatically.

In selecting the beginning and ending points, use the absolute lows and absolute highs of a price move. In an uptrend, begin at the lows, such as shown at “A” on the YM chart in Figure 30, and end at the highs of the move, shown here at “B”. A return to the starting point would thus represent a 100% retracement of the price move.
A trader can start drawing Fibonacci lines even if s/he is not certain that the absolute highs of a price move are established. For instance, at 11:30 the YM was still holding fairly close to the highs of the day and there was still a chance for them to break at some point, but once it had held those highs for about 30 minutes, the Fibonacci lines could have still been drawn in order to assist with identifying pullback support as well as the next potential resistance, which, in terms of the Fibonacci lines, would have been at the -38.2% level. Since those highs did hold, however, that level is not displayed in this example. The support on the pullback to the 38.2% retracement level though is. When the YM fell off the morning highs, that Fib level, marked as “1”, held extremely well, missing it by only a tick or so before pulling back into the highs.

The YM tested the highs several times throughout the early afternoon, marked as “2”, “3”, and “4”. The pace never slowed enough on each of the corrections though to allow for enough of a build-up of momentum to push through the highs and the range eventually broke down.

Incidentally, the trading range would have had a better chance to have broken those mid-day highs if it had pulled back just a little more after the test of highs marked as #3. This would have pushed the YM into a slightly longer range before the next test of highs. Although not always the case, a strong trading range, ideal for a continuation breakout, will take 1.5 to 2 times as long to form under normal market conditions as the rally heading into that range. Since the morning rally took about two hours to form, this means that the range would have had stronger odds for a successful upside breakout if it held for at least three hours.

Instead, the range fell apart, again dropping back to the 38.2% Fibonacci retracement at #5. This time it did not hold it, however, and only corrected for about 5 minutes before plunging through that Fibonacci support. The next two Fibonacci levels are the 50% and 61.8% Fibonacci retracements. There was little reaction to the 50% level, but the 61.8% one held at #6 and the YM then fell into a smaller trading range stuck in between the 61.8% and 50% levels.

When this smaller range broke lower, the momentum was slightly stronger than the initial selling. Support hit first in the equal move zone as compared to that first decline out of #4, again ignoring a Fibonacci level at the 100% retracement, but the selling continued into another Fibonacci level marked as #8. This is the 138.2% retracement off highs. It held very nicely and the YM bounced back to the Fibonacci level it had ignored earlier at the 100% zone, much as it had when it was dealing with the 50% zone. The 100% level at #9 then took the market back into the 138.2% zone prior to the close, making it also a price support level as well in that it was also a test of prior lows.

Over time, I stopped physically adding the Fibonacci lines to my own charts other than using them for demonstration purposes, because I learned to have an intuitive feel based upon experience as to where each of the levels would fall. This keeps my charts less cluttered, but even just adding them in a light gray hue can help improve a trader’s analysis of the price action without them being a huge distraction.

There are other more advanced configurations using Fibonacci, but as with most things when it comes to trading, the least complicated the better. To borrow an apt quote from Peter Bernstein, “We have trouble recognizing how much information is enough and how much is too much.” As discussed earlier, this is the situation many traders
find themselves in when delving into the field of technical analysis, so this is word of caution that is well-worth repeating. Even though technical indicators based upon some mathematical formula or another can be useful in assisting traders in their investment decisions, it is wise to stick to only a few and to not switch back and forth a lot, instead taking the time to build your experience level. It is also wise to not rely on just one or two of these types of indicators when developing a trading or investment strategy, but rather to take into account each of the simple 5 technical tools laid out in this course which cover a wider view of the security in question to assist with those decisions.

Interestingly, Fibonacci analysis can also be applied to moving averages. Some traders will use a 13 or 21 period moving average for instance.

**Combining Support and Resistance**

I’ve covered quite a few methods for recognizing support and resistance levels in this segment, so I will now take a minute to look at how these can come together. For this purpose I’ve selected an intraday chart of China Med Technologies (CMED), displayed in Figure 31. This 5 minute chart has a goodly mixture of both price and moving average support and resistance levels to display their import.

To begin with, what I like to do when first looking at a chart is to get a grasp on the price increments in which a stock tends to move. In the case of CMED, many of its intraday price moves are about a dollar at a time, but it stalls at both whole and half numbers most often. The two most obvious instances of whole number support and resistance are at $30.00 and $33.00. $30.00 served as support on day one heading into the last hour of trading. The highs at the $33 zone were made just prior to 13:00 ET on day two when it ran out of 11:00 and then fell flat for almost two hours. These marked significant correction points for the stock. Some nice examples of it stalling at the halves as well are demonstrated on this chart when it reacted on both days to the $32.50 zone. It held that level as highs on day one and then again as the highs of the morning on day two. It also served as the congestion zone for the pullback from $33 on day two.
Figure 31

While the example of $32.50 is also one of prior highs serving as resistance and then support, the same type of resistance also takes place just above $31 from a small afternoon high on day one to the opening highs on day two.

CMED also has a nice example of equal move support on day one. After dropping off the morning highs, it fell into a range over noon. When that range broke lower, the pace picked up a bit, but the equal move zone still held very well and helped the market bounce back a bit into the early afternoon.

In addition to the price support and resistance, CMED made good use of the 20 period simple moving average as well. After the early morning pop on day one, CMED based along $31.50 for an hour or so until it caught up with the 5 minute 20 sma. It held the highs of the range and pushed lower into the early afternoon, leading to that continuation move we just looked at.

The 20 sma continued to hold throughout the remainder of the day, but notice that within the last hour or two it began to test it repeatedly. This is often a sign that it will eventually bust through it, like it did into the next morning. Once it did so, that 20 sma resistance then became support, holding the lows of the early morning correction for the first hour before the stock popped off that support into the 11:00 ET correction period. The slowdown of the selling into the prior day’s lows, combined with the momentum increase that morning, created a rounded low with the move into the 20 period sma the next morning leading to the completion of a pattern that is most commonly known as a “Cup with Handle”. It is one of my favorite bottoming patterns, although it can also be part of a larger price move, with the entire pattern serving as a continuation setup on a larger time frame. That 20 sma again held well as the stock based throughout the remainder of the morning, igniting another breakout higher around 12:30 ET and, as in the prior session, remained a support level into the close.
The CMED chart illustrates how a security can hang onto a support or resistance level for a bit, testing it repeatedly before busting through it. This testing and retesting is a good heads-up to watch for a break of that S/R level. The strategy works the best, however, when it’s part of a newer overall price move. For instance, in CMED the stock hugged a resistance level after several waves of selling, so the resistance that broke led to a larger change in direction and the beginning of a new upside move.

**Figure 32**

**Busting Support and/or Resistance Levels**

In the chart of Timken Co. (TKR) in Figure 32, several examples of this type of price activity are emphasized. The first is when the stock hugged the 5 minute 20 sma around 14:30 ET before breaking lower, in a very small example. That breakdown took the stock into its 5 minute 200 sma support where it based for an even longer correction along that support zone. The 20 sma served as an upside barrier, and the prices became wedged between the support and resistance, favoring the support before breaking it just before the end of the day and continuing in the next. The third time this type of activity occurs is after the stock corrects off its morning lows. It broke through the 5 minute 20 sma this time, but is unable to clear it completely throughout the entire afternoon. After about 13:45 ET it couldn’t even seem to shake it for even a single bar on the 5 minute chart. A half-hearted attempt at the 15:00 ET correction period just led to a pull right back to the support.

This picture reminds me a bit of when I see a dog tied up in someone’s back yard and it’s trying and trying the limits of its chain, excited about one thing or another... a squirrel on the neighbor’s windowpane or something... Eventually it just wears itself out, however, and returns the doghouse. That’s what happened on TKR as the day wound to a close on Sept. 22nd. The buyers finally gave up, slinking back to the dog house and dropping the stock to new lows into the following morning.
In terms of how often a support or resistance level is likely to hit before it does bust it, the third time is often the charm. Sometimes it can break it after bouncing off it two other times. That was what happened with the NQ in Figure 33. It paused at the third test of the lower trend channel for only a couple of minutes before the support gave way.

At other times, however, it might hug that support even longer, or even pull up very slowly for a bit to change the pace within the range a little more favorably before it gives way. This is the type of action I prefer, because it allows me to place a tighter stop over that slower moving segment as opposed to a prior pivot high within the range and the follow-through is typically steadier without as much risk of the security
pulling back into the former support before continuing lower. That type of retracement is what happened on the NQ from about 13:30 to just after 14:00.

Occasionally it can take a bit longer for a support or resistance level to break. This is particularly true if the initial move into that s/r level was stronger than average. That occurred on the monthly chart of CECO in Figure 34. I began stalking CECO for a short setup as a position trade towards the end of 2005. It hit the lower trend channel early in 2006, but it held. The sellers finally returned in the summer of 2006, leading to a nice breakdown as the year progressed.

This is a case where, given that the selling in 2004 was at the extreme of above average pace, the continuation on another breakdown won’t have a chance to maintain the same type of momentum, so price targets have to be tightened and the equal move type of support simple will not work as well. Obviously that isn’t even possible here since an equal move would push the stock below zero, but the concept remains the same even when there is theoretically enough room.

**Combining Price and Indicator Support & Resistance**

When examining the odds of a support or resistance level holding or not, I check to see if there are several types of support or resistance hitting at about the same time. When that’s the case, those levels have more strength and have a more difficult time breaking.

**Figure 35**

*Types of Resistance:*
- Whole Number ($136.00)
- Equal Move
- 200 Simple Moving Average
- Prior Price Level
- 38.2% Fibonacci Level
This 5 minute chart of Research in Motion Ltd. (RIMM) in Figure 35, from the first of December, provides a perfect example. The stock had sold off all morning, finally rounding off at lows into the early afternoon. That correction continued until after 15:00 ET. With only about half an hour left in the day, RIMM ran head-long into a number of resistance levels all at once. Whole number resistance loomed overhead at $136.00, it was nearly the equal move resistance from the continuation off the 5 minute 20 sma breakout, the 200 sma was hitting right in the middle of the congestion zone from earlier in the morning, and it was right at the 38.2% Fibonacci retracement level off the earlier lows. The bulls intraday never had a chance. At first RIMM corrected through time, basing into the close, but that quickly changed overnight as the stock gapped lower, hitting the 5 minute 20 sma before retesting the prior day’s lows.

**Combining Time Frames for Support & Resistance**

Support or resistance levels that hit at approximately the same time, but on multiple time frames in a stock or commodity also hold more easily than if they are only hitting on one time frame.

This means that if there is a support zone on a daily chart as well as a 15 minute chart, such as in Energy Transfer Partners (EPT) in Figure 36, then that support is more likely to hold than if there was only support on the 15 minute time frame. In EPT there were several nice factors that helped it hold the opening lows on May 15th. First off, there was the $42.50 price support. This was combined intraday with the 200 period sma on that 15 minute chart. The daily support, being on the larger time frame, was even more significant. The opening lows hit the 10 day sma right away. This was after gapping off the previous day’s close at the 20 day sma support. The stock was able to pull solidly back up into the middle of the range from the week before as a result, without even looking back to second-guess the buyers.
Conclusion

Once a trader has a firm understanding of the types of price activity that is likely to create support or resistance in a security, the next step is to put this knowledge into practice. A trader cannot simply look at a support level, such as $50, and assume that a stock will bounce off it. It is imperative to take into account the interaction of the support or resistance with the other 4 tech tools.

While I have not yet covered the topic of trend development, each of the four segments I have covered thus far will play a role in the impact support or resistance has on a price move. A slower than average paced move into support as compared to the rally which precedes it, for instance, will have a better chance of bouncing strongly off the support. The odds increase if the volume is also declining into that support. The pattern improves even more if the support zone hits at the same time as a correction period. Even without considering the trend development, the interaction of these four tech tools alone creates a highly probably buy setup with significant reward versus risk potential.

Worksheet Questions

Answer the following questions to the best of your abilities. Once you have completed this section, turn to the answer guide to double check your work.

1) Which support level is likely to have the strongest support zone?
Part 4: Support & Resistance

2) Which test of support or resistance is the one that is most likely to break?

a) the first test  

b) the second test  

c) the third test

3) Which of the following is not a Fibonacci support or resistance level?

a) 61.8%  
b) 0.0%  
c) 138.2%  
d) 35.8%  
e) 100%

4) Complete the following sentences:

a) When a support level breaks, it becomes __________________.  

b) When a resistance level breaks, it becomes __________________.  

c) A __________________ is the minimum upward or downward movement in the price of a security.  

d) $150 is a type of __________________ support/resistance.  

e) A __________________ is a break between prices, either higher or lower, whereby no trading occurred between the two price levels.  

f) In the Fibonacci Series, when any number after 144 is divided by its preceding number, it yields 1.618. This was known by the Greeks as "_________________________.”

5) Explain the concept of a “support zone” as compared to the absolute price of a support or resistance point.

___________________________________________________________________  

___________________________________________________________________  

___________________________________________________________________  

6) How does the pace of a move of a security into support or resistance affect the reaction it has to that support or resistance level?
7) How does a security typically react when it has broken out of a trading range and then returns to that area of congestion?

8) What is a trend line and how is it drawn?

9) What is the difference between a simple moving average and an exponential moving average?

10) What does a 20 period simple moving average measure on a daily chart?

11) List the main types of price and indicator support and resistance discussed in this portion of the course.
Worksheet Answers

1) Which support level is likely to have the strongest support zone?
   a. a five minute 20 simple moving average
   b. a 50 week simple moving average
   c. the third test of lows on the weekly chart
   d. a second test of lows on a 60 minute chart
   e. a retracement to a 120 minute congestion zone

2) Which test of support or resistance is the one that is most likely to break?
   a. the first test
   b. the second test
   c. the third test

3) Which of the following is not a Fibonacci support or resistance level?
   a. 61.8%
   b. 0.0%
   c. 138.2%
   d. 35.8%
   e. 100%

4) Complete the following sentences:
   a) When a support level breaks, it becomes resistance.
   b) When a resistance level breaks, it becomes support.
   c) A tick is the minimum upward or downward movement in the price of a security.
   d) $150 is a type of whole number price support/resistance.
   e) A gap is a break between prices, either higher or lower, whereby no trading occurred between the two price levels.
   f) In the Fibonacci Series, when any number after 144 is divided by its preceding number, it yields 1.618. This was known by the Greeks as “The Golden Mean.”

5) Explain the concept of a “support zone” as compared to the absolute price of a support or resistance point.

An absolute support or resistance level is often an exact price. For instance, a prior high might be $50.07 in a stock, or a 20 period simple moving average may have a value of 12253 on the YM. When a security comes into support or resistance, however, it may not hit it exactly. So, instead of being focused on an exact price level, a trader should consider the support or resistance to be a zone which cushions the exact price. So, the resistance zone of the stock with a prior high of $50.07 may span from $49.90 to $50.20. The moving average support zone on the YM, which would hit at 12253 could, also be considered to be trading at the support zone when it is between approximately 12256 and even down to 12246.
6) How does the pace of a move of a security into support or resistance affect the reaction it has to that support or resistance level?

The faster a security moves into a support or resistance level, the more "give" it has at that level and the more it can push through the exact price of the support or resistance before bouncing back and holding it. Hence, the support or resistance "zone" becomes larger. A slower paced move into support or resistance, however, is more likely to hold the exact price of the support or resistance within a few ticks. It might not even hit it absolutely, but begin to correct off the zone even before the exact price, such as the price of a 20 period simple moving average, hits.

7) How does a security typically react when it has broken out of a trading range and then returns to that area of congestion?

The congestion level becomes a support or resistance zone once it has broken and then is tested again. For instance, if the Euro breaks higher out of a trading range, and then pulls back into that trading range, that range becomes a support zone. Typically the middle of the range is the strongest price support.

8) What is a trend line and how is it drawn?

A trend line is a line that indicates the direction of a larger price move. In an uptrend it connects the lows of an upside move and serves as support when it is tested and resistance once it is broken. When drawing a trend line, the conventional method is to connect the lower prices for an uptrend and the higher prices for a downtrend. Sometimes traders will ignore odd ticks and tails in a price move.

9) What is the difference between a simple moving average and an exponential moving average?

A simple moving average is calculated by adding the closing price of the security for a number of time periods (such as daily bars) and then dividing this by the number of time periods (such as 20). Exponential moving averages will give greater weight to the more recent data.

10) What does a 20 period simple moving average measure on a daily chart?

It measures the average closing price for the past 20 days.

11) List the main types of price and indicator support and resistance discussed in this portion of the course.

Part 5: Trend Development

User Tip: Since there is a great deal of reference in this segment of the course to the charts displayed, please be sure to just sit back and not rush. Use the CD to help you follow the material more easily to begin with, supplemented by the text afterwards.

Throughout this entire course I have made reference to price moves in securities. These price moves are called “trends”. It is the nature of these price moves themselves that I will now address in this chapter of the 5th and final of the five technical tools or categories that I use when assessing the market for a new position or even when exiting a position. Trend development, or trend placement, will often be the deciding factor on the success or failure of a trade or position.

In this segment I will be referencing the other four technical tools, incorporating them into trend development. Pace, in particular, will be discussed at length. Pace and trend development are perhaps the two most important factors in the market that will indicate an upcoming price move in a security.

To understand how trend development or trend placement can affect price action, it’s first imperative to understand what exactly a trend is. I’ve hinted at it a few times throughout this course. A trend is simply the primary direction that the prices in a security are moving at any given time, whether it’s in a stock, index, commodity, etc.

Many times when I am trading, I will come across a pattern on a particular time frame that looks exactly like one traded in the past on the same time frame. When I attempt to secure the same level of success as on the previous trade, however, I found that I was unable to do so. In time, I learned that this was a result of the larger trend development and the placement of the setup within that larger trend.

For instance, something that looks the same on a five minute chart on two different days, might look completely different on a 30 minute chart or a daily chart. If there is a five minute buy pattern forming on one day and it’s near the beginning of a new uptrend on a larger time frame, then it’s going to have a higher probability for success than one which is forming on a very advanced uptrend or forming into a strong resistance level on a larger time frame. This locale in the larger trend is crucial to determining the degree of success or failure of the setup and what would be the best means to manage the position.

Something which has larger resistance due to a more extended trend can still offer opportunities for shorter term traders, such as a swingtrade coming out of an extended monthly trend, or a scalp coming out of an extended 60 minute trend. It is simply necessary to realize that the larger moves, such as a prior rally in the trend on the larger time frame, are not likely to hit targets such as those set with an equal move on the higher time frame. They may hit smaller equal moves based upon the prior move on the smaller time frame though.

A trend is the primary direction that the prices in a security are moving at any given time.
Trend Types

This first segment may be a bit of a review for many readers, since I will be discussing the basic types of trends which exist in the market. For those newer to trading, however, it is very important to understand the difference. The market is comprised of three types of trends: the uptrend, the downtrend, and the sideways trend. An uptrend is a series of higher highs and higher lows. A downtrend is a series of lower highs and lower lows. A sideways trend, often called a trading range or base, will have comparable higher, comparable lows, or both.

The sideways trend may have more comparable highs than it does lows, or vice versa. If $50 were resistance, for example, it may trade at highs of $50.04, $50.00, $49.97. It may then have lows within the range of $49.45, $49.67, $49.50 and $49.82. As long as the downside momentum on that last drop into $49.83 was slower in pace than the last rally into $49.97, then the bias will favor an upside break from that sideways trend, no matter if the range is forming at the highs or the lows of the previous price move.

A template for the types of trends is shown in **Figure 1**. The uptrend on the right illustrates how previous highs, once broken, will often become support on the next pullback to a higher low within the trend. This is not always going to hold true, but it is an additional support level to watch for when trading or investing to help time continuation patterns in the direction of the larger trend. As a directional trend such as this begins to correct, it is fairly common to see it fall into a sideways trading range. This can then form a continuation pattern to the upside, or reverse and lead to a downtrend, where each support level, once broken, then becomes resistance.
Uptrends

Figure 2, which displays the Mini-Sized Dow Jones Industrial Average futures contract (YM) is a solid example of an uptrend in play. Pay attention to how many of the pivot highs and lows within the trend channel occur at correction periods. The initial high on this chart occurs at about 14:00 ET on first day of trading. A low, which is comparable to the initial low on the chart, forms at around 15:00 on the first day. The YM breaks out of this back and forth action, beginning a new uptrend, when it pushes through the 14:00 ET highs heading into the second day of trading. It establishes those highs into the 10:15 ET correction period and pulls back, creating a higher low into 11:00 ET, which is another correction period. With a higher high and a higher low now in place, an uptrend has begun. Notice that the low around 11:00 ET is also the same price level as on the first day, with an excellent example of how prior highs in an uptrend will often serve as support when that trend corrects. This uptrend continues into the end of the day on the second day of trading and holds correction periods with each test of highs and lows within that trend channel.

Another nice example of an uptrend is the one in Figure 3 of the QQQQ. After selling off at the beginning of the time frame displayed here, the QQQQ establishes a higher low into the second week of August. A higher high soon follows, running smack into price resistance from the late June pivot in the $39.00 whole number resistance level. The series of higher highs and higher lows continues, forming a solid trend heading into October. Throughout the trend, the QQQQ reacts to price support and resistance in the form of half and whole numbers, such as the initial July lows in the $35.50 zone, the second lows around $36 and so on, and highs into $39, $40, $41, etc. This creates
a consistent trend with multiple support and resistance levels hitting at the same time since these price levels also correspond to the trend channels.

Figure 3

Downtrends

On the opposite side of the spectrum is the downtrend, which contains lower highs and lower lows. Figure 4 consists of a great example of such a trend. After reversing from highs with the 9:45 ET correction period, the YM broke through morning lows and then forms a lower high into 10:15 ET. The lighter volume on this small correction assists it in resuming its downside bias, breaking into new intraday lows and the last pivot highs from around 15:30 ET on the previous afternoon. A second correction off lows, again on lighter volume, hits the upper channel resistance at about the same price as the first lows off the high (around 10:00 ET), and a third wave of downside follows.

Both support and the correction periods again come into play. The 10:45 ET correction period takes place right as the YM is closing its morning gap and this combination, along with the level of development of the trend which I’ll cover here in the next half hour, lead to a longer correction into lunch. Since pace of the downside move was

TRADE TIP:

A correction within a trend move which takes place on declining volume is more likely to break in the direction of the previous trend, leading to a continuation of the trend.
stronger than average, this longer correction takes place more through time than price as it pulls off the lows.

Arch Coal, Inc. (ACI), shown in Figure 5, also has a strong downtrend example. In this case it took place on the daily time frame. It shared a lot of the same traits on the YM, beginning after a strong upside move that contained a gap. This is, of course, not how all downtrends begin, but it is always interesting to notice how sets of patterns will repeat time after time on multiple time frames.

After the momentum slowed on the upside into early May, ACI sold off very sharply throughout the middle of the month. This descent closed the gap from mid-April, where it found its first support level on the daily time frame in what would become the new downtrend. The first lower high took place heading into June when the stock pulled gradually higher on declining volume, coming into price resistance from the highs made in late April. A second strong decline followed, confirming the formation of a downtrend. This time support in the $38 congestion zone from March and into April curbed the sellers. This was also equal move support as compared to the initial decline off May’s highs.

Even though the momentum increased slightly coming off the second low in the new downtrend as the stock move higher into the end of July, it did so with declining volume, indicating a lack of motivated buyers. The result was a hold on the upper trend channel with another lower high and then a third lower low. The downtrend held until winter.
Sideways Trends

The third type of trading range is the sideways trading range. Northeast Utilities (NU), shown in Figure 6, is a textbook example of a sideways trading range. After moving higher off lows in November, 2005, the stock ran into prior highs in December on the daily time frame. That price resistance stalled the buying and NU fell into a sideways trend channel, also known as a congestion zone, in the area of $20. Although a bit more erratic to begin with, the range began to fall into a series of comparable highs and comparable lows. These were not exactly the same prices though, and it would be unusual if they were. Remember, support and resistance levels are “zones” and should not be thought of in terms of an exact price level.

NU attempted to make a break for highs in early May, however, the stock had to move all the way from the lows of the range before it hit the prior highs on the daily charts and this left the stock a bit winded. It was unable to sustain the momentum long enough to hold it up over the highs and it fell back again into the end of May before making a second attempt to break out in June. This time the move was a bit stronger. The pace increased as compared to the previous rally, and the stock made it into the $21 price resistance zone. It still had the same type of action to deal with, however, as a result of the larger move that had been in play heading into that breakout. The stock fell back into the prior highs at the end of June as a result, returning quickly to the upper channel resistance, which became support after establishing the June highs.
A breakout such as this is higher risk, since it is very easy for the security to form a false breakout, such as in May, and then reverse. In this case it at least held the previous lows and returned for another breakout attempt, but it could have just as easily fallen back sharply off the highs and then had a more gradual move off the lows of the range. This would have then been more prone to a break lower. The momentum of the decline in June, which was stronger than earlier selling within the range, would have helped out.

A more ideal setup for a breakout as a continuation would have been if the stock bounced into the upper end of the sideways trend, based or pulled back more gradually from that resistance, preferably holding the upper end of the range, and then triggered a breakout.

As I’ve hinted at earlier, not all sideways trading ranges will form continuation patterns. It is just as easy for them to lead to a reversal of the prior trend move, such as took place in the template of the trend moves in Figure 1. A change in pace within the range can be used successfully in making this distinction. This one minute chart of the YM (Figure 7) had a typical type of sideways trend in play along highs. The index had rallied higher throughout much of the morning and after breaking the pivot high marked “A”, it fell into a channel whereby the price resistance from “A” became support within the sideways trend.

Throughout much of the sideways range the buying was fairly strong, particularly into 12:15 ET when it popped back into the higher end of the range. It lacked any volume confirmation on the buying, however, and the pace began to turn over into the first
hour of the afternoon. At about 12:30 ET a more gradual move to the upside within
the range was accompanied by a decrease in volume and the lower end of the range
was soon giving way. The support which had held the lows of the range became price
resistance when it corrected higher around 12:45 ET. The YM did have quite a move to
make before breaking the lows of the range, so it was easier for it to repeat the type
of action we saw along highs on NU. It broke the support and then congested along
the former support and new resistance level before continuing in the direction of the
breakdown. Increased volume confirmed the breakdown.

One trait of the sideways range which increased the risk of a reversal pattern right
away was when it put in that slightly higher high just prior to noon. This creates a bit
of a trap for late-arriving bulls and it can create additional panic when support levels
give way. It can also assist in the formation of a rounded high, where successive
attempts at highs barely break before the security pulls back and they do so by lesser
degrees each time. Each new high lures in more bulls, but the frustration mounts as
each high fails to result in substantial gains, so when selling hits then it can do so very
quickly, creating a lot of panic to fuel sellers.

Another sideways trading range which broke with a reversal took place in Sears
Holdings Corp. (SHLD) (Figure 8) in early 2006. I had been following the range for
quite some time. It had pulled lower into its 20 month simple moving average and had
been hugging it for several months. I caught it as a short with about half a lot
(meaning half my normal risk) when it was moving off the upper end of the range, but
before it had really based long enough to confirm that the pace and development
within the range was going to break lower. While it looked good to start with since I
was able to catch a move lower within the channel itself, it ended up being a rather
costly mistake.
The volume within the range did decline, which is typical of a continuation pattern forming, but this is also just normal volume activity for any range, even a reversal one. It would have been better had the selling within the range actually picked up a bit into February and March, but it did not. The momentum slowed on the downside with choppier selling than buying and in March the stock gapped higher on news, clearing the trading range completely. There were some nice intraday buy setups on the day of the gap, making it easy to catch that new breakout direction, but it was a little rough since I got caught on the short side and had to reverse my position quickly in order to not take a substantial hit.

**Figure 8** contains a template of a typical continuation breakout from a sideways trading range. In most ranges, it is common for the initial move into resistance to display more “give” at the resistance than on subsequent tests. If the resistance level here were $50 for instance, then “A” might be as much as $50.23, whereas the next high to follow could be $50.03 and the one to kick off “B” could be $50.00 exact.

The pace within the move off “A” is similar to the rally into those highs. Sometimes it might be somewhat faster as well, but as long as the initial rally was stronger than average, if the correction is also stronger than average, then it indicates that a trading range, or sideways trend, is going to stand a good chance of developing.

The security in the template attempted to break lower towards the end of the range, just above where it says “Activity” in “Preferred Volume Activity“, but since it had to drop all the way from the highs of the range and into the lows of the range, it was exhausted by the time those prior lows hit. Such a breakout like this will always be higher risk for failure simply because it can trap traders who use a trend channel break from the larger range as their entry trigger instead of using a smaller trend...
channel within the range itself. True, it may have then based under that range, like it did in the examples of the sideways ranges which served as reversals, but it can also easily whip back to the upper end of the range like it did here.

*Figure 9*

![Diagram of trend development with resistance, support, and preferred volume activity]

It was the slower pullback off the highs, marked “B”, that really provided a boost to the pattern as a continuation pattern as opposed to a reversal pattern. This does NOT mean that a security won’t move from the lows of a sideways range and through the highs and just keep going! If a range is very narrow compared to prior price activity, then this is still ok. If the range is wide, however, then the amount of room needed for a stop, and the extension of the move at the time of the breakout, WILL cut the potential and also increase the chances of failure.

In addition to favoring sideways ranges with a more gradual move within the range to assist in decreasing risk and for

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**Preferred Traits for a Continued Uptrend:**

- More gradual downside pace as compared to upside pace within the corrections inside the trend just prior to it breaking out.
- Declining volume throughout the correction, particularly within the last pullback off the upper end of the range.
- When the last pullback within the correction itself holds within the upper 50% of the larger correction move.
- When the correction pulls into a moving average support level before breaking higher again.
- When the larger uptrend resumes by coming out of a correction period and confirms with an increase in volume.
timing an entry, monitoring volume is also highly beneficial. A volume decline throughout an entire sideways range and particularly during that last more gradual move within the range itself is ideal. When the volume is the lightest and the pullback marked "B" only corrects about 50% off the highs of the range, then I know I have a highly successful pattern developing.

My entry is as the channel from the pullback marked “B” breaks higher, with a stop placed under the low of pullback “B”. If the resistance was $50 and the lows of the larger range were $49.50, then this could mean an entry of about $49.90 with a stop under $49.75. It's a big difference from an entry over $50 and a stop under $49.50, but amazingly it doesn’t really hold any higher of a chance of the stop hitting on the closer support within the range than when it’s under the lows of the range. It only increases the reward versus risk potential.

Polycom Inc. (PLCM) in Figure 10 has a nice illustration of this type of continuation pattern on a sideways trend breakout, where the pace and volume are both favoring a return of the bulls. PLCM moves higher out of December, stalling at $20 price resistance. After breaking through that level, $20 became support with the $23 area as resistance. Throughout most of the congestion the action was very choppy without a strong momentum bias to favor a break in either direction.

It wasn’t until the end of July and heading into August that the pace within the sideways range slowed in one direction. In fact, the drop in July was even on stronger volume, although it had to move all the way off the highs to make it back into the lows. As a result, the break of the prior lows was exactly like in the template labelled Figure 9 and it merely served as a trap for those that jumped the gun a bit. The pace finally slowed on the next pullback off highs going into August. At that point the
volume declined and the pullback only came into the middle of the range, which is much better than had it pulled back into the lows, even if it had done so on declining momentum. The reason is that the prior highs will not serve as much, if any, resistance that way, whereas they would have if it had to make a larger move to return to them. I’ll be examining this setup in greater detail in the last segment of this course.

**Figure 11**

This next chart of Genentech Inc. (DNA), in Figure 11, has two sideways trends. The first led to a continuation of the previous selling, while the second broke with a reversal of the prior trend. The continuation move again shows how a range may not provide a strong directional bias for a breakout when there are stronger than average moves at play. The stock fell sharply in July of 2001 to retest the initial lows of the range, but then managed to round off at the support and rushed back into the prior highs, creating a stronger than average upside move. The pullback into the New Year coming off the highs of the range was more gradual than the fall rally, but the attempt to return to those highs in March failed miserably and a mid-range congestion broke lower.

The decline in the spring of 2002 was followed by another sideways trend. This time it would lead into a reversal of the previous selling. One of the first indications of added risk for those hopeful for a continuation was the slightly lower low into the start of July as compared to the lows made heading into May of 2002. This initial rounding off is common of sideways moves that turn over, just like the ones shown earlier in Figures 7 and 8. The pace then began to change as the range progressed. Volume was lighter for the most part on each of the declines within the range once that pace began to turn over. It attempted an initial setup into January 2003, but since the sideways
range had not taken as long to form as the previous one, it indicated that it might be a little premature. Once it had corrected for that long it managed a more solid breakout from the range, this time following through sharply to the upside. On weekly time frames such as this, it is common for breakouts to correspond to news events such as on SHLD. This will often lead to very rapid breakouts. The same idea applies on all time frames and securities though.

**Trend Development**

At the beginning of this segment I posted a template of the three types of trend moves. It began with an uptrend, followed by a sideways trend, and then a downtrend. Another configuration of these trends unfolded in International Business Machines Corp. (IBM) on the daily chart this past year (Figure 12). It began with a choppy sideways range throughout the first part of the year, eventually breaking lower when the pace within the range slowed on the upside and the support gave way in May. This kicked off a downtrend that lasted until July. Volume spiked as the stock reversed, pulling quickly back up into the price resistance from June and early July.

*Figure 12*

The pattern of this reversal off lows in IBM is usually called a “Reverse Head and Shoulders”. The left shoulder was that range in June and early July, the head was the pivot low in July, and the right shoulder formed in late July and throughout the first half of August. This right shoulder formed on declining volume and confirmed the beginning of a new trend when it broke through the late July highs and returned to the late May price zone. Although not displayed here, the trend continued on the weekly time frame until February of 2007 when the 10 period simple moving average on the
weekly charts that held as support finally gave way and a lower low was made on February 27th after it fell into a sideways range along the highs made back at the beginning of 2005.

**Trends and Moving Averages**

Although a trend can be quickly identified by simply looking at the directional move, one technical tool that I often fall back on to help display support within the trend are the moving averages. Often an uptrend or a downtrend will hold one moving average or another throughout its development and as long as the pace of the trend is fairly consistent, then the moving average will be very reliable. I mentioned this briefly regarding the trend development on IBM in Figure 12. It held the 10 period simple moving average on the weekly time frame. The chart of the QQQQ in Figure 13 shows what such support will look like.

![Figure 13](image)

Initially the 20 period simple moving average served as resistance as the QQQQ was turning over in July, 2006. After hugging the moving average into August, it broke rapidly higher, creating the beginning of an uptrend with a higher high and higher low now in place. Each time the QQQQ corrected it pulled back into the 20 period simple moving average and then bounced back. I have found that most trends will hold a 20 period sma on one of the time frames it is trending on. Stronger than average momentum moves, however, can hold a shorter period moving average such as the 10 sma, whereas more gradual trends, or ones that are also forming on a larger time frame, can hold a slower moving average as the trend progresses, such as a 50 week sma or even a 100 day sma.
The Fractal Nature of Trends

Trends are fractal in nature, meaning that multiple trends will be taking place at one time, but just on different time periods. As a result, a faster moving average that is serving as support on a larger time frame might be a slower moving average on a smaller time frame. The 10 period sma on the weekly chart of IBM for instance, was close to the 40 day sma, albeit not exact.

**Figure 14** displays how such activity develops. The three darker black moves are part of a larger uptrend. Within this uptrend, however, are several smaller trends in play. After the initial buying, for example, the security fell into a sideways trend. A smaller uptrend within the larger one followed and then led into a smaller downtrend. Within each of these smaller trends were even ones. The sideways trend was comprised of up and downtrends within the range, while the upside coming out of that sideways trend had two smaller downtrends and three smaller uptrends within the larger uptrend.

![Figure 14](image-url)
The YM in Figure 15 is very similar to the template. It is also in a larger uptrend, with a series of higher highs and higher lows intraday on the two minute chart. It has two smaller trends that break up the larger uptrend. These are sideways ranges, which also have a number of trends that developed on the more diminutive time frames. Sideways trend #1 began with a small downtrend, followed by a small uptrend into noon. That mid-day correction period hit as the initial highs of the range hit and led to a second downtrend with the range. This continued until breaking higher out of the 13:00 ET correction period when the YM bounced off the prior lows within the congestion. The smaller trends in #2 were not as clear-cut and were choppier, but they existed within that sideways move as well.

**Trend Development – Three Waves**

There are a couple of ways that a trend can be monitored to help indicate an upcoming price move. In addition to the pace within the range itself, the development of the trend will often fall into certain “rules of conduct” that repeat time and time again. Trends often develop in the same manner over and over again, leading to two and three waves (or smaller trends) within a larger one before that trend corrects on a larger time frame.
In three wave trend development (Figure 16), a trend (whether it’s a sideways trend, an uptrend or a downtrend), with have either three waves of buying or three waves of selling before the trend channel breaks. Thus, when I am looking at a pattern as a continuation or reversal pattern, I find that it’s very important to pay attention to where that pattern is forming in the larger trend. If I am following a base along highs for a continuation breakout to the upside for instance, then it is typically best if there has only been one or two waves of buying within the trend. After a third wave of buying then targets based upon equal moves and larger time frames will have greater difficulty hitting and it’s more common to see continuation patterns fail.

It is imperative here to examine the corrections between each of the waves of buying or selling within the trend to determine if this type of trend development will be an effective aid in reading market activity. In order for the above assumption to hold true, then the corrective moves must be comparable in terms of time development. In other words, #2 must take approximately as long as #1 in order to assume that any breakouts after the move into #3 will be less than ideal. If #3 is similar to #1 and #2, then it can still attempt a continuation, but targets must be tightened since they typically will not get as far as the moves out of “A” and “B” were able to. Even if it makes a new high in the trend, it will more often do so by only a hair before turning over, creating a type of double top. The trend may not necessarily break on the larger time frame, though. It might simply fall into a longer correction and then resume later on.
Figure 17 of the NQ displays a very typical three wave trend development. Although I generally do not place a 40 period sma on my intraday charts, I have added here to illustrate how many trend moves will gravitate towards one of these simple moving averages. In a new trend for instance, if the security has fallen off highs and then hugs a moving average, such as took place from about 11:35 to 12:15 or so in the NQ, then that moving average will often be the resistance when it corrects a second time. This is particularly true if the second move is not significantly greater than the first. In other words, as long as move #2 does not drop more than twice what it did in #1.

Since each of these corrections was also similar in terms of time development, meaning they each took around 45 minutes to form, after correcting for the same amount of time coming out of the low just before 14:00 ET, the NQ did not resume the downtrend. Instead, it busted through the 40 period sma following the third wave of selling. Knowing that a longer correction would likely follow that third wave of selling, I watched that drop closely and took it as a pivot trade coming off the lows when the momentum on the one minute time frame began to turn over and after that tail formed into the lows on the two minute chart.
The same thing happened in 2006 in Maxim Integrated Products Inc. (MXIM) (Figure 18). It fell off highs near the beginning of the year, dropping into its 50 day sma where it formed a small base before continuing lower. When it corrected, however, it dropped more rapidly than it did initially off the highs and hence took nearly twice as long to move off the March lows than it did at the 50 day sma to begin with. The moving average still held as resistance in April, however, and the stock broke lower. The pace of this second selloff into May was similar as the initial move off highs and it was able to achieve an equal move on the decline whereby #2 fell by approximately the same amount as #1. This meant that if it attempted a third wave of selling on that time frame, then the 50 day sma would again serve as resistance, which it did heading into July.

The third wave of downside was a bit choppier overall than the prior two after the first couple of days. It even moved back into the 50 day sma in August without hitting an equal move again. Although it made a slightly lower low, that overall move in wave #3 was unable to obtain that equal move since the smaller correction off lows into August meant that the overall pace of wave #3 was now more gradual than the prior two.

Volume spiked on this third wave of selling as lows were established in August. The momentum increased on the upside and the stock was quickly back at that 50 day sma again. This time it began to hug the resistance, much as it had earlier in the year when it was support. It did so on lighter volume, indicating that the selling within the correction off the resistance was not very significant and it did not take too long before that moving average resistance and the downtrend itself were broken.
Within the larger downtrend in MXIM was a smaller downtrend as well. This was marked in the gray square in Figure 18 and is expanded here in Figure 19. This smaller trend is the second wave of selling on the larger trend. When that first correction into April hit the 50 day sma, it kicked off a new lower low into the end of April. It was followed by a correction into May and a second wave of selling mid-May. Since the pace was similar to the first drop, the moves were nearly equal. A second correction, labelled “B”, formed. This correction took 6 days, just as it had between the previous two waves of selling. It then broke lower in late May for a third wave of selling. As on the larger trend, the third wave of selling began quickly, but it was unable to sustain that momentum and was soon falling into another sideways trend.

Although three wave trend moves will nearly always correct longer afterwards when each of the waves of correction with the trend are similar, it does not mean that the trend itself is over. When the corrective period following wave #3 is only 1 ½ to 2 times the previous two, then it can lead to a fourth wave of selling (Figure 20). So, if the correction is two weeks long between waves #1 and #2 and again from #2 to #3, then a correction lasting 4 weeks can again break lower. After that fourth decline, however, the trend will nearly always break by either falling into a longer sideways trend or by reversing completely. In either case, it’s highly probable that the trend line and moving average resistance from the trend move will end up breaking, even if the trend resumes on a larger scale later on.
Figure 20

The YM in Figure 21 displays two types of three wave trend development. In red is the type in which there are three waves of selling, with similar corrections between each. This is followed by a third correction, but one which takes about twice as long as the prior two. It allows the YM to put in a fourth wave of downside before turning over around 11:30 ET and starting a new uptrend.

Notice that on the upside move, each time it stalled and fell into a pullback, it did so at price resistance from each of the prior downside moves. When it completed the third wave of buying, it returned to the price zone of the beginning of the downtrend and stalled at that resistance. Unlike the pivot at lows around 10:00 ET that led to a slower upside move and then a fourth decline, the reversal off highs came in the form of a pattern I call a 2T. It's a type of double top, but the second high is slightly greater than the first. This took place into the 14:00 ET correction period on the YM. The 2T trap pattern led to a more rounded high and the result was a sharper reversal and no fourth wave of buying before breaking the trend with a slightly lower low into 15:00 and lower high into 15:30 ET.
One of my favorite methods for utilizing three wave trend development is as a means of entering trend reversals (Figure 22). In doing so, it is to again pay close attention to the pace of the waves of selling. If a decline begins sharply and each of the two waves of selling which follow are more and more gradual than the first, then a security can turn around very quickly off the lows and lead to a strong momentum reversal. This can be a more difficult pattern to trade, however, because it is fairly common that the security will attempt one last flush on wave 3 before turning over and the return of the bulls can begin gradually before that pace really accelerates.

One way to try to avoid these risks is to drop down to a smaller time frame and look for buy setups there as well, or to wait until after a flush does take place and then take the trade. Of course, a flush is not guaranteed, so this strategy can end up meaning that the trader misses the position altogether. The same thing applies to trying to wait and time it on a smaller time frame. Such a setup may never form. It might just take off on the larger time frame without any other ideal entry zone. Usually I will draw a trend line connecting highs in the last segment of the third wave of selling and when that breaks higher, I wait for the prior bar’s highs to break as well and then take the position. If there is a sharp volume increase on the first wave of selling, but a slow down in volume on the third wave, then this will boost the odds for more immediate success.
I will re-examine this type of three-wave reversal pattern in the final segment of this course, but one example of such a move took place intraday in Corporate Executive Board Co. (EXBD) (Figure 23). Wave #1 was very extreme, but after a brief correction (A) it continued with a more gradual move lower. A stronger upside move in “B” followed, leading into a third decline into 10:00 ET. Within about 15 minutes EXBD was back at the $91.00 zone from the “A” correction.

Where this pattern takes place in the larger time frames will determine how successful it is as either a quick setup or something that will reverse and break the highs from the first decline. A newer downtrend on the next couple of time frames higher would be more prone to correct like the move in EXBD and can resume selling later on, whereas if there had been three waves of selling on a 5 or 15 minute chart already and these three waves shown here made up a third downside wave on the larger time frame, then a much sharper correction off the lows is more likely.
Trend Development – Two Waves

Trend moves can also develop with just two waves of buying or selling within the trend. These are most common as counter-trend moves within a larger trend, such as a two wave pullback within a larger uptrend. They can also serve as continuation patterns though. In the case of Akamai Technologies (AKAM) in Figure 24, the stock had fallen into a trading range out of the open. Within that range itself it had two waves of pullback off the highs around 10:00 ET. It then fell into a longer base along lows heading into 11:00 ET as volume declined, creating a continuation breakdown. It had an initial wave of selling, marked #3, and then a second continuation, marked #4, into 11:15 ET.

When there are two waves of selling and then a longer base, each of those initial two waves of selling can be used to determine the target on the continuation. The second segment of the decline (#2) can be compared to the initial breakdown (#3) to identify the first support and target. The move on #3 can then be measured for an equal move level for #4 as long as the pace remains the same as in the previous drop. Additionally, the overall move from #1 and #2 combined can be compared to #3 and #4 combined to create a larger target, as long as the pace again remains comparable. In this case the pace increased somewhat on the continuation, and this allowed for a slightly larger move than an equal move.
A similar two wave continuation pattern, this time on the upside, took place intraday in the ES in Figure 25. This time the action was a bit choppier, but after hugging the upper end of the trend channel on the correction marked “B”, the range broke higher for another two waves of buying. This time around the pace was more gradual than the combined two waves going into the range and the volume didn’t confirm the breakout from the 12:00 ET correction period. The two wave pattern still held faithfully, but it did not quite hit an equal move target.

Although in the previous two examples, each of the correction periods between the two waves of the moves into the congestion and out of the congestion were similar in terms of how long they took to develop, this is not always the case. Sometimes the continuation out of “B” will have a larger or smaller time development at “C” than at “A”, so that even when the pace of the continuation begins with similar action as the last wave heading into “B”, it will not always be able to sustain it if the small continuation at “C” lasts longer than at “A” since the overall pace of the larger continuation becomes stunted. The continuation can have a larger than equal move even if the pace is the same on the initial breakout as compared to the last bit of buying or selling into “B” if the action between waves three and four takes less time to develop than between the first and second ones.

![Figure 26](image_url)

**Figure 26** of Hansen Nat. Corp. (HANS) has a plethora of two wave trend moves. The first two are just a correction within a larger uptrend, forming a more gradual overall pullback into 11:00 ET, at which point the pace changes and two waves of buying follow. These end up as part of another upside move before correcting again off highs with the 13:00 ET correction period, leading to another two wave correction within the larger uptrend.
Both the three wave, as well as the two wave trend development can be found on Lam Research Corp. (LRCX). It consists of three strong upside moves into the summer of 2006, following by a sharp pullback into the range from "B". At that point the stock bases along the price support befor

In order to continue with a third wave of downside, LRCX would have needed to have broken lower again in September when that base along support had mimicked the move marked "C". It tried to break the lower trend channel, but because it dropped off the highs of the range without basing at the lower end of the range before attempting the break the lower trend channel line, the risk was a lot higher that it would either be too early, or failure completely... which it did. Instead of continuing lower, it popped back up, based on a smaller time frame into the end of September, and then resumed the uptrend until late November.

**Conclusion**

As with each of the previous four technical tools that I’ve covered in this course, trend development is one that is best when used in combination with the others. I showed a lot of examples of what to look for in this section, but the key one to focus on will be pace. When using the trend development as an entry tool, take care to make sure the trend has not already had an extreme run. If this is the case, then drop down to the smaller time frames for placing targets. The closer a trader can enter a position within a new trend, the better. In the final part of this course we will look at more examples of how to use this tool while actually placing and timing a trade.
Worksheets

Answer the following questions to the best of your abilities. Once you have completed this section, turn to the answer guide to double check your work.

1) How can “trend placement” lead to the success of one pattern on a daily time frame which appears at first glance to be identical to the daily pattern in another security also forming on the same time frame?

2) Define the terms “uptrend”, “downtrend”, and “sideways trend”.

3) What is the best time in a trend to enter a new position?

4) What does a common trend move look like in a security and what are some of the possible indications in a trend move that the trend is coming to an end?

5) When looking at trend reversals, what do the terms “rounded highs” and “rounded lows” refer to?
6) When examining a sideways trend for a breakout, what are some of the things to watch for that will indicate the most likely direction of that breakout?

_________________________________________________________________
_________________________________________________________________

7) Which trend should be given the greatest consideration: an uptrend on a daily chart or a downtrend on a 5 minute chart?

_________________________________________________________________
_________________________________________________________________

Worksheet Answers

1) How can “trend placement” lead to the success of one pattern on a daily time frame which appears at first glance to be identical to the daily pattern in another security also forming on the same time frame?

Even though the patterns may look the same at first glance, where the patterns are forming on the larger time frames may be completely different. A bull flag that is forming after three waves of upside already, for instance, will have a more difficult time following through strongly than if that same flag formed after only one or two upside moves in the trend. The latter typically has a lot more room to move before stronger resistance levels hit, whereas the former can still work out as a trade, but only as a faster position than in the previous moves within the trend. Even if they make higher highs, it can more easily serve as a trap, followed by a stronger reversal.

2) Define the terms “uptrend”, “downtrend”, and “sideways trend”.

An uptrend is a price move consisting of higher highs and higher lows. A downside price move has lower highs and lower lows. A sideways trend is more of a congestion move, with a lot of back and forth action in a sideways trading range. It often has comparable highs, comparable lows, or both.

3) What is the best time in a trend to enter a new position?

An uptrend is a price move consisting of higher highs and higher lows. A downside price move has lower highs and lower lows. A sideways trend is more of a congestion move, with a lot of back and forth action in a sideways trading range. It often has comparable highs, comparable lows, or both.
4) What does a common trend move look like in a security and what are some of the possible indications in a trend move that the trend is coming to an end?

Many trends will develop in waves of two or three. A typical uptrend for instance, will have three waves of buying, with comparable correction periods within the uptrend, and then will be followed by a larger correction afterwards. Many times the counter-moves within a larger trend will form with two waves of reaction, such as a two wave downside correction within a larger three wave upside move. If a trend already has three waves of buying, then it becomes easier for that larger correction to begin. Before a trend reverses, the pace will often start to reverse, forming a slower move higher in an uptrend before turning over with a more rapid downside move that pushes the security into either a sideways trend or downtrend.

5) When looking at trend reversals, what do the terms “rounded highs” and “rounded lows” refer to?

When a trend is slowing, many times it will make higher highs or lower lows to a lesser degree than before. For instance, the difference between highs may be 6 points at first, and then 3 points, and then 1 point. This would be an example of rounding highs. The momentum or pace with each attempt at highs or lows is often slower than before as well. This allows for a more rapid reversal in the trend than if the highs or lows were not “rounded”.

6) When examining a sideways trend for a breakout, what are some of the things to watch for that will indicate the most likely direction of that breakout?

- More gradual downside pace as compared to upside pace within the corrections inside the trend just prior to it breaking out.
- Declining volume throughout the correction, particularly within the last pullback off the upper end of the range.
- When the last pullback within the correction itself holds within the upper 50% of the larger correction move.
- When the correction pulls into a moving average support level before breaking higher again.
- When the larger uptrend resumes by coming out of a correction period and confirms with an increase in volume.

7) Which trend should be given the greatest consideration: an uptrend on a daily chart or a downtrend on a 5 minute chart?

An uptrend on a daily chart will carry more weight than a downtrend on a 5 minute chart.
Part 6: Managing Risk

There is one question that I am asked in one variation or another more often than all others combined: If I follow your methodology, how much can I make? My answer is one most may find to be rather disappointing: I don’t know. In truth, no one can honestly answer that about any trading system. Even in a black box system where it tells a trader to buy and sell at exact prices, the results will change over time, sometimes dramatically. These systems tend to only react to change after the fact and can cause substantial losses in the interim. I don’t even personally know of a single black box system that is publicly sold that has generated consistent results. I do have friends that have created their own, but they tweak them constantly as market conditions change and rarely share their findings since it would affect their own ability to profit from the trades.

What I offer is better than these expensive “don’t think and just follow the leader” methods of trading. It is imperative for a trader to find a system of market analysis to use for their trading that can withstand changing market circumstances and allow the trader to react in a very timely manner, as well as one that can adjust to fit their level of commitment at any given time. I know, from applying them myself as well as working with other traders to develop their own careers, that the system of analysis that I use, which gets right down to the bottom line and focuses on the bare bones of a security’s development, is perfectly suited for those needs. It lets a trader take the tools I have covered and apply them to the time frames, markets and styles of trading that best fit each trader’s own personality.

In this portion of the course I will be demonstrating ways to increase the odds on a trade or position when using these tools and delve into some of the various ways to combine them to generate the best returns. As market conditions change or as the time a trader can commit to the markets changes, or his/her risk aversion changes, it is very simple to adjust to fit those needs.

Understanding Risk

I’ve brought up a very important topic here already in this section that I want to take a minute to address before I move on, which is the topic of risk. What does risk mean? How can I, as a trader, assess it? What does “risk aversion” refer to? Most importantly, what affect will it have on my trading?

The word “risk” has its roots in an early Italian term, riscare, which means “to dare.” The concept of risk as we know it today is fairly new, evolving slowly after the mid-16th century. When in the context of participating in the markets as a trader or investor, it can have several connotations. The most obvious is how it relates to loss. The amount of money a trader or investor puts on the line, meaning the amount they are willing to lose on a position before admitting that they were wrong, is referred to as the amount they are “risking.” Hence, “risk” is monetary sum they “dared” to loose. If I bought XYZ at $50.05 and will close the position, or stop out of it, when it breaks under $49.50, then my risk would be about $0.60-$0.65 once I allowed the $49.50 level to break.
The risk amount, when lost, is called the stop. Understanding stop losses is crucial to a successful trading career. There are a number of ways traders will place stops, but the thing they have in common is as a means of limiting losses. Without stops, it’s very easy for a trader to give away a large chunk of their account and be forced out of the game. Ignoring a stop or using them incorrectly will have a similar effect.

Some traders will only let a position go against them by a certain amount, such as a 5 point negative move in the Mini-Sized Dow (YM). Other traders will take the same number of shares or contracts no matter what and are willing to let the position go against them by a certain amount, such as $100, before they bail. Still others will never let a position go against them, so if the momentum does not increase right away or it begins to stall, then they will jump out. Each of these has some serious disadvantages in terms of getting the most out of a price move. The main one is that they don’t take into account volatility and every security trades somewhat differently at different stages of their development, even when a trader focuses on just one time frame for identifying setups, such as on a 5 minute chart.

I believe that the best format to use for most traders, particularly those who hold a position an average of less than a week, is to place a stop loss using a technical strategy. The closest to this out of the three methods already mentioned is the last one in which the trader does not let the position go against them. This is the one that generally places the most focus on technical analysis, typically with the assistance of pace and volume activity. It’s a difficult concept for risk management for newer traders to master.

The technical tools that I have covered work very well for assisting in stop placement and involve aspects from each of the above strategies. I rely heavily on support and resistance levels. For instance, if I bought the Russell E-Mini, then I would examine the time frames and identify the support levels at play. I would then use them to place my stop. I will never use some arbitrary amount, such as a certain point loss that never fluctuates. Instead, I will vary my contract size or share size in order to attempt to keep my stop losses comparable. In this regard, it shares one trait from the second type of stop level discussed earlier which limits monetary losses to a given point. For instance, I might adjust my contracts or shares so that I am risking only $100 on every trade I take.

Going back to the much-loved question on gains, every trader will ascribe a different value to what they consider to be risk and the amount a trader is willing to risk on each trade or position varies greatly depending on the individual. This is one aspect of what is referred to as “risk aversion.” Risk aversion is how often or how much a trader is willing to accept losses and incorrect decisions without letting their emotions rule their trading as opposed to the technical or fundamental reasoning for a position.

Some traders may be perfectly comfortable risking $1000 on a $50,000 account, while others may never feel comfortable taking stops larger than $50 with that same
account size. Both can still make a very good living, but the first trader is likely to have much more significant swings in his or her account size even when taking the exact same positions. This fact alone will greatly affect what they can expect in terms of their returns.

I spoke with a person a few months ago who was trading with an account of about $100,000 and it was not unusual for her account to fluctuate up or down by as much as $30,000 in just a week or two. I cannot even fathom how I would react to a comparable swing in my own account. I would be considered to be significantly more risk adverse than this individual. I place greater value in having a less volatile account and while this does place greater limits on my potential gains as well, it also keeps me less stressed and allows me to focus primarily on my strategy instead of the money that I am placing at risk. No two traders will have the same level of risk aversion. A good thing to keep in mind is that if taking a loss of a certain amount makes a trader anxious, sick, or so scared that they are not following their plan on a position, then they are risking too much and should scale down for at least awhile.

Additionally, the general rule of thumb for all traders is that no matter what, no trader should ever risk more than 2% of their account on any one position. This allows a trader to come back even when afflicted by a series of losses, giving them a chance to adjust their strategy or giving them the time for the market to turn back around and for their strategies to come back into favor.

A simple way to manage risk by limiting losses to a certain amount is to make a cheat sheet or an excel formula that you can just plug your account size and stop level into, making it easy to adjust share or contract size relatively quickly. Figure 1 displays an example of a cheat sheet in a smaller account using maximum risk. In some positions a support level on a long setup is just $0.50 cents away, so risking 2% or $400 on a trade would allow the trader to purchase 800 shares, whereas if the support is $2 away, then to risk the same amount, the trader would only be able to purchase 200 shares.

It is more difficult for commodities traders to adjust their risk to comparable losses every time unless they trade larger sizes. One way to try to get around this while learning is to trade the fund equivalent such as the QQQQ as opposed to the E-Mini NQ when trading the NASDAQ 100. 800 shares of the QQQQ are the same as 1 contract in the NQ. So, a trader can start with only a couple of hundred shares in the QQQQ and work up to larger risk levels until they can move into the NQ. There are some disadvantages to this method. For one thing, the QQQQ is subject to the Pattern Day Trader rule, so in order to daytrade it time and time again, a trader must have an account size that exceeds $25,000. Additionally, taxes are much easier when trading commodities as opposed to equities. The QQQQ is also choppier than the NQ and we will look at what this means here in just a few minutes.
I know how difficult it can be to calculate in a brief time just how many shares of a stock you can take while staying within your risk parameters so here is a "cheat sheet" to help simplify things. The following risk control sheet is based on a 20k account.

2% Risk in a 20k account. Total risk per trade = $400

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* Always round down to even out shares. Never round up or you end up risking more than 2%.

To borrow a quote from Peter Bernstein: “The essence of risk management lies in maximizing the areas where we have some control over the outcome while minimizing
the areas where we have absolutely no control over the outcome and the linkage between effect and cause is hidden from us.”

As a trader begins to develop skill in the market, there will be times when it is suitable to adjust the risk levels based upon the trades developing. If I come across a setup, for instance, that has each of the 5 tech tools lined up in it’s favor and I know from past experience with the pattern that it’s odds of success are exceedingly high, then I will often risk a bit more than usual on the position. If I think the market is more risky, however, and a setup has more cons, or I am simply feeling under the weather but still want to keep my feet wet, then I will trade smaller, or else increase how stringent I am on the criteria I use for accessing which patterns and setups I will take. If normally I might be okay with the fact that the volume in a pattern is not in my favor, or that the setup is not accompanied by a reversal period, then in those cases I would be more willing to pass and wait for setups that did have these attributes.

This brings me to my next point to make when it comes to risk. The risk on a trade or position can refer not only to how much money is at stake, but also the odds of the setup failing and leading to a loss. Various combinations of the 5 tech tools will create different odds. For the highest success, all 5 should be favorable. The most important of these would be pace, support and resistance and trend placement or trend development at the time of the pattern’s formation. The more cons there are, the smaller the odds for success will become. While a setup can still have 60%+ odds for success when it does not have the correction period or the volume in it’s favor, it’s possible to develop systems using these tools that are correct 90% of the time or more. The drawback of course is that these “perfect” setups are much rarer and hence much easier to miss that the ones with at least some noticeable flaws. The more cons a trader is willing to accept, the more active they will become. That activity is then limited by their risk aversion. How often are they willing to be wrong and not let it greatly affect how they manage their positions?

This can be widely influenced by the risk to reward ratio of the setup under scrutiny. Simply because a setup will work 80% of the time does not mean that it will make more in the long run than a strategy that is correct 60% of the time, or even one that is accurate 40% of the time for that matter. What if the 80% probability setup is only 80% accurate for a move that mimics the risk? For example, a trader risks $100 on a trade, but it only yields a $100 gain 80% of the time. On the other hand, another combination of the tech tools can create a pattern that is accurate a mere 50% of the time, but its average return is 4 times the initial risk, meaning a $400 gain. In the long run, the trader who is willing to be wrong 50% of the time would actually make more than the trader who is only comfortable being wrong 20% of the time.

When approaching risk management and the ever-present inquiry, “How much can I make?” the important thing to keep in mind is that no two traders will perform exactly alike, no matter what. It’s more important to find a style that works best for the individual and to use the 5 tech tools to maximize the gains on that style. By starting small, with minimal risk per trade, a trader can gain a very good feel for the style of trading that suits them the best. They can then work on perfecting that system until they get to the point that they are analyzing the 5 tech tools automatically and making

“The essence of risk management lies in maximizing the areas where we have some control over the outcome while minimizing the areas where we have absolutely no control over the outcome and the linkage between effect and cause is hidden from us.”

- Peter Bernstein
consistent progress when applying them. It is at that point that it then becomes prudent to slowly increase their risk parameters and the size of the positions they are trading to begin to maximize their profit potential.

Worksheet Questions

Answer the following questions to the best of your abilities. Once you have completed this section, turn to the answer guide to double check your work.

1) How will “risk aversion” affect a trader’s earning potential?

___________________________________________________________________
___________________________________________________________________
___________________________________________________________________

2) What is a “stop” and how should it be set?

___________________________________________________________________
___________________________________________________________________
___________________________________________________________________

3) What is the maximum that any trader should ever risk on a single position?

___________________________________________________________________
___________________________________________________________________
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4) Under what circumstances might a trader be willing to adjust their risk parameters?

___________________________________________________________________
___________________________________________________________________
___________________________________________________________________

5) In what three ways might a trader measure risk?

___________________________________________________________________
___________________________________________________________________
___________________________________________________________________
6) Complete the following “Cheat Sheet” given your account size and the amount of risk you feel is acceptable at this point in your trading.

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Note: Always consider slippage when determining share size.
Worksheet Answers

1) How will “risk aversion” affect a trader’s earning potential?

Risk aversion refers to how a trader reacts to different risk levels and how much they are willing to risk on their own. Essentially, it is one’s comfort level. A person who takes very few risks and waits “for just the right time”, preferring to wait for setups that are accurate at least 75% of the time, and risking only a fraction of his or her account on a position, such as 1/8 or 1/16 or less, would be considered to have high risk aversion. It can limit their earning potential and severe risk aversion can lead to being “frozen” when it comes time to make an entry or exit decision on a trade. This paralysis will make it very difficult to establish a successful career as a trader or investor unless the individual can find a way to overcome it.

2) What is a “stop” and how should it be set?

A stop is the maximum amount of money that a trader or investor is willing to risk losing before they exit a position. The purpose of a stop is to limit losses and allow a trader or investor to preserve capital and allow them to be able to continue to invest on new positions in the future.

3) What is the maximum that any trader should ever risk on a single position?

2% max, but ideally less

4) Under what circumstances might a trader be willing to adjust their risk parameters?

If circumstances are extremely favorable for a positive outcome and a trader has a great deal of experience in a particular pattern or set of trade criteria, then they might be willing to increase the amount they are risking. This should not exceed the 2% guideline, however.

On the other hand, there are a number of cases when a trader may be compelled to risk less than average on a position. These could include when they have run into a losing streak and it is beginning to play on their emotions, when the market is choppy and higher risk than usual or when the trader is feeling under the weather or distracted by other events yet still wishes to keep his or he feet wet. Be extremely careful trading at such times, however, because it can greatly affect reaction times and make emotional triggers more prominent.

5) In what three ways might a trader measure risk?
• Risk is typically viewed as the amount of money that a trader has on the line and will accept for a loss if they are wrong on a trade or position in the market.

• Risk could also be viewed in terms of the chances of being correct on a position. In other words, is the trade or position typically correct 60% of the time, 80% of the time, etc.?

• The risk versus reward ratio can also be considered in terms of assessing risk. Is a setup likely to generate 2 times the amount risked, three times, more, or less?

6) Complete the following “Cheat Sheet” given your account size and the amount of risk you feel is acceptable at this point in your trading.

This sheet can be filled out in numerous ways, depending on the individual trader’s risk aversion. The amount risked should not exceed 2%, but can range from simply risking $10/trade while learning, to up to 2%.
Part 7: Assessing Market Conditions

When it comes to “risk”, there is yet another aspect of the markets that must be examined, and that is the market conditions themselves. This is often referred to as volatility. I have touched already briefly upon this subject, however, it’s important to take a bit of time to explore this topic more in depth. “Volatility” refers to the degree of change over time of a particular variable. In the case of the market, this means the amount of uncertainty or risk associated with the changes in a security’s value. When the price of a security changes dramatically within a short period of time in either direction, then it is considered to be highly volatile, whereas a security whose value does not fluctuate greatly, but rather does so at a more steady pace over time has low volatility.

There are a couple of ways to view volatility. On the one side, any security which has a rapid price fluctuation would be considered highly volatile. This could be simply a stock which is moving rapidly on news. An increase in volatility also increases risk for a market participant, since it becomes more difficult to execute orders at the prices desired and the value of a security can move against the trader rather quickly. These can still be great opportunities for daytraders and scalpers, however, since they have much more potential for generating large gains in a relatively brief period of time.

The term “volatility” can also be used when discussing securities which not only change in price very quickly, but will swing back and forth, creating a more substantial trend channel or trading range with a great deal of overlap in the value of the security being traded. This is when the concept of risk tied to volatility becomes even more apparent. It represents an inefficient market where there is mass disagreement by market participants as to the directional implications of the information currently available on a security. The result is a lack of a strong directional bias, which manifests itself in choppy trading.

As with many of the technical tools I’ve discussed, indicators do exist whose aim is to measure volatility. Perhaps the most popular of these as it relates to the larger market is the VIX (the CBOE Volatility Index). It is used to measure the level of investors’ confidence in the larger market by displaying the market’s expectation of 30-day volatility using a wide of S&P 500 index options calculated from both calls and puts. When the VIX registers at greater than 30, then it is typically a representation of strong volatility resulting from uncertainty or fear, whereas values under 20 signify light volatility. The lesser-followed VXN measures the implied volatility of the NASDAQ 100. Neither of these measures individual issues, but can provide a picture for investors as to the near-term volatility in the larger market.

When examining the relative volatility for an individual security as compared to the market, investors will often rely on its beta, which compares the overall volatility of a security’s returns against the returns of the relative benchmark, such as the S&P 500. A stock with a beta of 1.2 represents a move of 120% for every 100% move in the underlying index, while a beta of .8 would mean that it has historically moved 80% compared to every 100% move in the index.

Of course, there is always the simple “eyeball it” method for assessing how volatile or choppy a security is as well. As you may have already guessed, this is my preferred method, although you will certainly find traders who swear by other means. For the
purposes of this course, however, let’s explore this topic without the assistance of such indicators so that the underlying price activity becomes the focus.

When examining a security for a trading or investing opportunity, the ones that have the less volatility in terms of choppy trading and the amount of overlap that occurs from one bar to the next on a given time frame will tend to yield the best risk to reward scenarios. For instance, if the E-Mini Russell 2000 goes from trading in a wider-than-average range of 4 points back and forth 5 times in a two hour period and then trades with an 8 point move back and forth twice in the following two hours, then the activity in the first two hours would be considered to be much more choppy than in the two which followed. As a result, attempting to trade those initial reversals would also harbor greater risk. (Figure 1)

Figure 1

I prefer to look for securities which display narrower-than-average trading channels and more decisive moves in either direction, even if the overall volatility based upon momentum remains high. The less overlap there is in terms of value from one bar to the next on a given time frame, the lesser the odds will be of getting flushed out of a position only to see it return and follow through with the position’s initial bias. Due to this, there are higher odds a stop order left on the books getting hit on just a few random trades before turning back around. These steadier moves will also allow a trader to more accurately predict correction levels in a security, allowing him or her to achieve exits nearer to the higher or lows of a price move since an increase in the
overlap of prices would indicate slowing momentum and not just the random fluctuation and indecision of a wider channel.

KLA-Tencor Corporation (KLAC) in Figure 2 offers an excellent opportunity to examine several types of trading in a security. To begin with, on the weekly time frame KLAC displays a high degree of volatility in terms of choppy trading. While the moves from the highs to the lows in each of the trend channels shown here are quite wide, averaging at least four points in most cases, it only takes a week or two in many instances to make that journey from the highs to the lows of the channel and has an extremely high degree of overlap from one week to the next. This makes trading or investing in KLAC on a weekly setup or pattern quite difficult, since the support and resistance levels of the trend channel will have more “give” to them and placing stops based upon these levels could easily result in numerous mistakes whereby the trader fell just shy of allowing for enough room to accommodate the added volatility and gets stopped out only to soon learn that had they held they would have eventually seen their target prices hit.

KLAC does not, however, display this same type of trading on all time frames, as we shall see in just a bit. A security may display marked volatility of this kind on one time frame, only to trade much more smoothly on another, making it less favorable for one time frame, such as attempting to trade patterns based upon a weekly setup in the case of KLAC, and more favorable for another time frame, such as trading based upon intraday or daily setups or even upon monthly setups.

Another example of choppy trading occurs in Business Objects (BOBJ) in Figure 3. Even though it obeys some semblance of trend development, such as two waves of
Part 7: Assessing Market Conditions

corrective activity both between 11:30 and 12:30 ET on Day 1 and on the correction off highs from the end of Day 1 and into the beginning of Day 2, this type of choppiness, whereby the prices on each of these 5 minute bars share many of the same values as in the previous bar, makes it much more difficult to notice these characteristics in real time, let alone narrow down ideal entry and exit locales. If I had attempted a buy out of 10:00 on Day 2, for instance, relying on the increase in volume to act as a possible confirmation tool, then I likely would have been stopped out when it made a somewhat lower low into 10:15 ET.

It is also extremely difficult to accurately read a change of pace or momentum. For instance, the downside pace appears to be slowing from 12:30-13:30 ET on Day 2, and volume is declining, which would often indicate a lack of highly motivated sellers. The stock even spikes higher shortly thereafter as it breaks free from the triangle. Nevertheless, it reverses just as quickly and is soon attempting to make its way back to the zone of the morning lows. This does not mean that the concept of pace is completely invalidated of course. The stock did manage a more rapid spike initially after all. It also displays a better, less choppy, pattern as it forms a more narrow range out of 14:00 ET on more gradual upside and then makes that final drop into 14:30 ET. Even within the choppier activity itself a larger change of pace can be observed when comparing the overall momentum of the afternoon rally on Day 1 to the late morning rally on Day 2 when the stock attempted a continuation pattern coming out of the correction that had formed into the close on Day 1 and the first 45 minutes of trading on Day 2. The second move was much more gradual on Day 2 and the declining volume on the upswing on Day 2 and compared to Day 1 indicated that the bulls were having greater difficulty despite several strong upside bars within the larger upside channel.
Securities can display changes in trading activity not only on multiple time frames as mentioned a few minutes ago, but also within one particular time frame, such as shown here in Figure 4 on C H Robinson Worldwide Inc. (CHRW). Although CHRW is never extremely smooth on this daily chart, it has periods of greater and lesser risk for traders hoping to profit from multiple day moves within the security. When attempting to trade within a period of choppier trading, different styles of trading need to be utilized as compared to a trending market.

While I trade both equities as well as the E-Minis, I rely more heavily on reversal patterns and pivot trading when trading the E-Minis, meaning that I am focusing on trading reversals off absolute support and resistance levels as opposed to using patterns which require greater confirmation. Although there are more times in the overall market that this choppier or range-bound type of activity will occur as compared to smoother trends, the styles of trading which excel under those conditions tend to take longer for a trader to perfect and become comfortable with. Decisions often need to be made very quickly, relying heavily on instinct based upon experience and unhindered by emotions which cause hesitation, whereas continuation patterns in a trending environment, such as towards the end of June in CHRW, give a trader more time to plan and prepare for the different scenarios he or she may encounter when the position triggers a buy or a sell.

As with every security, it can really pay off to review prior price activity within the security itself. Although volatility can change over time, most securities will tend to indicate these changes ahead of time as the momentum and volume activity progresses from one stage to the next. It often takes some outside impetus, such as
earnings, upgrades, downgrades, or other news, for it to do so and will instead continue in much the same manner as before.

![Figure 5](image)

Notice that in Figure 5 in Lam Research Corp. (LRCX), the stock typically trades in a very choppy manner, displaying a high degree of price fluctuation back and forth from one day to the next. The choppier moves, however, are often punctuated by a day of strong upside momentum, but rarely follow through to any significant extent into the following trading day. As a result, traders who saw such repetition should be wary of attempting to hold a long position that was acquired on one of those strong momentum days with the hopes of receiving greater rewards through a swingtrade. The returning choppiness would make it easier to get flushed out the following day at a lower level even when it did manage to make it higher on that second day, such as in #6 when it managed about another 50% of upside the following day as compared to that initial momentum day, but also took back about 50% of the previous day’s gains in doing so.

To further illustrate this point, the next four charts show several spans of time within the E-Mini S&P 500 (ES), where the ES has sessions of both higher and lower risk trading. Although the amount of time displayed in each chart is comparable, the type of trading is not.

This first chart of the ES in Figure 6 has several flaws. First, there is a high degree of overlap in prices within the trend moves. Even as the ES moves higher on the morning of Day 2 it does so with a great deal of hesitation. Additionally, the amount of movement itself is rather minimal. So, even if a decent pattern were to occur, such as
the mid-day reversal, by the time a trader allowed for a bit of leeway on a stop the ratio of potential return as compared to the amount risked would be rather minimal, particularly if they waited for confirmation on the breakdown from the smaller channel taking place out of noon. They would have then been lucky to have even covered their risk before it bounced off the support zone from the prior afternoon. I will discuss this particular aspect of risk in even greater detail prior to the end of this segment.

**Figure 6**

![Chart showing overlap and lack of smooth follow-through in ES trading](chart)

**Figure 7** has yet another example of this choppier trading in the ES. Again notice the greater degree of overlap, as well as the fairly narrow trading range of just a couple of points over the course of a day.

In **Figure 8**, however, the potential for a successful, lower risk trade has expanded. Even though there is still overlap in terms of price from one bar to the next, the average move has expanded as compared to the corrections and this makes all the difference in the world! The next higher time frames would not even show this degree of overlap, whereas the same could not have been said for the prior two examples in which the 10 and 15 minute charts would still have been quite choppy. This increase in the daily range and narrower counter-trend moves allows for greater reward vs. risk potential on a trade.
Part 7: Assessing Market Conditions

Figure 7

Hazardous Trading Range - Very Scalpish

Figure 8

Smother Follow-through with Larger Trend Moves
Obviously, pace (aka momentum) plays a large role in the matter. A stronger than average move will typically follow through more smoothly than one that is less than average. This is shown in Figure 9 with the difference between #1 and #2, whereby the pace on the first move is noticeably stronger than on the second. If a security was attempting a continuation pattern, such as in #2, and it merely crept higher, the odds that it will flush or reverse very quickly increase. In this case it did so by taking back most of the gains from the second upside move marked here in just a few minutes into 13:30 ET, even though it made up the losses again later on when the pace again turned over with a somewhat slower pullback into 15:00 ET.

Earlier in this segment I discussed choppy trading on the weekly time frame in KLAC. As I mentioned at the time, however, not all time frames in a security will trade in the same manner. As I was compiling this course, for instance, KLAC was an excellent stock for daytraders to focus their attentions upon. Although it did offer levels of greater congestion, even those congestion zones were more textbook and held support and resistance levels more securely before providing stronger and larger moves than the average ranges. The waves of buying and selling can even be seen more clearly, such as the two waves of downside following #1 in Figure 10 as it corrected into noon, as well as the two waves of upside within "C" when it turned back around off the highs and formed a continuation pattern for the bears.
The chart of KLAC in Figure 10 when viewed as one pattern should look somewhat familiar. Think back to the segment on pace. This was a perfect example of the template I created to display changing momentum within a breakout attempt. Notice
that the upside move in #1 was much stronger than average, however, the attempted
continuation at #2 (which was “A” on the template marked Figure 11) was a lot more
gradual and that pace continued to turn around into #3 as the stock pulled back into
the range (displayed as “B” on the template). This reversal in momentum, combined
with the fact that the stock never showed much acceleration in volume on the
breakout attempt, indicates a much higher probability for failure. By basing at “C”
within the lower half of the pullback at #3, and doing so on declining volume, it also
indicates that it would be time for those who had attempted to profit on the breakout
to cut their ties and move on.

Another stock that was ideal for trading at the time of production on this series was
U.S. Global Investors, Inc. (GROW) in Figure 12. Even as its uptrend began, the
trend moves formed within narrower channels as compared to the extent of the move
and even the trend channels within the corrections were often narrow as well. This
creates fewer false setups or triggers and makes it less likely to get stopped out
prematurely as well. Once a channel broke on the weekly and daily charts, it followed
through on that break.

Of course, most of this will likely mean very little if a trader does not see the practical
applications of how the type of trading itself that is taking place within a security can
affect how a position is managed. The next part of this segment is meant to address
just that. The template in Figure 13 displayed should hopefully be setting off a couple
of light bulbs. It illustrates an uptrend channel with higher highs and higher lows.
Although the trend itself is likely easy to identify, the action taking place on the
smaller time frames within that trend as it moves from the highs to the lows and back
may seen a bit more perplexing. As such, I will be dissecting each correction off the upper trend channel one by one and examining its characteristics.

*Figure 13*

**Typical Uptrend:**

*Higher Highs*

*Higher Lows*

Out of each of the three corrections within this uptrend, the first holds the highest potential both in terms of its odds for success, as well as the rewards it can produce as compared to the amount a trader risks. Although each of the successive moves can also be played, they require more skill and will typically take longer to master in order to maintain a high return as compared to risk, but even then the percent odds for success will not be as high as in the first. I will explain why in just a few minutes.

By virtue of being the first congestion zone within an uptrend, the range marked “A” in *Figure 14* has a bit of an advantage on the other two continuations, but for the sake of study, let’s put aside the assumptions based upon trend placement and focus on each of the three congestion zones as individual entities.

After a nice and steady upside move at #1, this security, which I’ll call XYZ, fell into a range, marked “A”. There were several things that occurred within its range that lent favor towards a strong continuation pattern on the upside. The first, of course, was the development of the pace within the range itself. While the selling was initially decent within the range, just before breaking higher it formed a stronger rally and then held for a much more gradual pullback. This change of pace created favor for the continuation based upon that characteristic alone.
Figure 14

A narrow trading range as compared to trend move will increase the potential for greater rewards on a trade.

How the range formed as compared to the initial rally was also very significant, however, since the closer a range holds the highs of a trend move, the tighter a stop can be. As a result, the reward versus the risk on the position will also typically be even greater. I prefer that a security will base within the upper third of a trend move to allow for a continuation that will yield more than I risked. In the case of a bull flag, where there is a gradual pullback off the highs, then I would also find this to be ideal, although up to a 50% retracement can still result in strong gains if a trader is able to use the pace within the correction itself to gain an edge. This would be accomplished in this example by using that last little pullback with the larger congestion of “A” for placing an entry and stop. The entry would be as the trend channel for that pullback breaks higher, preferably following an even greater volume decline. The stop could then be placed under the lows of that smaller pullback. Essentially, just take the correction marked “A” and tilt it downwards a bit.

Although Research in Motion (RIMM), shown in Figure 15, attempted a bit of an early breakout without any volume confirmation on November 22nd, it has a nice example of how a narrower overall range, when compared to the price move into the range, can lend itself to the best follow through. RIMM had approximately a $3.00 move off the lows of November 22nd heading into the congestion. This congestion range held throughout the majority of the day on the 22nd, with the average range of the base only about 50¢ wide. Whether using the average lows of the range, or the lows of the gap, the result was still a breakout move of at least $3.00 into the following day.
On the other hand, a wider range, such as shown in Figure 16, will have a more difficult time producing the same type of results unless there is some sort of smaller correction off the highs of the range or correction to allow for an entry and stop to be placed on a smaller time frame. Although certainly ideal, that IS NOT always the case. Many times a security may head straight from the lows of a range and break through the highs, triggering a breakout pattern. If the trend channel on the correction was fairly narrow as compared to the upside move, then this is not necessarily a problem at all, but if that channel is wide, then the risk increases by quite a bit. This is particularly true of the correction has taken back 50% or even more of the prior upside move. The only logical stop is under the last pivot low of the range, and if a trader waited for the range to break before entering, then the stop amount takes up a good chunk of the prior move, so an equal move target might not even cover the stop.

It is still ok to play such trades, however, when I do so I prefer for all the other tech tools to line up in my favor, such as trend placement and volume. Many times they will be highly successful in hitting that equal move, so even when a pattern does not cover its risk, if it works for that closer target often enough, such as 80-90% of the time or more, then it can still be worth taking. If one is wishing to build confidence, however, and hesitates more when placing or exiting a position, then this is one of the things that can just as easily be avoided.
A wider trading range as compared to trend move will limit the reward potential on a trade.

Bed Bath & Beyond Inc. (BBBY) in Figure 17 had this very thing happen intraday back in November. It had rallied out of the open and then fell into a zone of congestion. It was roughly in the upper half of the day’s range, but had still pulled under that ideal 1/3 retracement level. It also displayed no change of pace to suggest an upside breakout as the range developed, although the volume was favorable. Upside volume within the range was increasing, while downside volume decreases, indicating more interest from the buyers as opposed to the sellers. This helped the stock break higher into 14:00 (Note how the correction period worked in its favor), but with the best place for a stop under $39.25 and a prior price move of 61¢, it did not leave much room for gains. If we assume that the entry using a channel breakout would have been over the last pivot high of $39.50, then a logical fill would be around $39.55. This already eats up about 50% of the initial rally out of the open, leaving only about another 30¢ for gains. Even this could only be accomplished if the pace was as strong as out of the open and the trader was skilled enough to get a fill into the highs.

Unfortunately, the pace slowed as the breakout progressed and while one could have still gotten out with gains on a trailing stop when the ascending pennant from 14:00-15:30 ET broke lower around $39.70, I can’t say that the time and capital commitment involved would really made it that worthwhile. If I can find little else and am willing to be patient, then I will take a few such as this, but I have to admit that they seriously try my patience! It’s not unusual that I would just try to get out on any of the smaller upside moves as that pace is slowing and simply call it a day rather than risk getting flushed out should the move turn over quickly.
In this daily chart of Fairpoint Communications Inc. (FRP) in Figure 18, both of these concepts come into play. Initially there is a wider and choppier trading range beginning in March and heading into mid-June after a rally of more than $4.50. There is an attempt to turn the pace around in June, although that range itself is rather wide. One could have used that mid-June low for a stop, but a more traditional one is shown as “Stop A”. A traditional entry point would have been around $14.50 when the high from May broke. The result was a setup whose target was approximately twice the amount risked.

Altogether, the potential results from a June entry were certainly not bad, however, a more ideal setup began to form in July when FRP falls into an even smaller trend channel along the highs of the larger one. This more obvious change in pace, combined with how it held the upper end of the range as opposed to the one in June which was stuck in the middle of the range created a breakout pattern with nearly the same entry price as on “A”, but with a stop of half the price, allowing a trader who entered on “B” to take twice as many shares and still keep a comparable risk as the one who entered on “A”. With twice the shares, s/he had more to work with to time targets and would have likely earned at least twice what trader “A” would have. Of course, the option does exist to enter on “A” when the potential is still strong for a nice return, and simply add on “B” while adjusting the stop. This was a stock from the Position Trade Letter that I write. I did miss the initial trigger at “A”, but caught it right into the end of July as it came out of “B”.

*An extremely narrow trading range, often only several cents wide, will increase the risk of a trap or flush before it resolves the tug-of-war.*

Although I went to all that trouble to just point out how a narrower range is better in terms of risk and returns, an extremely narrow range can actually be quite risky. This is particularly true if there is any adverse bias in terms of pace, even if it’s very subtle as in the case of “C” in Figure 19. Often volume is dropping, so since the overall
correction itself is more gradual, it can be deceptive and any upside attempt to break at all can trap an unsuspecting trader or investor. Typically the securities with the highest risk are those whose range is only a few ticks (or pips in the case of currencies) wide.

An example of an exceptionally narrow range can be seen in the 5 minute chart of Baidu.com Inc. (BIDU) in Figure 20. It is not uncommon for this type of a range to form after an extreme momentum move, such as occurred on the morning of November 22nd. Although the stock based in the lower 1/3 of the range from the descent and volume decreased throughout the consolidation, the breakdown attempt at 13:30 ET ("A") failed miserably. In most cases it IS ideal to use the last channel or pivot low in a range at lows for entering a continuation pattern. The volume was also the lightest within that range at the lows.

The two huge cons that broke the mold, however, were the extremely extreme decline, which generally necessitates a longer correction period than usual in order to form a continuation of any stamina, and the fact that the end of the range was so much narrower than the rest of it. If this had represented a heart monitor, the patient definitely flat-lined. It should come as no surprise then, how it reacted when jolted back to life. After another false start at "B", it whipped higher, hitting any stops placed over “A”, which would have been the ideal locale in most circumstances, it dropped suddenly into the open. It merely tested the morning price support from the previous day, however, before turning right back around with barely a moment’s hesitation.

This type of range is most dangerous when it occurs on anything larger than a 5 minute chart. If I am trading a gap or just scalping intraday and am using a 1 minute
time frame, then I will more often see these very tight ranges, and although the risk remains for such activity as this, if I combine the 1 minute pattern with those on a larger time frame, such as a strong daily chart favoring the same directional bias, then I can keep a stop wide enough to avoid getting pushed out at exactly the wrong time.

The final image for this segment in Figure 21 displays each of the types of corrections I have just covered as they come together. The range labelled “A” is the least risky all around. “B” still has some possibilities to work with, but has greater limitations and is more prone to creating traps in which a buyer takes a break in the upper trend channel line only to have the position reverse. “C” is also more risky if it gives a buy trigger since its pace does not turn over well to favor buyers and the range is so extreme that it makes it easy for an upside attempt to flush quickly to the downside to take out stops before deciding if it will maintain the downside bias now established with “D” or if it can round off at lows and form more gradual lows into support, or bounce quickly off the support and then base in a more sideways manner to turn the pace over and allow it to resume the earlier uptrend.

Figure 21

Conclusion

By simply paying attention to how volatile or choppy the price activity is within the time frame being observed for a trade or setup, a trader can adjust their risk and activity level to fit their comfort zone. Some traders will find they can still fair well under more adverse market conditions than others. The range of difficulty from one
type of environment to the next begins with the first correction as the easiest to master, the second as the more difficult one and the third as the most difficult.

Worksheet Questions

1) Complete the following sentences:

   a) The degree of change in a security’s price over time is its _________________.

   b) When the _________________ reads over than 30 then it means that volatility is high.

   c) A stock with a beta of 1.1 represents a move of _________________ for every 100% move in the underlying index.

   d) A base near highs that has the greater potential will hold within the upper _________________ of the range of the move heading into the congestion zone.

2) What problems might a trader run into when dealing with a security that is highly volatile?

   _____________________________________________________________

   _____________________________________________________________

3) The following charts show breakouts on a number of different securities. Discuss how the type of trading that is taking place within each of these positions could affect a trader’s ability to manage and profit from each of the channel breakouts.
Chart 1 A:

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Chart 1 B:

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Chart 2:

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Chart 3:

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Chart 4:

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4) Sometimes a trading range will become extremely narrow on a stock which typically displays nice volume and price movements. What are the risks associated with a continuation breakout on such a pattern?

Worksheet Answers

1) Complete the following sentences:

a) The degree of change in a security's price over time is its volatility.
b) When the VIX (CBOE Volatility Index) reads over than 30 then it means that volatility is high.
c) A stock with a beta of 1.1 represents a move of 110% for every 100% move in the underlying index.
d) A base near highs that has the greater potential will hold within the upper third of the range of the move heading into the congestion zone.

2) What problems might a trader run into when dealing with a security that is highly volatile?

The following are several issues that can arise when volatility is high.

- It can become rather difficult to execute orders at the prices desired and the value of a security can move against the trader rather quickly, resulting in greater than anticipated losses.

- Due to this rapid price action, it's necessary to be able to make decisions quickly and without a great deal of hesitation, and is hence more dangerous for newer traders.

- It is also easier to get “flushed” out of a position, whereby a stop gets hit just before the security reverses again and heads back in the direction the trader had initially anticipated.

- It is also more difficult to manage a position since it is not as easy to view changes in a security’s price. A pullback can more easily be a
3) The following charts show breakouts on a number of different securities. Discuss how the type of trading that is taking place within each of these positions could affect a trader’s ability to manage and profit from each of the channel breakouts.

Chart 1:

A. In this chart of the E-Mini Russell 2000 there is steady selling out of 10:00 ET, lasting for about 30 minutes. When it corrects off those lows it does so in typical trend development fashion: with two moves to the upside in a congestion zone. The initial setup when the range breaks lower is still somewhat higher risk, however, because the range goes from the highs to the lows and through support to setup instead of hugging the lower end of the range first. Since the correction retraces about 50% of the prior price decline, it made it easier for the move to stall again in a larger range before it was able to break lower out of B.

B. In B the setup is more solid because the correction itself is more narrow, allowing for a tighter stop as compared to the prior trend action. Declining volume within both the larger and smaller corrections off lows aids in the formation of the continuation short patterns. Another positive aspect of this particular breakdown is that the smaller base which formed just after 11:00 ET only retraced about a third of the drop off the highs of that larger congestion zone which immediately preceded it.

Chart 2:
This trend channel breakout is higher risk than the first because there is a great deal of overlap from one bar to the next. It becomes very easy for the stock to flush out stop orders and makes it more difficult to just sit back and relax and trust that the pattern will end up hitting a larger price target without getting flushed. Even though the overall pullback was much more gradual than the rally out of 13:00, it also takes back all of those gains as it does so and this creates stronger resistance in the zone of the 13:30 highs, where it fell into congestion again into the next morning.

Chart 3:

This chart of PENN is a pretty typical range. It is fairly narrow, but is not quite flat-lining. The range is within the upper third of the upside out of the open, so the odds were higher for a continuation move. It also broke higher into a correction period at noon, which was also a bonus. It would have been nicer, however, if there were clearer back and forth moves within the trading channel itself to help identify a pace bias within the range. The range was a bit narrower than ideal as well.

Chart 4:

To begin with, the base along the early afternoon highs on ENDP did not look much different than in the previous one of PENN, except that this time the base was even smaller as it progressed. It spent half an hour moving two ticks from $31.79 to $31.80 without any increase in the trading range. This made it easier to trigger a setup, only to flush back lower into 13:30 ET, attempting to run any stops before reversing again. The choppier trading out of 11:00 also added risk that such action would return before the momentum did as a result of the two tick range. Eventually the stock did form a more solid breakout and went on to and hit $32.63 before the closing bell.
4) Sometimes a trading range will become extremely narrow on a stock which typically displays nice volume and price movements. What are the risks associated with a continuation breakout on such a pattern?

A range of only a few cents or a few ticks wide often follows an extreme momentum move. Unless the security typically trades in such a range, then breakouts can more easily trigger, only to reverse quite quickly, taking out stops based upon typical support or resistance levels that are near at hand.
Part 8: Understanding ‘Gaps’

Earlier in this course, in the segment on support and resistance, I introduced the topic of gaps as they relate to the market. Gaps are the breaks between prices, either higher or lower, whereby no trading occurs between the two price levels. Most traders, no matter what their style of trading, nor the market that they trade, will have to deal with issues associated with gaps at one point of another. Understanding the nature of gaps can help a trader avoid situations where gaps will dramatically increase their risk, as well as help them identify the setups in which a gap will greatly enhance the likelihood for success in their trades.

When analyzing gaps in the market, understanding the type of gap at play can be quite helpful. I could take an entire day just discussing the nature of gaps and how to trade them. While that goes beyond the scope of this particular course, I still want to address some additional characteristics of gaps and later on I will show you a couple of examples of trades that were instigated on the basis of their gaps.

Types of Gaps

When a gap takes place in a choppy market or within a trading range, these gaps are less significant than ones which form in a new trend or accelerated price move. These lesser gaps are most often referred to as “common gaps.” The most recognizable gaps are those which occur at the open and involve greater momentum than a common gap. These are called “opening gaps”. These occur when a security trades at one price level into the close of the regular trading session and then opens at another at the start of the next session and can lead to significant price moves intraday.

An example of common gaps occurred in this chart of Canadian Natural Resources Limited (CNQ) (Figure 1) on December 5th and again on the 6th. These gaps, which are typically less than a third of an average day’s range or less, can fill very easily. Many times they do so within the first hour of trading. Notice that in both the upside and downside gaps, the stock failed to continue to move in the direction of the gap and eventually gave into the pressure to close the gap.
There is a common misconception about gaps, and that is that “all gaps eventually fill.” In truth, this is not the case. Yes, a vast majority will fill eventually, but think back to some of the high-flyers that were brought low by bad news, such as corporate corruption, as just a few of the more obvious gaps that did not fill. These stocks gapped lower and just continued until they were delisted. In other cases, if a gap occurs on news which reflects the fundamentals of a company, these gaps will also have a more difficult time closing and may take months, if not years, to do so. I know it’s tempting to simply hold onto a position that gaps against you, hoping that eventually it’s going to come back, but in the meantime, how long are you willing to let a position continue to move against you before admitting that you made a mistake? Often, the longer one waits, the more costly that mistake becomes!

A great example of an opening gap can be found on the daily chart of Systemax Inc. (SYX) (Figure 2). I had been stalking this stock for a few months after coming across it on the monthly time frame. It had been basing nicely along highs and volume was dropping off throughout that time, indicating a consolidation. After giving an initial price trigger on August 29th, the stock gapped strongly higher into the next morning. By gapping higher by more than an average day’s range, the gap had a much higher chance of holding and forming continuation patterns in the direction of the gap. Since the gap took SYX out of not only a daily trading range, but a monthly range as well that had lasted several years, it has yet to look back. At the time of production on this course, SYX was trading around $30/share.
Most gaps in the indices, such as the NASDAQ Composite and S&P 500, are common gaps. Every once in awhile, however, a more extreme gap will occur. Unlike in stocks, a larger than average gap in the indices will typically fill fairly easily and start to do so shortly after the open on the day of the gap. The major exceptions tend to be when the market is at a major reversal point and economic factors come into play.

Although larger than average gaps can offer excellent opportunities for traders to take advantage of patterns forming in the direction of the gap, leading to strong momentum continuations intraday, not all extreme gaps are as fruitful. When an extreme gap occurs after a rally of several days or several weeks, then the gap, even when it’s larger than average, can still more easily attempt to fill and is called an “exhaustion gap.” Gaps which are more than three times an average day’s range will also have a much more difficult time continuing right away in the direction of the gap and are less favorable for intraday setups on the day of the gap, although they can still be worth-while as position trades. Omnivision Technologies Inc. (OVTI) (Figure 3) on the daily chart from December 1st experienced both of these types of gaps. The gap not only occurred after the stock had already been experiencing strong selling pressure for several days, but it was more than three times an average day’s range and it also took place right into price support from previous lows. As a result, intraday it was only able to form a scalp pattern for a continuation short and failed to break the lows from the day of the gap until the start of the new year.
American Depository Receipts (ADRs)

Many equities traders will also trade what are known as American Depository Receipts (ADRs). These are negotiable (transferable) certificates issued by a U.S. bank representing shares in a foreign publicly-listed stock that is traded on a U.S. exchange. They allow investors to hold shares in equity in other countries and are an excellent means of diversifying one’s portfolio. ADRs follow all of the same technical rules as other stocks, but they are prone to gapping since their counter-parts are traded on foreign exchanges. This creates an additional element of risk for those who trade them overnight.

CNOOC Limited (CEO) (Figure 4) engages in the exploration, development, and production of crude oil, natural gas, and other petroleum products in China. This is a daily chart of CEO from the beginning of 2005. The ADR had been in a steady uptrend for a number of years and was correcting yet again into its 20 period simple moving average on the monthly time frame. It did a nice job of forming a three wave trend move on the daily chart. Each of the corrections between the moves in the downtrend took 10 days to correct. Hence, it’s typical that a security will then create an even longer correction and break the trend channel. CEO complied with this basic tenet of trend development and broke the trend in April.
The greater difficulty and risk when trading ADRs is not that the 5 technical rules do not work well when trading them, but rather that the gaps can move the security very quickly through support and resistance levels and when entries and stops hit, it can be more difficult to manage risk. If I were risking $200 on a trade in an ADR for instance, and it gapped past my stop, then I could easily end up losing $400 instead. An adverse gap can just as easily wipe out gains. Take a look at the daily chart of Toyota Motor Corp. (TM) in Figure 5. This ADR resumed a nice solid uptrend after a two wave correction into September. After three waves of buying, however, TM gapped sharply through its lower trend channel support, opening nearly $5 lower on November 20th. Since the gap opened right into price support from the beginning of the month, it was able to hold and continue to move slowly into the 50 day sma before breaking higher again, but it’s still a good example of how a typical correction in an ADR can occur.
Figure 5

Uptrend Breaks on Large Downside Gap

Figure 6

Buy Setup on CRXL

Rapid Retracement
The same thing happened in Crucell NV (CRXL) (Figure 6), a biotechnology company that focuses on developing and marketing vaccines and antibodies for preventing and treating infectious diseases. This ADR caught my attention because it was forming a pattern called a cup with handle on the weekly time frame and was closing in on its 20 week sma support on declining volume. It did not quite hit that support level, however, before it attempted an initial breakout in mid-November. Even though it popped higher for three days, it wiped out nearly all of those gains in just one day of trading on November 16th. It continued to fall back into the lows of the larger trading range on the 21st before it finally turned back around and returned to the highs of the previous year ($29 zone).

I do love trading ADRs. It is a great chance to diversify into other markets. When I trade them, however, I find that it is very important to manage them a bit differently than in stocks that do not trade in such a gappy or choppy manner. I rarely keep a stop order on the books, for instance, and prefer to manage them manually. If a setup also occurs a bit earlier than ideal, such as in CRXL, then I also need to be prepared for the ADR to pull back into the range before it can continue. This can take place very quickly.

I also will try to move into and out of positions more gradually, instead of just placing all my order on at once and will typically only take a partial position if I feel the initial trigger is a bit premature. I will then add on at a later date. This keeps me from beating myself up if I make a mistake and the ADR falls into an adverse move since my risk is reduced, and using this method for exiting also allows me to get a bit more out of the position as it’s coming into highs since I can start offering out into a target level as opposed to waiting and using just a trailing stop, which, as was the case in TM, can be a bit rough!

**Understanding Time Frames**

A very important thing to look at when determining whether or not to take a setup or not is to look at it from several points of view. In the market these are called Time Frames. The ones that are the most pertinent to a particular trader will depend on their objective. For instance, let's say that I am planning on taking some swing trades. My primary focus is going to be to look for patterns on the daily charts for buying or shorting opportunities. Once I have a list of stocks that caught my eye, however, it is usually so many that I then need additional means for trimming down that list. One of the ways to do so is to look at those symbols on several other time frames. It is important to not focus merely on the time frame that I first notice a setup on. Utilizing multiple time frames will vastly improve my reward versus risk ratio.

I make a point of examining both the smaller, as well as larger time frames as well. For a swingtrade for instance, it is helpful to look at a weekly chart. This will show me where my pattern is at in the larger trend. If I see a bull flag on the daily, but on the weekly I notice that the stock is coming into very strong resistance, such as an equal move from the last weekly breakout, then the odds for success on my swingtrade is going to be lower. This is because, with the weekly so extended, it becomes more probable that the stock is near the end of that swing upwards on the weekly chart and more likely to become suspect to reversal patterns forming.
Now let's say that I still have a pretty decent list to choose from and most of the daily charts still had room to move on the weekly as well. What I want to look at next are the smaller intraday time frames. For a swingtrade, these will be the 15, 30 and 60 minute charts. I will begin to watch for smaller buy patterns on these time frames that can lead into a trigger on the daily chart. If I identify a bull flag on the daily, then I will look on a 30 minute chart for a base along the highs of the trend channel in the bull flag. As that base breaks, I can use that as my trigger, instead of having to wait for the daily breakout, which might not occur until the pace and volume in the market have already picked up and are moving strongly higher. If that is the case at the time of my entry, the odds of my getting in near a short term top are much higher. What this does is make it easier to mess up my trade by getting scared out of the position on a rather significant intraday pullback well past my entry point.

If a trader focuses purely on daytrading or scalping, then the weekly charts won't matter as much to them. Even if a stock is at weekly resistance, it can still get a nice upside move intraday. On the other hand, the smaller intraday charts like a 5 minute or even a 2 minute will matter. They will be like the 15-60 minute charts for the swingtrader. These smaller charts can be used to enter a position at the most ideal locale.

The same can be done with exits. As a stock is coming into a target level and a trader wants to look to get the most out of it without having to hold through any more pullbacks, they can use the patterns and action on the smaller intraday charts to help time an exit. This is where the multiple time frames really come into play: as a way to manage and reduce risk, as well as increase your reward potential.

Traders should be very careful, however, to pay attention to the time frame they took the pattern on. If I took a daily bull flag, I generally don't want to use a 15 minute chart halfway to my target for anything other than assistance on trailing stops. Just because I see resistance on a 15 minute chart doesn't mean that the daily rally is over with. More likely, it will just lead to a temporary correction before moving higher again. Too many traders drop down to smaller time frames and start trying to micromanage the trades when they are in play. What this will most often do is just get them out at temporary resistance levels, diminishing their risk:reward potential and keeping them from reaching their targets or objectives.

**Putting It All Together - KYPH**

Throughout the remainder of this course, I’m going to revisit each of the categories and tools that I’ve discussed so far and explore how to utilize them to put together highly profitable setups and to manage positions. One of my favorite strategies for daytrading involves looking at momentum type of activity, particularly gaps. When searching for daytrading opportunities, those that have a strong daily breakout or gap are often great candidates for continued momentum intraday in the direction of the gap.

A perfect example of this which I came across a few months ago was in Kyphon Inc. (KYPH) (Figure 7). KYPH gapped strongly higher at the beginning of December after announcing the acquisition of St. Francis Medical Technologies Inc. The stock caught my attention when it popped up on my gainers list in the morning. I use Real Tick for
my charting platform and one of my favorite scans built into the platform is one which looks for premarket gainers and premarket losers. These are stocks which are trading higher or lower in the premarket (meaning before 9:30 am ET). I peruse this list for stocks which have a lot of room on a daily time frame and are gapping into the open because these will often follow through strongly intraday on a continuation of the momentum and offer some of the most favorable intraday setups.

**Figure 7**

KYPH gapped nicely in December, providing just the type of daily and gap combo that I favor. After catching my eye on the daily time frame, the first thing I did was to check out what types of pros and cons it had. Although the gap still left the stock within a larger trading range on the daily chart, there were a lot more pros. In terms of trend development, the stock had a two wave pullback off the upper end of the larger daily range in November with the second pullback much more gradual than the first. Volume declined as KYPH pulled into the lower end of the range and the pace slowed, creating a rounding off at the lows ahead of the gap.
Since the daily chart looked free and clear with a lot of room to move out of the open, I then stepped back to check out the weekly and monthly time frames (Figure 8). This isn’t always necessary for just a daytrade, but it never hurts to check anyway. As it happens, the weekly and monthly charts of KYPH were excellent. The stock had two waves of upside in a steady uptrend since 2003. There was an initial correction into 2004 and early 2005 that split up the buying and the stock began a second correction into the second half of 2005. This meant that in terms of trend development, there was a strong possibility for a third wave of buying on the monthly time frame.

Once I had established that I really liked the looks of KYPH on the daily and monthly time frames, the next thing I had to do was drop down to the intraday charts (Figure 9) to see if I could locate a buy setup on those time frames that would lead to a continuation on the daily. Unfortunately, this didn’t happen right away. Instead the stock soared out of the open, rallying back into the previous daily highs and price resistance at the $40 whole number level. It had opened around $35 after closing near $33.50 the previous day, so this was quite a move.

KYPH rounded off at the morning highs and corrected by falling into a triangle pattern at highs. The pace within this triangle began to favor a breakdown by hugging the lower end of the triangle’s range out of 9:45 ET before giving in to the pressure and taking back about a third of the intraday gains before finding support. The comparable pace of the back and forth moves within the first 45 minutes of the day pushed KYPH into a trading range intraday.
The stock pulled down off highs for a second time into the 10:15 ET reversal period. By doing so on declining volume, it suggested that KYPH would end up continuing the previous trend move before the range, but it was still a bit too early to be certain. It helped though that the volume increased on the upside moves. An even greater decline in volume just prior to 10:45 ET, followed by a strong pop back to the highs of the range at the same time as the reversal period continued to speak positively for the bulls. A smaller two wave correction into 11:00 also showed favor for this bias and a final base into 11:15 ET cinched the deal.

KYPH triggered its first buy setup out of the 11:15 ET correction period. When the upper trend line from 11:05-11:15 ET broke higher, the buy was confirmed as volume also increased. The perfect thing about timing a setup based upon a smaller time frame that corresponds to a larger time frame setup is that it offers the best chance to increase the reward potential by allowing a trader to keep a substantially tighter stop than the would have to otherwise. The intraday stop level on KYPH was only about 25¢, while a stop based upon the daily chart would have been under the day’s lows in many cases, which was about $4 away. Notice that my entry was also based upon this smaller time frame. Instead of using a prior pivot high, like the one at about 10:45 ET, or above the highs of the day, I used the smaller base at the very end of the range. When it broke higher, that triggered the buy.

Charts with a daily gap like the one in KYPH which have a nice strong setup on those larger time frames, will often lead to a trend day, meaning the chance for more than one setup in the direction of the gap. Figure 10 shows the ongoing development of KYPH on December 4th as it continued past the early morning trading. A second buy setup intraday corresponded to the 12:00 ET correction period. The stock again
experienced declining volume as it corrected with a narrow base just under the day’s highs. The breakout led to new highs on the day.

**Figure 10**

Equal Move Comparison

BREAKOUT TEMPLATE

Volume Decline

Light Volume
A third and final intraday setup on the 2-5 minute charts came with the last hour of trading. After pulling back gradually in the first half of the afternoon, the stock completed another two wave pull off highs and reversed again in another variation of the breakout template shown here that had led to the initial buy out of the morning, marked “A”. Volume had again fallen throughout the correction and particularly in the last segment of it when it based at #3. As that base broke higher it triggered a buy into the 15:00 ET correction period. The stop level was under the lows of that smaller base labelled #3.

The breakout into the last hour of trading had an equal move target as compared to the early afternoon rally at nearly the same price as the highs from May in the $44.00 whole number resistance zone (Figures 10-11). This target level hit with the open on December 5th and held well, reacting well to both the equal move resistance and price resistance levels and served as a target for daytraders. The stock is still working on its breakout on the monthly charts, where it still has plenty of room to move. It has been trading higher since last year, however, and the next major resistance will be $50.

**Putting It All Together - DRIV**

This next chart of Digital River Inc. (DRIV) in Figure 12 has another strong continuation pattern intraday that is based upon not only the intraday action, but the daily as well. As in KYPH, DRIV caught my eye early on in the day as a result of its strong upside gap into the open. This gap took it above the highs of the month. After an initial move in the direction of the gap, the stock pulled back with a two wave
correction into 9:45 ET. This move into 9:45 ET would have been a nice initial buy since the second wave of selling was slower than the first and on declining volume. I did not catch this initial buy, however, and catch a setup forming until later in the morning.

After pivoting off highs around 10:00 ET, DRIV formed another two wave correction. It was not as extreme as the first two moves lower out of the open, but the idea was essentially the same. The first drop was very strong, lasting just under 10 minutes. The stock bounced into the 10:15 ET correction period and then began a second wave of corrective action for another 10 minutes or so. The volume at this time was the lightest of the day, despite it occurring on a price decline. This indicated that the sellers were not that pushy and there was no panic or real concern from the bulls. An initial trigger was as the upper trend channel line from that second pullback off highs broke. The volume spiked at this time, confirming the buy. A stop was under those pivot lows. I didn’t have my chart up in time for the initial setup, but a secondary one quickly followed. There was another gradual pullback out of 10:30 ET. This time it was more of a base along the previous highs. I was able to catch it at $57.09 and placed a stop under that little base.

Assuming that the pace on the breakout would be comparable to the move heading into the congestion, I looked for a larger target to mimic the rally off the morning lows, meaning about $2. By just eyeballing these moves, it meant around $58.70 or so. An initial price resistance level that it would have to deal with, however, was $58.00. Although the pace of the breakout was strong to begin with, it started to slow after only a couple of minutes though and began to have a more difficult time making higher highs as it closed in on the 10:45 ET correction period. This slowing momentum meant that the closer resistance would end up being stronger resistance, so I adjusted my target to the $58 zone. Had the pace remained comparable to the previous move, it would have still likely had at least some reaction to the price resistance, but then could have more easily broken through it into the larger equal move zone instead of turning around like it did because of the rounded highs into the closer resistance.
In the segment of this course where I discussed trend development, I mentioned one of my favorite reversal patterns off lows. It happens when a security falls sharply into a support zone and then the trend continues, but at a stunted pace. It can be either a two wave or a three wave downtrend, as long as the second move within the trend is more gradual than the first and preferably takes place on lighter volume.

**Putting It All Together - SCHN**

One of the stocks which fit this criteria and caught my eye last year was Schnitzer Steel Industries Inc. (SCHN) (Figure 13). It had three waves of selling since highs in late March, 2006 and then broke that downtrend to establish a higher high in July. This high held and a second downtrend on the daily time frame began. I started following it in September when I noticed it pulling back into the previous lows and that it was doing so on declining volume. The stock was also starting to round off and began to knock heads with the faster moving averages.
Part 8: Understanding 'Gaps'

Figure 13

$30 Support
Reversal

Figure 14

Slowing Pace
2 Waves & Pace Change
Buy Setup
Volume Escalated
I mentioned earlier that one of the risks of such a setup is that they can often flush lower one last time before reversing. Since SCHN had not quite hit the congestion support level from the beginning of the year in the $30 price zone, it left room for that level to serve as a magnet. The stock dropped quickly into the beginning of October, which is a correction period on the weekly and monthly time frames. Volume escalated as exhaustion hit. By busting the previous lows, which were made on lighter volume, this created a bit of panic, but the stock jumped higher on the 5\textsuperscript{th}, taking it back into the 20 day sma (Figure 14). It based there for a week or so and then continued, stalling at each of the major moving averages as they hit for the first time and increasing in momentum between each of those moves. SCHN had been in a very wide trading range since late 2003 and the surge into November took the stock back into the highs of the range where that resistance held, much like it had in the earlier example of KYPH.

For additional examples of using the 5 tech tools and applying them to trading the markets, check out the CD which accompanies this segment of the course!

**Conclusion**

No matter what style of trading I am doing on any day, or which market I am trading, using the five technical tools that I laid out in this course will always give me strong odds for success in picking the right setups and helping me manage my targets and risk once I’m in those positions. It can take time, however, to get into a habit of checking for each and every one of these traits, particularly making sure to check the multiple time frames. The goal is to make it rote. I rarely think through each of these tools one by one anymore.

Our minds are the fastest computer available and once they become programmed to check for given criteria, then it will begin to make those judgments automatically. A trading journal, whereby a trader copies and examines each and every position they traded, is also very valuable since it allows them to see exactly what their mistakes are, as well as the areas in which they excel. This not only helps a trader narrow down his/her trigger and entry strategies and which patterns they trade the best, but the added experience in dealing with each of these tools helps built accurate intuition, making for more effortless entries and exits.

**Worksheet Questions**

Answer the following questions to the best of your abilities. Once you have completed this section, turn to the answer guide to double check your work.

1) How does a “common gap” differ from an “opening gap”? 

________________________________________________________________________

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________________________________________________________________________
2) When a security gaps by more than three times its average daily range, what will most likely happen?

___________________________________________________________________

___________________________________________________________________

3) What is an ADR and what makes them higher risk than many U.S. publicly traded companies on the NYSE or NASDAQ?

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___________________________________________________________________

4) When placing a target on a swingtrade setup, which time frame(s) are the most important to use for exiting the position?

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5) If a stock is gapping higher, what are some traits on a larger time frame that will increase, as well as decrease, the risk of a position intraday as a daytrade?

___________________________________________________________________

___________________________________________________________________

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Worksheet Answers

1) How does a “common gap” differ from an “opening gap”?

*Common gaps are ones which occur in a normal trading range or choppy trading. They are often small and fill quite easily. An opening gap tends to be more substantial and will affect the price moves of a trend to a greater degree. Gaps within a trading range would be considered to be common gaps, but a gap that breaks a security out of a trading range would be called an opening gap.*
2) When a security gaps by more than three times its average daily range, what will most likely happen?

It is harder for a security to do much at all after such a gap. It has become very extended, often gapping into a support or resistance level on a weekly or monthly chart, and yet traders do not often want to bet on the gap attempting to fill because they could easily get trapped. So, the end result is that often the security will trade in a range for several days or longer with a minimal move either in the direction of the gap or as a very small partial fill of the gap.

3) What is an ADR and what makes them higher risk than many U.S. publicly traded companies on the NYSE or NASDAQ?

ADRs are negotiable (transferable) certificates issued by a U.S. bank representing shares in a foreign publicly-listed stock that is traded on a U.S. exchange. They allow market participants to own positions in a foreign-traded company. They are higher risk because they are prone to gapping overnight as a result of their counterpart being traded on a foreign exchange. It can thus be more difficult to manage a position in them.

4) When placing a target on a swingtrade setup, which time frame(s) are the most important to use for exiting the position?

Always base the target on the primary time frame that the setup was located on. Even if there is an intraday setup, if I am watching something on the daily charts for a larger move as a swingtrade, then my target and trade management are performed on that time frame and I will only drop down to the smaller time frames when entering the position or when it gets close to my target or trailing stop zone.

5) If a stock is gapping higher, what are some traits on a larger time frame that will increase, as well as decrease, the risk of a position intraday as a daytrade?

Increased Risk (assuming a buy setup): If there is substantial upside resistance near at hand, such as a daily simple moving average within 25¢ then my risk will be increased. Additionally, if the larger trend has already had three wave of buying or is rounding off at highs then risk also increases. The same applies if volume is decreasing on an upside move and decreasing on a downside move.

Decreased Risk (assuming a buy setup): My risk decreases if I have multiple time frames in my favors, such as the daily and intraday charts when I am daytrading, it also decreases if the volume and pace are slowing on the downside as compared to the upside, and when the larger trends are not very extended. Corrections periods and support levels hitting at a trigger zone will also provide fuel for the fire. If there is no strong resistance overhead, then it will also make it easier for the security to put in a strong momentum move.
Glossary

2B – A type of double top or double bottom when the second high or low is slightly past the first pivot. To help with clarification, TFMS uses the term 2T to refer to a 2B at highs and the term - to refer to one at lows.

Above the Market - A limit order to buy or sell a security for a specified price that is higher than the current market price. A sell order may be placed above the market in an attempt to sell at higher prices. However, if the market does not reach these prices, the order will go unfilled.

Accumulation – The first phase in a bull market when investors are buying shares from other investors who are uncertain about the market.

Advance Decline Line - The line that measures the net daily difference between the number of advancing issues and the number of declining issues thus reflecting market breadth. It provides an indication as to the overall strength of the market.

After-Hours Trading – Trading activity which occurs in a stock after the market is closed.

All or None (AON) – A trade order to buy or sell a stock in one order or not at all. This prevents a trader from having an order “half-filled.”

American Depository Receipt (ADR) – A negotiable certificate issued by a U.S. bank representing shares in a foreign stock that is traded on a U.S. exchange. ADRs are denominated in U.S. dollars, with the underlying security held by a U.S. financial institution overseas.

American Stock Exchange (AMEX) – Regulated by the SEC, this exchange offers facilities for the trading of equities, options, and debt securities.

Analyst - Employee of a brokerage or fund management house who studies companies and makes buy and sell recommendations on their stocks. Most specialize in a specific industry.

Annual Report – This is a record of a publicly held company's financial condition. It includes a description of the firm's operations, its balance sheet and income statement. SEC rules require that it be distributed to all shareholders. A more detailed version is called a 10-K.

Arbitrage Activity – (1) When traders try to profit from buying and selling two related securities at the same time. (2) Profiting from differences in the price of a single security that is traded on more than one market.

ARCA (Archipelago) – An electronic communications network (ECN).

Arms Index - Also known as TRading INdex (TRIN) The TRIN is calculated by dividing the Number of advancing issues by the number of declining issues and taking that total and dividing it by the total volume of advancing issues by the total volume of
declining issues. Less than 1.0 indicates bullish demand, while above 1.0 is bearish. A ratio of 1 indicates the market is in balance. This indicator was developed by Richard Arms.

**Ascending Triangle** – This is typically a bullish continuation pattern in an uptrending stock. An ascending triangle consists of higher lows and comparable highs, creating a right-angle triangle where the slope rises from left to right. When the highs are broken a buy signal is given.

**Asking Price** – Also referred to as the offer. The lowest price anyone is willing to sell a specific stock or commodity at a given moment in time. Also called the offer. This is the price a buyer would have to pay to guarantee purchase of a stock or commodity.

**At the Market** – An order to buy or sell at the best price obtainable in the market.

**Avalanche** – A reversal pattern which occurs after a strong bull run followed by a rapid pullback to support, typically a moving average such as the 20 sma. The next step in this setup is a bear flag hugging the support level. When that flag breaks a short is signalled.

**Average Daily Volume** – The number of shares traded over a period of days and then divided by that same period.

**Average Directional Index (ADX)** - The ADX is an indicator that was developed by Welles Wilder. It is a calculation based upon positive directional movement (+dma) and minus directional movement index (-dma). The ADX is used to measure how strong a trend is, regardless of if this trend is up or down. A high ADX measure reflects a strongly trending market and a low ADX reflects a non-trending market.

**Averaging Down** – Where a price moves against a trader and they add to the position to create a lower average price for the shares they bough. Generally speaking the intent is to create a lower exit price at which they can make a profit. For many traders though this can lead to even larger losses.

**Ax** – The key market maker in a stock, sometimes known as the hammer in a stock.

**Back Testing** – Using historical data to test a strategy.

**Bar Chart** – A graphic representation of price activity. The high and low of the session define the top and bottom of a vertical line. The open is marked with a short horizontal bar attached to the left of the vertical line. The close for the period is marked with a short horizontal bar attached to the right of the vertical line. Price is on the vertical scale. Time is on the horizontal scale.

**Base (Basing Pattern)** - A pattern in which a stock is trading in a relatively narrow price range over a period of time.

**Basis Point** – Used to calculate differences in interest rate yields. For example, the difference between 4.25% and 5.00% is 75 basis points.
**Basket Trades** – Trading a number of different stocks at the same time, usually all from the same sector, or having similar characteristics.

**Bear** - Anyone who takes a pessimistic view of the forthcoming long-term trend in a market. One who thinks that a market is or will soon be in a long-term downtrend.

**Bear Flag** – A counter-trend move categorized as a continuation pattern. They are characterized by higher highs and higher lows with parallel trend lines.

**Bearish** – Descriptive of a market that is trending lower, or the disposition of a trader who believes the market will decline.

**Bear Market** – A long-term downtrend (a downtrend lasting months to years) in any market, especially in the stock market, characterized by lower intermediate lows (those established in a time frame of weeks to months) interrupted by lower immediate highs.

**Bear Trap** - A bear trap occurs when prices break below a significant level and generate a sell signal, but then reverse course and negate the sell signal, thus trapping the bears that acted on the signal with losses. A bear trap is another form of whipsaw and relates to the spring.

**Below the Market** - A limit order to buy or sell a security for a specific price that is lower than the current market price. Buy orders may be placed below the bid in an attempt to purchase at lower prices. However, if the market does not reach these prices, the order will go unfilled.

**Beta** - Beta is a measure of the security's systematic or market risk. Most stocks move in the same direction as the stock market. The level of the beta indicates the degree of correlation between a security and the market. The market is the benchmark and has a beta of 1.

**Bid Price** – Also referred to as the bid. The highest price any buyer is prepared to pay for a stock or commodity at a given moment in time. This is the price a seller would have to take to guarantee sale of the stock or commodity.

**Block Trade** - A trade so large that the normal auction market cannot absorb it in a reasonable time at a reasonable price. In general, 10,000 shares of stock or $200,000 worth of bonds would be considered a block trade.

**Bollinger Bands (BB)** – Developed by John Bollinger, Bollinger Bands are bands plotted two standard deviations away from a simple moving average. Because standard deviation is a measure of volatility, Bollinger Bands adjust themselves to the market conditions. When the markets become more volatile they widen and contract during less volatile periods. By using standard deviations rather than a fixed percentage, the bands adjust for volatility. During volatile periods, the bands move further away from the average, when the market is flat, the bands move closer to the average.

**Bottom** – The lowest price a stock traded at within a certain period of time.
**Bottom Fishing** – Buying stocks whose prices have bottomed out.

**Breadth** – The difference between advancing issues and declining issues in the market. If there are more advancing issues then breadth is positive. If there are more declining issues then breadth is negative.

**Break-even Point** – The point at which gains equal losses.

**Breakout** – (1) When the price moves out of its recent trading range. (2) When a stock successfully penetrates through support or resistance, or any technical pattern.

**Broker** – (1) An individual or firm that charges a fee or commission for executing buy and sell orders submitted by another individual or firm. (2) The role of a firm when it acts as an agent for a customer and charges the customer a commission for its services.

**Bull** - Anyone who takes an optimistic view of the forthcoming long-term trend in the market. One who thinks that a market is or soon will be in a long-term uptrend.

**Bull/Bear Ratio** – Published by Investor’s Intelligence, this shows the ratio between those investment advisors who feel positive or negative about the market. Used as a contrary indicator.

**Bull Flag** - A counter-trend move categorized as a continuation pattern. They are characterized by lower highs and lower lows with parallel trend lines.

**Bullish** – Descriptive of a market that is trending higher, or of the disposition of a trader who believes the market will rise.

**Bull Market** – A long-term (months to years) price movement in any market characterized by a series of higher intermediates highs (those established within weeks to months) interrupted by higher consecutive intermediate lows.

**Bull Trap** - A bull trap occurs when prices break above a significant level and generate a buy signal, but suddenly reverse course and negate the buy signal, thus trapping the bulls that acted on the signal with losses. A bull trap is another form of whipsaw and relates to the up-thrust.

**Buy** – (1) A recommendation to purchase a specific security. (2) To acquire an asset in exchange for currency.

**Buy Signal** - A buy signal is a condition that indicates a good time to buy a stock. The exact circumstances of the signal will be determined by the indicator that an analyst is using.

**Buy Stop** - An order to buy a security that is entered at a price above the current offering price and that is triggered when the market price touches or goes through the buy stop price. Traders using a buy stop hope to gain if momentum gains on a particular stock. If the price exceeds the price you have set, it will automatically trigger a market order.
**Candlestick Chart** – A candlestick chart is similar to a bar chart. The major difference is the graphical depiction of each period in a "candlestick." The candlestick is formed from the open, high, low and close of a specific time period. The period can be anything from a minute to a month. The color of the candlestick is determined by the relationship between the open and close. If the close is higher than the open, a white body is formed. This is referred to as an open candlestick. If the close is lower than the open, a black body is formed. This is referred to as a closed candlestick. The thin lines above and below the real bodies represent the high and the low for the period and are referred to as shadows. The high for the period is the upper shadow and the low is the lower shadow. It is these shadows, which look like wicks on a candle, that give rise to the term "candlestick."

**Capital Gain** - When a stock is sold for a profit, it's the difference between the net sales price of securities and their net cost, or original basis. If a stock is sold below cost, the difference is a capital loss.

**Capital Loss** - The difference between the net cost of a security and the net sale price, if that security is sold at a loss.

**Capitulation** - In stocks this term is associated with "giving up" any previous gains in the stock price. True capitulation involves extremely high volume and sharp declines (oversold stocks), it usually indicates panic selling.

**CBOE Volatility Index (VIX)** - A volatility index for the Chicago Board Options Exchange known by its ticker symbol "VIX". It is calculated by taking a weighted average of the implied volatility from eight calls and puts on the S&P 100 index. The VIX measures the volatility of the US equity market, many investors say if the VIX goes above 35 then it signals a bottom in the stock market.

**Channel** - When prices trend between two parallel trend lines, this is referred to as a channel.

**Chart** – The display of price data over a period of time in a chart format. Price is on the Y axis and time is on the X axis.

**Chartist** – A trader who uses charts showing past price formations, with price on one axis and time on the other, to attempt to forecast future price movements.

**Chasing a Stock** – Trying to buy a stock moving up in price, usually very quickly, by increasing your bid after the stock has already gone up several price levels from your ideal entry point.

**Chicago Board of Trade (CBOE)** - The oldest commodity exchange in the US, established in 1886. The CBOT lists many agricultural commodity futures such as corn, oats and soybeans among other financial instruments.

**Chippies** – Traders using the ECN ARCA (Archipelago) and trading with small share size.

**Choppy Market** – A market characterized by large swings around a mean value, where traders, both long and short, get “chopped-up” trying to establish positions.
**Close** - The end of a trading session.

**Closed** – When referring to a position, this means one has made an equal and opposite trade to one already held and so has no more exposure to the market on that trade.

**Commission** – A service charge assessed by an agent in return for arranging the purchase or sale of a security or real estate. The commission must be fair and reasonable, considering all the relevant factors of the transaction. Commissions vary widely from broker to broker.

**Commodity Channel Index (CCI)** – Developed by Donald Lambert, the Commodity Channel Index (CCI) measures the variation of a security's price from its statistical mean. High values show that prices are unusually high compared to average prices whereas low values indicate that prices are unusually low. Contrary to its name, the CCI can be used effectively on any type of security, not just commodities.

There are two basic methods of interpreting the CCI: looking for divergences and as an overbought/oversold indicator.

- A divergence occurs when the security's prices are making new highs while the CCI is failing to surpass its previous highs. This classic divergence is usually followed by a correction in the security's price.
- The CCI typically oscillates between ±100. To use the CCI as an overbought/oversold indicator, readings above +100 imply an overbought condition (and a pending price correction) while readings below -100 imply an oversold condition (and a pending rally). Previous highs and lows in the CCI will also tend to trigger reversals even when not at ±100 levels.

I prefer to use the CCI only on daily charts as an overbought/oversold indicator with the setting of P=15. In such a case the oscillation occurs between ±200 instead of ±100.

**Conditional Order** – An order that is activated when a certain set of conditions is met. Those conditions can be related to moving average prices, NASDAQ prices, etc. in addition to stock’s price.

**Confirmation** – When one or more indicators substantiate the action of another.

**Congestion Zone** – See *base*.

**Consolidation** – A narrow trading range such as a base within a trend. In a consolidation the trading range is merely a pause in the overall trend and once it breaks the trend will continue.

**Continuation Pattern** – A technical pattern that suggests a continuation of the prior trend. For example, a flag is a continuation pattern.

**Contrarian** – An individual who generally believes it is usually better not to do what the majority are doing because the majority do not make money.
**Correction** – A short term reversal in the overall trend which gives the trend a chance to catch its breath before continuing. A correction is typically not significant enough to reverse the overall trend and can be through time or price but is generally a bit of both.

**Crossover** – When a faster indicator crosses above (bullish crossover) or below (bearish crossover) the slower indicator.

**Cubes (QQQQs)** – Also known as the “quadruple-Qs”. It represents the QQQQ, which is the NASDAQ 100 Trust, an ETF that trades on the NASDAQ.

**Cyclical Stocks** - Cyclical stocks are those that are highly sensitive to economic performance. Cyclical stocks tend to perform well when the economy is growing and suffer when the economy contracts. Chemical (Dupont), transportation (FDX Corp), auto (GM), paper (International Paper) and steel (Nucor) represent a few of cyclical industries and stocks.

**Day Order** – A trade order to buy or sell a security during the market hours of a particular day.

**Day Trader** – A trader who tries to capitalize on short-term price swings within one trading session. A true day trader will not hold open positions past the closing bell.

**Dead Cat Bounce** – A tiny bounce or “false” recovery after a major decline in a stock.

**Dead Zone** – Also known as the mid-day doldrums. The trading hours between approximately 11:30 A.M. ET – 2:00 P.M ET typically characterized by low volume and decreased liquidity. Market risk at this time is thus higher than the rest of the trading day.

**Descending Triangle** - This is typically a bearish continuation pattern in a downtrending stock. A descending triangle consists of lower highs and comparable lows, creating a right-angle triangle where the slope is declining from left to right. When the lows are broken a sell signal is given.

**Diamonds (DIAs)** - An exchange traded security, issued by the American Stock Exchange, that replicates the movements in the Dow Jones Industrial Average.

**Discount Rate** - The interest rate local banks pay to the central bank for secured loans. The discount rate is typically set by the central bank. In the US it is set by the FOMC.

**Distribution Phase** – This takes place near market tops, or at the end of a bull market, when intuitive investors sell their shares to others who believe the market will continue higher. In this phase rallied tend to occur on lower volume.

**Divergence** – (1) When a technical indicator disagrees with a certain price. (2) In charting, when two charting lines such as trend lines or moving averages grow further apart or extend in different directions from a cross-over point or close to a cross-over point.
**Diversification** – The simultaneous trading of several unrelated markets or sectors to reduce risk.

**Doldrums** – See *dead zone*.

**Dollar Cost Averaging** – A popular investment approach which consists of investing the same amount of money at regular time intervals.

**Doji Candlestick Pattern** – A doji is a candlestick which forms when the open and close are equal or almost equal. The resulting candlestick looks somewhat like a cross or a plus sign (+). A doji is an indecision bar. It can often occur at highs or lows or as a continuation pattern. Long upper and lower shadows form from wide swings and indicate volatility.

**Double Bottom** – A reversal pattern. It is a decline twice to the same price level and is typically followed by a bounce off the support from the prior low.

**Double Top** – A reversal pattern. It is a rise twice to the same price level and is typically followed by a reversal off the resistance from the previous high.

**Double Witching** - Similar to triple witching, but instead of three classes of options or futures expiring on the same day, in this case it is only two (any two). The three classes are stock options, index options, and index futures. The market tends to be more volatile than normal but not as much so as on triple witching days.

**Dow Jones Industrial Average (DJIA)** - Published by Dow Jones & Co, Dow Jones Industrial Average (DJIA) is a price-weighted average of 30 blue-chip stocks. Because it is price weighted, stocks with the highest prices will have the most influence and those with the lowest, the least influence. The DJIA is calculated by adding the closing prices of the stocks and then dividing by a number that takes into account splits, large dividends, substitutions and mergers.

**Downside Risk** – An estimation of the potential that a security might decline in price if the market conditions turn bad and thus gives an indication of what a trader could lose on a position.

**Downtick** – On the NYSE it is a trade taking place at a lower price than the previous trade. On the NASDAQ, a lowering in price of the best bid.

**Downtrend** - A series of lower highs and lower lows in the market, indicating a decrease in price.

**Drawdown** – Reduction in account equity as a result of losing trades, usually referred to in the context of trading a system or methodology.

**Due Diligence** - The careful investigation by the underwriters that is necessary to ensure that all material information pertinent to an issue has been disclosed to prospective investors.

**Dumper** – A stock that has retreated significantly, usually due to bad news or missed earnings, followed by an over-reaction by sellers.
**Earnings** – Usually refers to the net income for a company during a specific period after taxes. Earnings show how profitable a company is.

**Earnings Surprise** – When analysts expect one number and a company releases a different number.

**ECN** – Electronic Communication Network. An electronic system that attempts to eliminate third party orders by directly matching buyers and sellers. This order execution vehicle is available to subscribers of the ECN only or via SelectNet preference orders. Examples of ECNs are INCA, ISLD, REDI, BTRD, ARCA, ATTN, STRK, NTRD, and BRUT.

**Elliot Wave Theory** - Named after Ralph Nelson Elliott, who concluded that the movement of the stock market could be predicted by observing and identifying a repetitive patterns of waves. The main theory is that prices have 5 waves in the direction of the main trend followed by three corrective waves.

**EOD** – End of day.

**Exchange Traded Funds** – Index funds that trade like stocks. See Appendix I for a list of popular ETFs. For more information go to http://www.etfguide.com

**Execution Costs** – In system trading, the sum of slippage and commissions.

**Exit Strategy** – The plan a trader has made to close a position. It can be a strategy based on exiting with profits or exiting as a stop loss.

**Exponential Moving Average** - Exponential moving averages are calculated by applying a percentage of the current bar’s closing price to the previous bar’s moving average value, giving greater weight to the more recent data.

**Fading** – Selling as the market is rising or buying as the market is selling.

**Federal Open Market Committee (FOMC)** - Also referred to simply as the Feds. A committee that makes decisions concerning the Fed’s operations to control the money supply. The committee meets 8 times each year. Also referred to simply as the Feds.

**Fibonacci** – An Italian mathematician who formulated a series of numbers based on adding the prior two numbers. See also *Fibonacci Ratios*.

**Fibonacci Ratios** – These are ratios based upon calculations made using the Fibonacci series in which each number in the series is made by adding the prior two numbers. The most common Fibonacci levels used in retracement analysis are 61.8%, 38.2% and 50%. When an upward move starts to reverse the 3 price levels are calculated (and drawn using horizontal lines) using a movements low to high. These retracement levels are then interpreted as likely levels where counter moves will stop. It is interesting to note that the Fibonacci ratios were also known to Greek and Egyptian mathematicians. The ratio was known as the Golden Mean and was applied in music and architecture.

**Fill** – A buy or sell order that has been executed.
**Fill or Kill** – A trade order that is to be executed immediately and in totality or be cancelled.

**Flag** - A technical charting pattern. Flags result from price fluctuations within a narrow range, they mark a consolidation before the previous move resumes.

**Flat** – (1) Having no open positions. (2) A position that is at the same price as when entered.

**Float** - The total number of outstanding shares owned by the public that are available for trading. The float is calculated by subtracting restricted shares from outstanding shares.

**Flush** – A rapid break in support or resistance that triggers typical stop levels and is often followed by a return to the prior trend.

**Fundamental Analysis** - A method of evaluating securities by attempting to measure the intrinsic value of a particular stock. Fundamental analysts study everything from the overall economy and industry conditions, to the financial condition and management of companies.

**Fundamental Trader** – A trader who takes positions in the market based on his/her perception of current economic realities.

**Gap** – Also referred to as a window. When a stock moves, either up or down, with a price void between the previous bar’s close and the current bar’s open. Gaps usually occur between one trading day and the next. A gap up occurs when the opening price to the current bar is higher than the closing price of the previous bar. A gap down occurs when the opening price is lower than the closing price of the previous bar.

**Good 'til Cancelled** - Sometimes simply called "GTC", it means an order to buy or sell stock that is good until you cancel it. Brokerages usually set a limit of 30-60 days, at which the GTC expires if not restated.

**Grinding** – See *scalping*.

**Hammer/Hanging Man** - The hammer and the hanging man candlesticks look exactly alike. The difference between them depends on the chart pattern that precedes the formation of these candles. Hammers tend to occur at lows while hanging man candlesticks occur at highs. Hammer and hanging man candlesticks form when a security moves significantly lower after the open, but rallies to close well above the intraday low. The resulting candlestick looks like a hammer and hence the name. The long stick below represents the long lower shadow that forms from the intraday low. The high for the day is near the open or the close, depending on which of the two is higher. If the open is higher than the close, then the candlestick’s body will be black/closed and the high will be just above the open. If the close is higher than the open, then the candlestick’s body will be white/open and the high will be just above the close.

**Harami** – See *inside range bar*. 
Head and Shoulders – A technical analysis term used to describe a chart formation in which a stock's price rises to a peak and then declines, then rises above the former peak and again declines, and then rises again but not to the second peak and again declines. The first and third peaks are shoulders, and the second peak forms the head. This pattern is considered to be bearish.

Hedge – Any strategy where a potential loss is offset by a contra-reacting position.

Hit the Bid – Selling a stock at the current inside bid.

HOLDRS - HOLDRS are Holding Company Depository Receipts. Launched by Merrill Lynch, HOLDRS trade just like stocks on the American Stock Exchange. Each HOLDRS is a basket of stocks designed to track the performance of a particular industry segment. More information on HOLDRS can be found at Merrill Lynch’s HOLDRS Web Site: http://www.holdrs.com. See Appendix I for a list of HOLDRS.

Index – A weighted value given to a group of issues. Some well-known indexes are the Dow 30, S&P 500, NASDAQ Composite, Dow Transport, Dow Utility, etc.

Indicator - Anything used to predict future financial or economic trends.

Industry - An industry is a grouping of companies in the same line of business. As opposed to sector groupings, industry groupings are more specific to the business. For example: airfreight, airline, trucking, railroad and shipping industry groups belong to the transportation sector.

Inside Market – The highest bid and lowest offer/ask make the inside market.

Inside Range Bar/Day (IRD) – When the price range of a current bar or current day is narrower than the previous bar or day and occurs within the range of the previous bar or day. In candlestick charting this pattern is called a Harami. Harami means pregnant in Japanese.

Insider – Someone with at least 10% ownership in a company, an officer, or a director.

Insider Information - Relevant information about a company that has not yet been made public. It is illegal for holders of this information to make trades based on it, however received.

Instinet – An ECN that allows subscribers to display quotes and trade during, before, and after market hours.

Institutional Ownership – Shares owned in bulk by mutual funds, banks, 401K, etc.

Intraday – Information pertaining to a stock during any given day.

IPO – Initial Public Offering of a stock. The first time a stock is traded in a public market.
iShares - Developed by Barclays Global Investors, iShares are index funds that trade like stocks. Like HOLDRS, they allow smaller investors to get the diversification of 50 or more companies without having to buy each individual stock. These shares can be bought or sold like normal stocks and are designed to track:

- Broad-based US indices such as the S&P 500 and Russell 2000.
- Sectors such as healthcare and financial services.
- International stock markets such as France (CAC40) and Hong Kong (Hang Seng).

Each iShare represents a basket of stocks designed to track its given index. The international iShares are based on Morgan Stanley Capital International (MSCI) Indexes and designed to track the performance of that countries stock exchange.

ISLD (Island) – An electronic communications network (ECN.) Allows subscribers to display quotes and trade during, before, and after market hours. For more information on Island, see their website at http://www.island.com/

Keynesian Economics - The economic theory that active government intervention in the marketplace and monetary policy is the best method of ensuring economic growth and stability.

Lagging Indicator - A measurable economic factor that changes after the economy has started to follow a particular pattern or trend. Lagging indicators are believed to confirm long-term trends. Examples include average duration of unemployment, corporate profits and labor cost per unit of output

Level I – Shows current or inside bid and ask.

Level II – Shows current or inside bid and ask as well as all market makers and ECN’s at different price levels on the bid and ask.

Limit Move – The maximum permissible change in a price in one day. This number is specified by the exchange and is particular to each commodity. When a market reached the limit, trading stops. Limits are designed in an attempt to minimize excessive price volatility.

Limit Order – An order to buy a stock at or below a specified price or to sell a stock at or above a specified price. For instance, you could tell a broker "Buy me 100 shares of XYZ Corp. at $8 or less" or to "sell 100 shares of XYZ at $10 or better."

Liquidity - Liquidity is the ease with which a stock may be bought or sold in volume on the marketplace, without causing dramatic price fluctuations. A large amount of trading and a large pool of buyers and sellers mean that a stock can be described as highly liquid.

Listed Stock – Stock listed on the NYSE or American Stock Exchange.

Locked Market – When the inside bid and ask are the same. NASDAQ prohibits intentional locking of markets.
**Logarithmic** – In a logarithmic scale, the distance between each unit of distance reflects an equal percentage change. The distance between 20 to 40 and 40 to 80 would be identical, because each change is a 100 percent increase.

**Long Position** – A position in which the issue is owned.

**Long Term** - Holding an asset for an extended period of time. The length of time is subjective. For some it might mean a matter of years, while other might consider long term to mean a few weeks or longer. Usually this term is in reference to investment portfolios.

**Main Street** - Used to describe the investing public, whereas terms like "Wall Street" is used to investment professionals and brokers.

**Manipulation** - When a person or group or people illegally inflate or deflate the price of a stock.

**Margin** – Extended credit granted by a broker to an investor which is governed by the NASD.

**Margin Call** – A demand by the trader’s broker for the trader to put up more money as his stocks have declined in value to satisfy margin requirements set by Federal regulation on the amount of credit that may be advanced by the broker to the trader.

**Mark to Market** – Recording the price or value of a security, portfolio, or account to reflect the current market value.

**Market Capitalization** - Market Capitalization, or market cap, is the total market value of a company (number of shares outstanding multiplied by the price of the stock).

**Market if Touched** - An order to purchase or sell a security as soon as a specific price is reached. Once the order reaches a certain price it automatically becomes a market order.

**Market Maker (mm)** – A broker-dealer on the NASDAQ who makes a market in a stock. Each Market Maker competes for customer order flow by displaying buy and sell quotations for a guaranteed number of shares. Market makers are required to honor their quote should they receive an order to buy or sell at their published price but they are only required to honor orders up to the size they are quoting. You can view the size a market maker is offering on a level II quote screen.

**Market Order** – An order to buy or sell a security at the current market price. Sometimes referred to as "at the market", these orders are usually filled immediately by the market maker. A sell order placed at the market will most likely be filled at the bid price and a buy order will be filled at the ask price.

**Market Timing** – Attempting to determine changes in market direction before they occur in order to sell a stock or portfolio at or near highs and buy a stock or portfolio at or near lows.
**Market Value** – The total number of shares outstanding times the current price per share.

**Marubozu Candlestick** - Marubozu candlesticks do not have upper or lower shadows and the high and low are represented by the open or close. A White Marubozu forms when the open equals the low and the close equals the high. This indicates that buyers controlled the price action from the first trade to the last trade. Black Marubozu form when the open equals the high and the close equals the low. This indicates that sellers controlled the price action from the first trade to the last trade.

**McClellan Oscillator** - Developed by Sherman and Marian McClellan, the McClellan Oscillator is a breadth indicator that is based on the difference between the number of advancing and declining issues on the NYSE. Primarily for short and intermediate term trading. To calculate subtract a 39 day EMA of advancing issues minus declining issues from a 19 day EMA of advancing issues minus declining issues.

\[
(19 \text{ Day EMA of Advances} - \text{ Declines}) - (39 \text{ Day EMA of Advances} - \text{ Declines})
\]

When the 19-day EMA (shorter moving average) moves above the 39-day (longer moving average) EMA, it signals that advances are gaining the upper hand. Conversely, when the 19-day EMA declines below the 39-day EMA, it signals that declining issues are dominant.

Buy and sell signals are generated as well as overbought and oversold readings. Usually, readings above +100 are considered overbought and below -100 oversold. These numbers may vary though, depending on previous levels of support and resistance which held.

**Mid-cap Stock** - Short for "Middle Cap", it usually refers to stocks with a market capitalization of between $250 million and $1 billion.

**Mid-day Doldrums** – The period from 11:00-1:00 ET when volume declines in the overall market over lunch. It is often accompanied by a trading range.

**Momentum** – The rate of change at which a stock is rising or falling.

**Money Flow** – A technical analysis indicator that tracks the money flowing in and out of a stock. Calculated by averaging the high, low and closing prices and multiplying by the daily volume.

**Most Active** - The stocks on an exchange which had the highest volume over a given period, usually a single days trading.

**Moving Average** – Shows an average price over a specific period of time. The time periods can vary. The longer the period, the greater lag between the average and the current price.

**Moving Average Convergence/Divergence (MACD)** - The Moving Average Convergence/Divergence (MACD) indicator is a combination of three exponentially smoothed moving averages. It is calculated by subtracting the 12-period exponential moving average of a given security from its 26-period exponential moving average. A
9-day dotted EMA of the MACD called the signal line is then plotted on top of the MACD.

There are 3 common methods to interpret the MACD:
1. Crossovers - When the MACD falls below the signal line it is a signal to sell. Vice versa when the MACD rises above the signal line.
2. Divergence - When the security diverges from the MACD it signals the end of the current trend.
3. Overbought/Oversold - When the MACD rises dramatically (shorter moving average pulling away from longer term moving average) it is a signal the security is overbought and will soon return to normal levels.

**NASD** – National Association of Securities Dealers which is responsible for the operations and regulations of the NASDAQ.

**NASDAQ** – National Association of Securities Dealers Automated Quotations. Usually just referred to as the NASDAQ Stock Market.

**NASDAQ Composite Index** – The NASDAQ Comp. is a market capitalization-weighted index of over 5000 stocks.

**Noise** – Fluctuations in the stock market which cloud the interpretation of a stock’s trend or pattern.

**Neckline** – A line connecting the lows of the head in a head and shoulders pattern or highs in an inverse head and shoulders. A move under the neckline of a head and shoulders top is bearish; a move above the neckline of an inverse head and shoulders is bullish.

**Net Change** - The difference between the closing price of a security on the trading day and the previous day's closing price.

**Nikkei** - The leading and most respected index of Japanese stocks.

**NYSE** – New York Stock Exchange

**NYSE Composite Index** – The NYSE Comp. is an index that measures the market value of all common stocks listed on that exchange, adjusted to account for capitalization changes, new stocks added to the list, and stocks removed from the list.

**Odd Lot** - An amount of a security that is less than the normal unit of trading for that security. Generally, an odd lot is fewer than 100 shares of stock or five bonds.

**Odd Lot Theory** - A technical analysis theory based on the assumption that the small investor is always wrong. Therefore, if odd lot sales are up, meaning small investors are selling stock, it is probably a good time to buy.

**Offer** – See *asking price*.

**On Balance Volume (OBV)** - A method developed by Joe Granville and used in technical analysis to detect momentum, the calculation relates volume to price.
change. OBV provides a running total of volume and show if this volume is flowing in or out.

**Open** – (1) An un-executed order that is still valid. (2) The start of trading on a securities exchange.

**Order** – An instruction to buy or sell stocks and in what manner.

**Oscillator** - A momentum line that fluctuates off a center, usually a zero value line. They are used to measure overbought/oversold levels, show negative and positive divergence, and can be used to measure a price move's velocity.

**Outperform** - A recommendation often used in broker recommendations, it means the stock is expected to do slightly better than the market return.

**Outstanding Shares** – The number of shares that are currently owned by investors. This includes restricted shares (shares owned by the company's officers and insiders) and shares held by the public. Shares that the company has repurchased are not considered outstanding stock.

**Over-the-Counter (OTC)** - A security which is not traded on an exchange, usually due to an inability to meet listing requirements. For such securities, broker/dealers negotiate directly with one another over computer networks and by phone, and their activities are monitored by the NASD. The NASDAQ is considered to be an OTC market.

**Overbought** – Overbought is a technical condition that occurs when prices are considered too high and susceptible to a decline.

**Oversold** - Oversold is a technical condition that occurs when prices are considered too low and susceptible to a bounce.

**Overtrading** – Excessive buying and selling, often to a trader’s detriment.

**Panic Selling** – A situation where sellers are in abundance, rushing to sell their stocks and causing a sharp decline in the stock’s price.

**Paper Trading** – A way to test out different strategies and setups. No actual transaction takes place as real money is not on the line and profits and losses are said to occur “on paper” only.

**Pattern Day Trader (PDT)** - Traders who make 4 or more day trades within a 5 day period, unless his/her day-trading activities do not exceed 6% of his/her total trading activity for that time period. If you have only 4 daytrades in a 5 day period but have done more than 67 trades during that time, then less than 6% of the trades were day trades and hence do not categorize a trader as a PDT.

**Pennant** – A specific type of flag that is more often an indication of an upcoming correction. In this pattern the triangle is slightly angled either with higher highs and higher lows or lower highs and lower lows.
**Penny Stock** - A stock that typically sells for less than $1 a share, although it may rise to as much as $10/share as a result of heavy promotion. All are traded OTC.

**Phoenix** – A reversal pattern which occurs after a downtrend. Initially the stock or market will pull sharply off lows. This is then followed by a gentle pullback to support. When the high of the previous bar are broken a buy setup occurs with a stock under the low of the pullback or under the low of the entry bar.

**Pivot** – A price reversal that looks like a “V.”

**Point** – A point is equal to $1.00 in a stock’s price.

**Point and Figure Charting** - Point & Figure charts consist of columns of Xs (showing price rises) and Os (showing price falls) arranged on a square grid. When the index increases, a rising column of black X's is created indicating a rally. When the index falls, a descending column of red O's appears indicating a decline.

**Position** - An interest in the market, either long or short, in the form of shares held or sold short.

**Position Trading** - Position trading means holding open positions for an extended period of time, typically a few weeks to a few months. Contrast this with day trading, where a trader buys, then sells before the market closes that day.

**Pre-Market Trading** – Trading that occurs on weekdays from 8:00-9:30 ET.

**Preferencing** – Directing an order directly to a specific market maker via SelectNet. The market maker is not obliged to fill the order.

**Price/Earnings Ratio** - Sometimes referred to as the multiple. P/E Ratio = Market Value per share/Earnings per share (EPS)

EPS is usually from the last four quarters (the trailing P/E ratio), but sometimes from the estimates of the earnings expected in the next four quarters (the projected P/E ratio), or from the sum of the last two actual quarters and the estimates of the next two quarters. Useful for comparing companies.

**Print** – The price and number of shares for each transaction as shown in the Time and Sales (TOS) portion of the level II screen.

**Program Trading** – Trades based on signals from computer programs, usually entered directly from the trader's computer to the market's computer system and executed automatically.

**Protective Stop** – A predetermined exit point used to limit losses in cases where the market goes against your position.

**Pump and Dump** – An illegal practice in which a small group of informed people buy a stock before recommending it to thousands of traders or investors leading to a quick spike in the price of the stock during which the small group who bought before the recommendation exit their positions. The price spike tends to be followed by an
equally steep drop. Companies pumped and dumped in this manner tend to be OTC with a small float so it is difficult for traders to exit at desired prices once the stock starts to pull back.

**Pyramiding** – Increasing the size of an existing position by opening further positions in the same stock, usually in decreasing increments.

**Quote** - Short for quotation. The current or delayed price being offered for a particular stock.

**Rally** – A strong upward move in the market, stock, option, etc.

**Range** – Also known as *trading range*. A security's low price and high price for a particular trading period, such as the close of a day's trading, the opening of a day's trading, or a day, month or year

**Reaction** – A price movement opposite the prevailing trend.

**Relative Strength Index** – An oscillator developed by Welles Wilder. The RSI compares the ratio of up closes to down closes over a specified period of time. The RSI ranges from 0 to 100. The RSI is useful in detecting the following:

- Movement which might not be as readily apparent on the bar chart
- Failure swings above 70 or below 30 which can warn of coming reversals.
- Support and resistance levels.
- Divergence between the RSI and price which is often a useful reversal indicator

**Resistance Level** – A level at which a stock or market will have difficulty breaking. Reversals or trading ranges are common effects of resistance.

**Retracement** – A price reversal. Also known as a pullback. Common retracement levels are 38%, 50%, and 62%. Other common retracement levels are prior highs and lows, whole numbers, and the opening and closing prices of a gap.

**Return** - The gain or loss for a security in a particular period, consisting of income plus capital gains relative to investment, usually quoted as a percentage.

**Reversal** – A directional change in the overall trend. A reversal from an uptrend is a downtrend.

**Risk** – The amount of money a trader will lose if they are wrong.

**Round Lot** - The normal unit of trading of a security, which is generally 100 shares of stock or five bonds.

**Quote** - Short for quotation. The current or delayed price being offered for a particular stock.
**Scalp** - To trade for small gains. Scalping normally involves establishing and liquidating a position quickly, usually within the same day, hour or even just a few minutes.

**Scan** – To search for tradable market patterns and setups.

**SEC** - The Securities and Exchange Commission, the primary federal regulatory agency of the securities industry.

**Sector** – A group of related stocks. Biotechs and Airlines are two examples of sectors.

**Security** - A financial asset including any note, stock, treasury stock, bond, debenture, certificate of interest or participation in any profit-sharing agreement or in a firm.

**Selling Short** – Selling a stock not owned by the trader by borrowing it from a broker with the intent of replacing it at a lower price than it was borrowed and profiting from the price decline.

**Selloff** – A downward price movement.

**Sentiment** – The emotional and psychological attitudes of analysts, investors, and traders toward the market. Market sentiment can be bullish, bearish or neutral.

**Settlement Date** – The date on which payment is made to settle a trade.

**Shooting Star** – A reversal candlestick occurring at highs in a trend. It looks like an upside-down hammer. The shooting star candlestick has a large upper tail with the body of the candlestick occurring at lows with little or no lower shadow.

**Short Covering** – Sometimes referred to as *buyback*. The purchasing of shares previously sold short so the open position is closed.

**Short Interest** – This is the total number of shares of a stock that investors have sold short looking for a decline in the security’s price.

**Short Squeeze** – This occurs when traders short a stock are faced with rising prices in that stock. Those short begin covering, aiding in the rise of the stock’s price. Remaining shorters are squeezed as their losses increase until they too cover their positions.

**Sideways Trend** - This trend occurs when prices move up and down within an established price range.

**Simple Moving Average** - A simple, sometimes called *arithmetic*, moving average is calculated by adding the closing price of the security for a number of time periods and then dividing this total by the number of time periods.

**Slippage** - The difference between estimated transaction costs and actual transaction costs. The difference is usually composed of revisions to price difference or spread and commission costs.
**Spiders (SPDRs)** - Shares in a trust that owns stocks in the same proportion as that represented by the S&P 500 stock index. Each share of a spider contains one-tenth of the S&P 500 index.

**Specialist** – A stock exchange member who stands ready to quote and trade certain securities either for his own account or for customer accounts. The specialist's role is to maintain a fair and orderly market in the stocks for which s/he is responsible.

**Split** - An increase in the number of a corporation's outstanding shares that decreases the par value of its stock. The market value of the total number of shares remains the same. The proportional reductions in orders held on the books for a split stock are calculated by dividing the market price of the stock by the fraction that represents the split.

**Spread** - (1) In a quotation, the difference between the bid and the ask prices of a security. (2) An options position established by purchasing one option and selling another option of the same class but of a different series.

**Standard & Poor's 500 Index (S&P 500)** – An index of the 500 largest and most actively traded stocks on the NYSE.

**Stochastic Oscillator** - Developed by George Lane, the Stochastic Oscillator is a momentum indicator that measures the price of a security relative to the high/low range over a set period of time. The indicator oscillates between 0 and 100, with readings below 20 considered oversold and readings above 80 considered overbought.

**Stop** – A predetermined price at which a trader will exit to limit risk when a position goes against him/her.

**Stop Limit Order** - An order placed with a broker to buy or sell at a specified price or better after a given stop price has been reached or passed.

**Stop Loss** – The predetermined amount that a trader is willing to lose should a position go against him/her.

**Stop Order** – An order to exit a stock when the price hits a specified level. A stop buy is an order to buy a stock when it hits a certain price above the current market. A stop sell is an order to sell a stock when it hits a certain price below the current market. Stop orders are often used to limit losses or enter positions you cannot watch closely.

**Stop-loss Order** – An order placed a broker to buy or sell when a certain price is reached. It is designed to limit a trader’s loss on a security position, sometimes called stop market order.

**Stopped Out** – When a position is closed to limit losses at a predetermined stop level.

**SuperMontage** – A fully integrated order entry and execution system used by NASDAQ for all securities’ transactions. It has replaced the SuperSoes and SOES systems as it is more accurate and efficient.
Support Level – An area where buyers are expected to hold the price up. Often we will expect a rest or reversal at areas of support.

Swing Trade – Holding a position overnight or for several days.

Symmetrical Triangle – A trading range in which each new high is lower than the last and each new low is higher than the last. The range constricts and risk increases on trading within the triangle until a breakout occurs.

Technical Analysis (TA) – A method of evaluating securities by analyzing statistics generated by market activity, such as past prices and volume. Technical analysts do not attempt to measure a security’s intrinsic value.

Thin Market – A market with few bid and ask offers. The market is characterized by low liquidity, high spreads, and high volatility.

Tick – (1) The smallest possible price move in a stock. An uptick occurs when the last trade in a security takes place at a higher price than the prior trade. A downtick occurs when the last trade in a security takes place at a lower price than the prior trade. (2) The NYSE tick ($TICK) is an indicator which measures stocks trading on an uptick versus stocks trading on a downtick. Upticks - Downticks = NYSE tick

Time and Sales – A transaction report which records the time, number of shares, and price for each trade.

Trading Curb – A temporary restriction in trading, in a particular security, usually to reduce dramatic price movements.

Trading Halt – A pause in the trading of a particular security on one or more exchanges, usually in anticipation of a news announcement or to correct an order imbalance. During a trading halt, open orders may be cancelled and options may be exercised. Trading halts can also be imposed for purely regulatory reasons.

Trading Range – The difference between the high and low prices traded during a period of time.

Trading System – Rules for making trades based on signals generated from evolving price patterns.

Trailing Stop – A stop loss level which is adjusted as the stock moves in the desired direction to maximize gains and limit losses.

Trend – The market’s prevalent price direction. There are three primary trends: the uptrend, the downtrend, and the sideways trend.

Trend line – A line on a chart that is used to visualize the trend. An uptrend connects higher lows while a downtrend connects lower highs.

TRIN – See Arms Index.
**Triple Witching** – This happens four times a year. The 3rd Friday of March, June, September and December. It occurs when the contracts for stock index futures, stock index options and stock options all expire on the same day.

**Underperform** – When a stock is not as strong as the overall market.

**Upside** - The potential dollar amount by which the market or a stock could rise by.

**Uptick** - On the NYSE it is a trade taking place at a higher price than the previous trade. On the NASDAQ, a rise in the price of the best bid.

**Uptrend** – An upward move with higher highs and higher lows.
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