# Back to the Basics – Trading Set Ups Utilizing Principles of Money Management & Risk Reward

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***FOREX and Futures Risk Disclaimer***

Trading in the off exchange retail foreign currency market or futures markets is one of the riskiest forms of investments available in the financial markets and suitable for sophisticated individuals and institutions. The possibility exists that you could sustain a substantial loss of funds and therefore you should not invest money that you cannot afford to lose. Nothing in this presentation is a recommendation to buy or sell currencies or futures and Timothy Morge is not liable for any loss or damage, including without limitation, any loss of profit, which may arise directly or indirectly from the use of Timothy Morge's tools or reliance on such information.

***Results***

Past performance does not guarantee future results.

This is one persons experience, your experience may differ.

Results are not guaranteed, individual experiences may vary.

***Market Volatility***

In volatile market conditions, substantial losses may occur.

In volatile market conditions, orders may not be filled as placed.

***Leverage***

The leveraged nature of FX trading and Futures trading means that any market movement will have an equally proportional effect on your deposited funds. This may work against you as well as for you. The possibility exists that you could sustain a total loss of initial margin funds and be required to deposit additional funds to maintain your position. If you fail to meet any margin call within the time prescribed, your position will be liquidated and you will be responsible for any resulting losses.

**This seminar is dedicated to the people that come to these lectures, trying to improve their skills. I am honored you take time out of your busy schedule to come hear my thoughts.**

**This is a presentation in the style I use when lecturing at MIT and Stanford. Please be patient while the material unfolds. At University, this might be a three or four hour lecture.**

**Please keep your comments related to this material and this seminar. Most of you are here to learn my methods.**

**Please hold your questions until the presentation is over.**

# Section 1: Taking ‘Money’ out of Trading

**Account Balance = $25,000**

**Like everyone, I begin the New Year with no Profits and no Losses. I have my opening account balance for the year. The slate is clean, ready for a new year of trading. The New Year is always a good time to go back to Basics.**

I was taught early on not to think in Dollars and Cents; instead of thinking in terms of money made or money lost, I was taught to think of all my accounts in terms of ‘Units’ – If you can take the emotion of money out of the equation, it is much easier to think and act rationally.

Over the years, I have measured my account balances, my risk and my Profits and Losses as ‘Risk Units’, number of ‘Stops Rolled Forward’ and recently, I’ve begun employing a visual representation, ‘GoNoGo’, when charting and making presentations. Simply put, one ‘GoNoGo’ equals the maximum risk you will take on any one trade, in Dollar terms, reduced to pips or ticks. I make mine look like this: [redacted], in various colors, and I usually place them vertically on a chart to visually represent what I can afford above or below my entry for an Initial Stop Loss. Since I always want to hide my Stops above or below Major Market Structure, once I drag over my standard ‘GoNoGo’, I can visually tell if I can afford a Stop hidden behind structure.

**This is a visual representation of the maximum risk I will take, per trade. I use a technique called 'equivalent risk' so that the maximum risk I take on any one trade is always equal – for example, my maximum risk per $25,000 on ANY trade might be $250.**

**If your Account begins with $25,000 and you risk one percent each time you trade, you have 1,000 [redacted] of these.**

Each time you trade, you risk a Maximum of one of these: [redacted]. We'll label these as GoNoGo's, and they visually represent your Maximum Stop Loss size.

**When you trade and make a Profit, you make more of these.**

Note that I am no longer thinking or talking in terms of Dollars; instead I am thinking and talking in terms of one ‘stop’, as represented by my ‘GoNoGo’. Even Profits are turned into ‘GoNoGo [s]’

**When you trade and take a Loss, you lose one of these.**

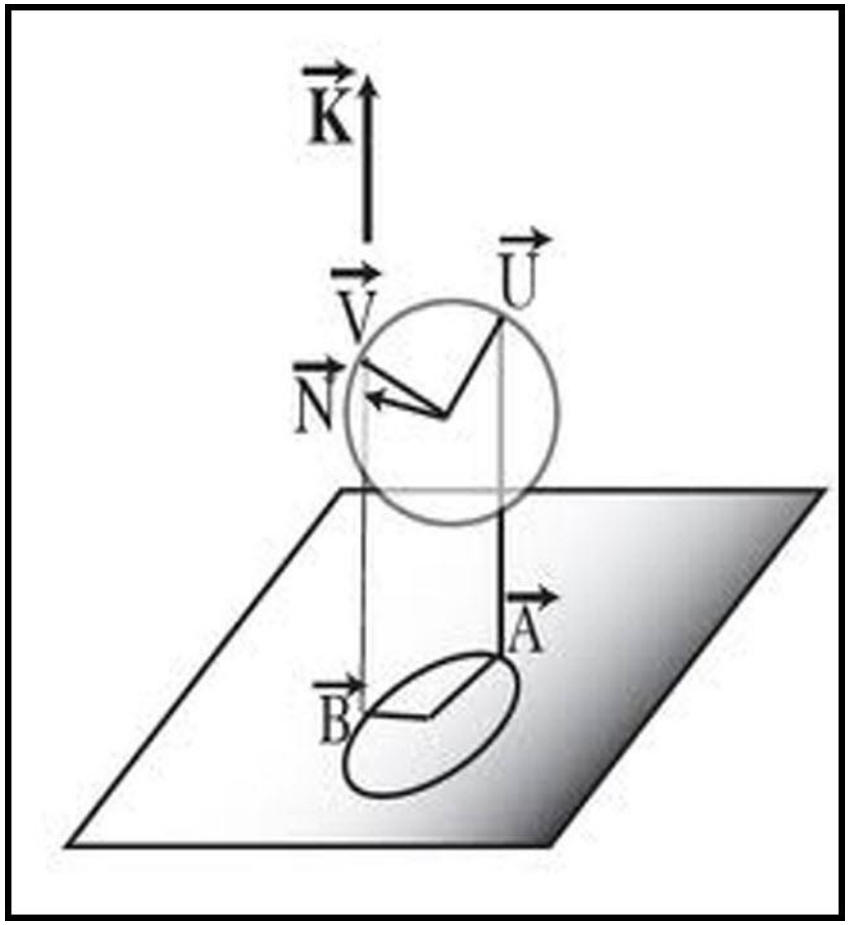
Note that I am no longer thinking or talking in terms of Dollars; instead I am thinking and talking in terms of one ‘stop’, as represented by my ‘GoNoGo’. Even Losses are turned into ‘GoNoGo [s]’

# Risk-Opportunity Analysis

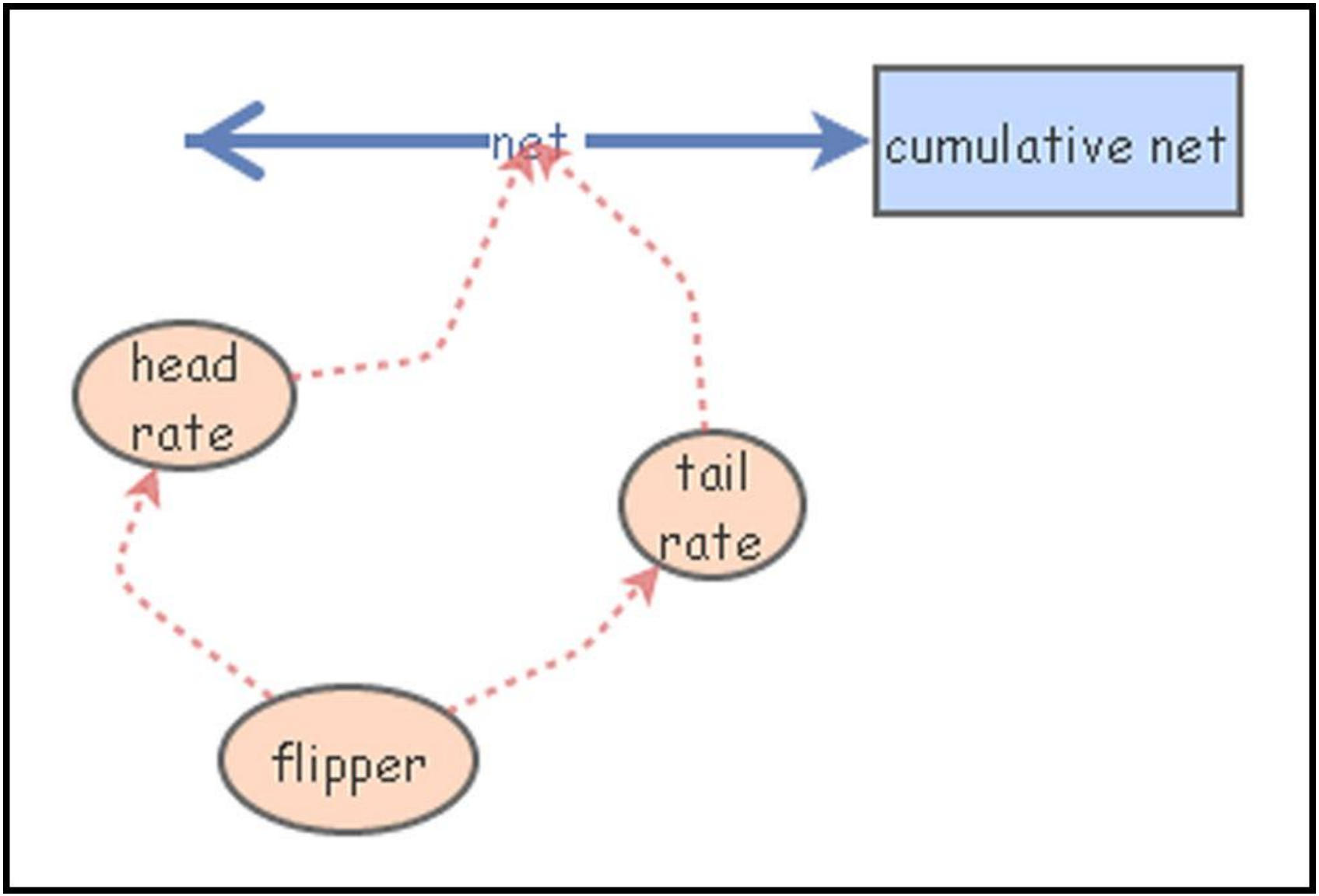
**Now that I have introduced a new way to take the Dollars and Cents out of your trading - and that should reduce the fear or pressure associated with each trade - we need to talk about Risk in its purest form.**

**Most of the people viewing this seminar are successful less than fifty percent of the time they take a trade. Studies conducted by the NFA and CFTC year after year show this to be true. Yet millions and millions of people trade, even though they have less than an even chance of winning.**

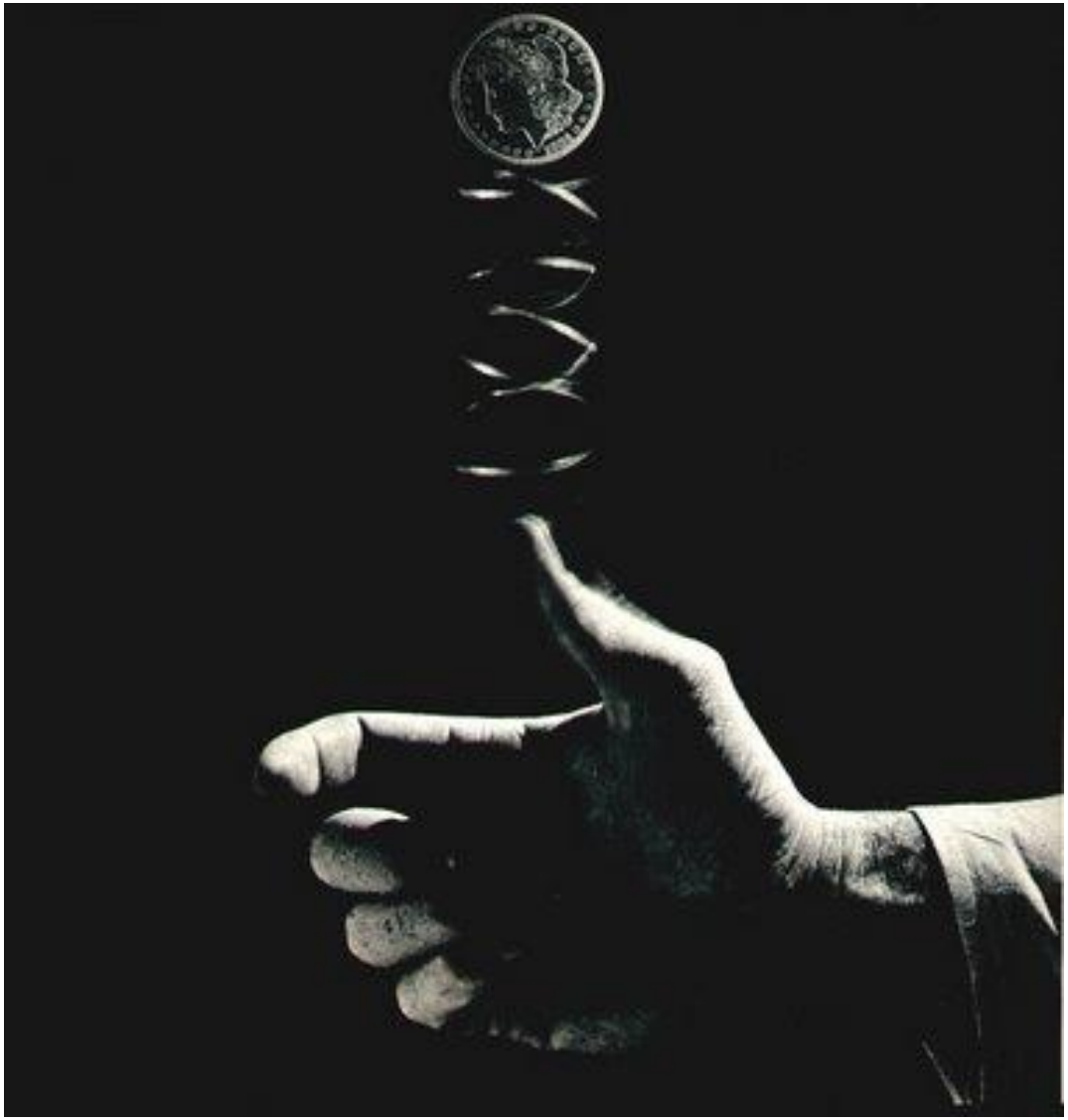
**Let's examine this phenomenon and then I will introduce a way you may become profitable even though your winning percentage is less than fifty percent.**




Do you have any idea what this diagram represents and how it relates to Risk Reward?




**Does this image give you a better idea what the prior diagram described?**



**Does this image give you a better idea what the prior diagram described?**

## Here is a mathematical description of a test of 1000 flips of a coin:

**Element Definitions**

**cumulative net** - The cumulative net result of flipping the coin

**Initial Value** = 0

**net** - represents heads inflow and tails outflow from cumulative net

**Flow Rate** = [head rate] - [tail rate])

**head rate**

**Value/Equation** = IfThenElse([flipper] < .5, 1, 0)

**tail rate**

**Value/Equation** = IfThenElse([flipper] > .5, 1, 0)

**Show Slider Value** = No

**flipper** - generates a random number between 0 and 1 normally distributed

**Value/Equation** = Rand(0,1)

**Time Settings**

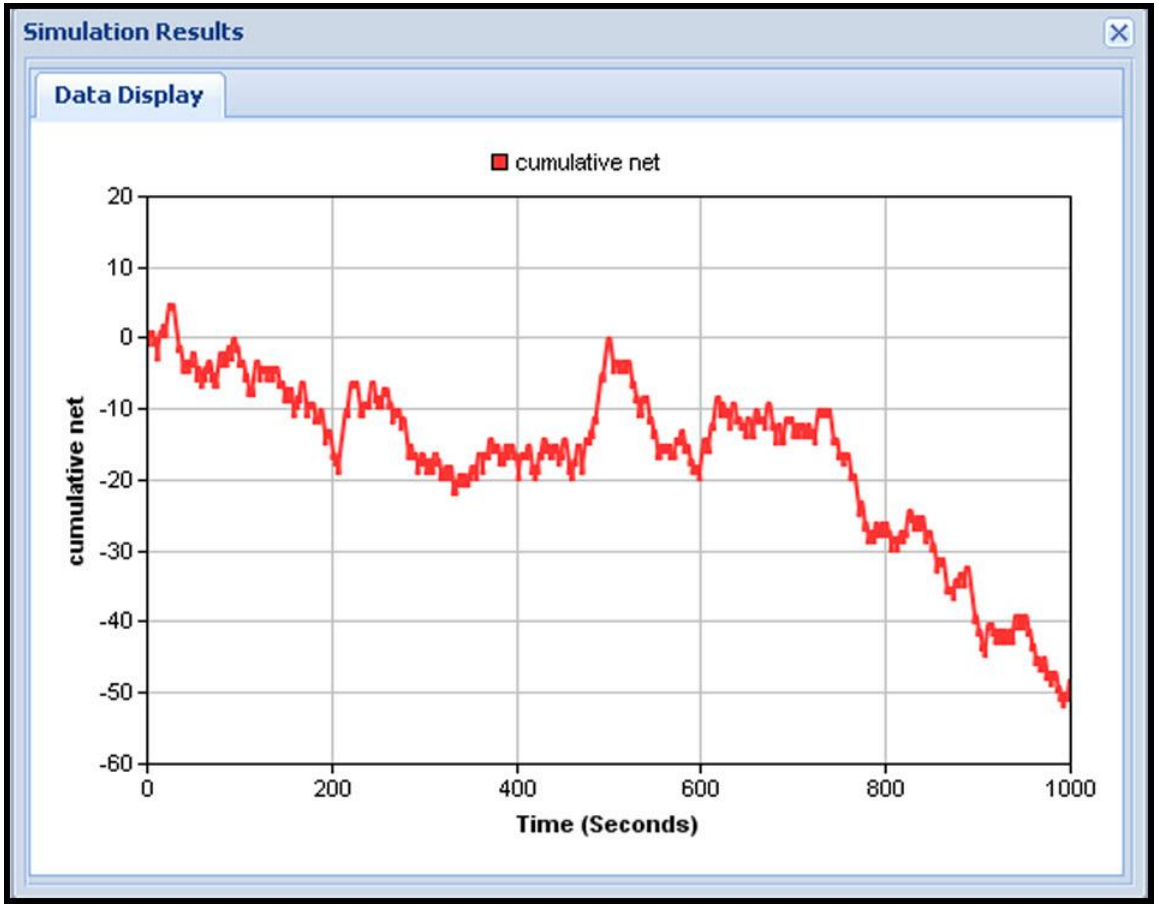
**Simulation Start** = 0

**Simulation Length** = 1000

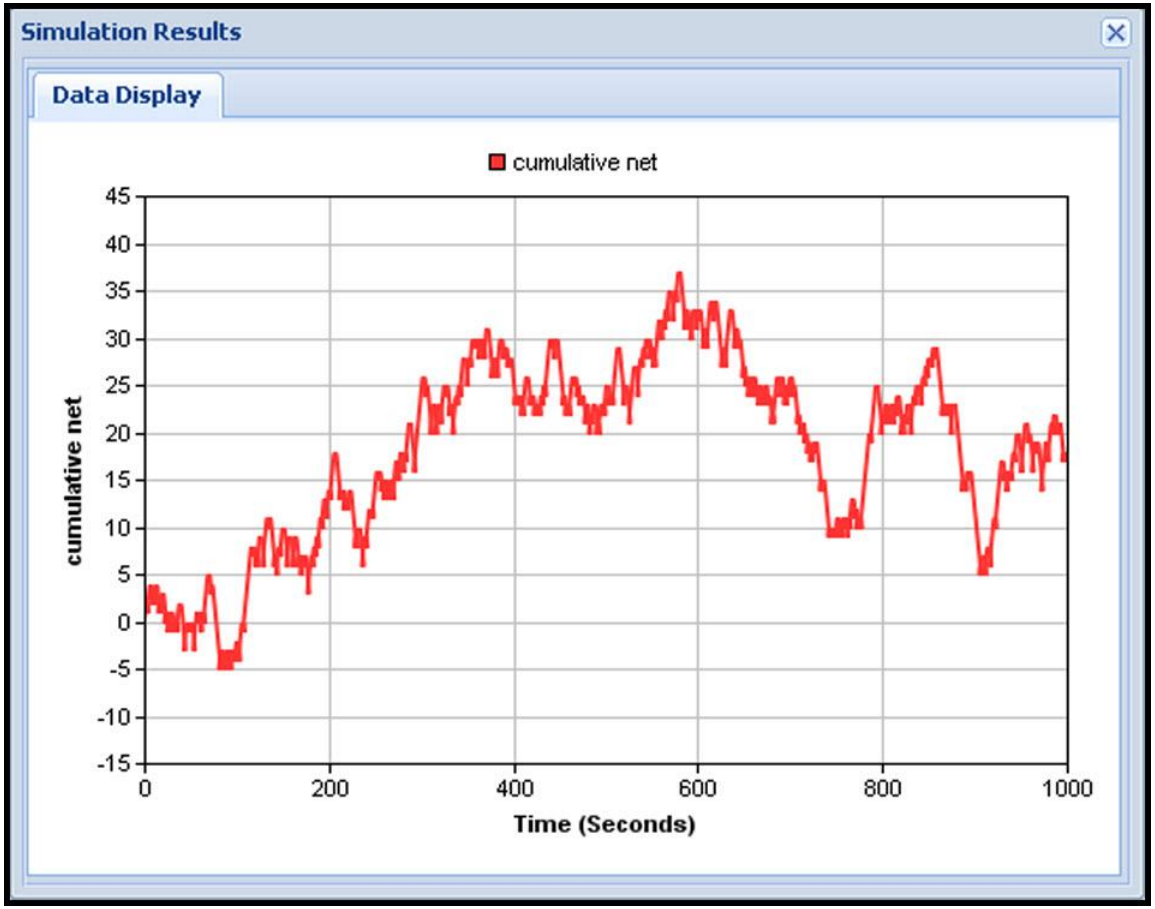
**Simulation Time Step** = 1

**Time Units** = Seconds

*Every time you run this model you will get a cumulative representation of the sum of the flips, +1 for heads, -1 for tails. Every run will be different, as evident in the next two images, even though the cumulative value for a sufficiently large number of flips should be 0.*




This graph represents the results of tossing a coin 1000 times. The chance of throwing a ‘Heads’ or ‘Tails’ is equal, fifty percent. Yet this test of 1000 tosses produced a very negative result.




This graph represents the results of tossing a coin 1000 times. The chance of throwing a ‘Heads’ or ‘Tails’ is equal, fifty percent. Yet this test of 1000 tosses produced a slightly positive results.

Even though the likelihood of throwing a Heads or a Tails was equal, two tests of 1000 tosses gave very different results. And the number of tosses per test was statistically significant.

If you tossed a coin an infinite number of times, the number of times Heads came up and Tails came up would approach an equal result. What can account for the differences in the two test results?

In statistics, the 'runs' or 'strings of consecutive Heads or Tails' that produced the very different results are called abhorrent runs. Strings that produce profits are called positive abhorrent runs and strings that produce losses are called negative abhorrent runs.

No matter what the perceived winning percentage of a string of events is, positive and negative abhorrent runs will happen and will skew the results. That's why you may be able to play the roulette wheel 100 times at a Casino and make a tidy profit – ***or play Lotto and win*** – even though the perceived winning percentage is against you.

Traders that talk about off floor 'scalping' for tiny profits or traders that continue to trade using a methodology that has a perceived winning percentage of less than 50 percent will generally fail. Let me show you how you can use a method with less than a fifty percent chance of making a profit each time you trade and still be a profitable trader in the long run. This same method will also help you overcome the devastating effects of negative abhorrent runs.

**Risk Reward was something no one talked about when I began trading, and it is not talked about enough even today. People DO focus on how they are going to increase their trade size as their accounts increase in value [there are various books about methods like Fixed Bet Sizing, Fixed Fractional Betting, and the Kelly Formula method, to name a few]. But too often, traders do not focus on their potential risk versus their potential reward when analyzing potential trades. My early mentor, Amos Hostetter, was the Father of Risk Reward. He believed Risk Reward was the engine that powered trading to profitability and it showed in his phenomenal trading results over his more than fifty years as a Professional Trader. Let's take a look at some Risk Reward modelling:**

If you do not know the probable outcome of a particular trading method, when you decide whether to take a trade or how much money to risk on a trade, it is called ‘Hunch-centric Betting’. Although hunch-centric betting is certainly popular and likely accounts for an enormous proportion of actual real world betting, it has several problems: the trader must constantly generate hunches and interpret them into bets, and the bets are likely to rely as much on moods and feelings as on science.

A similar problem is the amount risked relative to the potential amount a trader may win. Most traders are also ‘hunch-centric’ when it comes to this line of thought: If they like the way a trade ‘lines up’, they are generally willing to risk more to get less. Many traders look at a potential trade and will risk *MORE* than the potential reward, because their analysis of the trade set up tells them it is a ‘sure thing’.

The truth is, most traders do not think about what they are risking versus the realistic potential profit if they are right in their analysis [or if their hunch is correct]. If someone came up to you and asked you to play a game of chance you were totally unfamiliar with, would you agree to risk five dollars for an opportunity to make one dollar? Sadly, many traders trade this way.

Let’s look at the results of 20 trades made using various Risk Reward levels. I am using the Risk Outcome Calculator we gave away with our Advanced Risk Management Seminar and this is one set of results – results will vary each time you run the test.

For these 20 trades, we have a 70 percent chance of having a winning trade. But for each dollar we risk, we can only make one dollar [ giving us a Risk Reward of 1:1 ].

Welcome | Risk of Ruin | Position Size | Volatility

**Inputs**

| | |
|---|---|
| Starting Account Size | 25000 |
| $100 000 Contracts | 1 |
| Average Risk Reward | 1 |
| Average Winning Percentage | 70 |
| Average Trades a Month | 20 |
| Max Stop per Contract | 250 |
| Human Error (Hit Rate) | 10 |

**System Averages**

| | |
|---|---|
| Average Risk Per Contract | 1.00 % |
| Average Profit Per Contract | $250.00 |
| Expectancy | $150.00 |

**Aberrant Runs**

| In a Row | Wins | Losses |
|---|---|---|
| 1 | 6 | 5 |
| 2 | 3 | 2 |
| 3 | 2 | 2 |
| 4 | 0 | 1 |
| 5 | 0 | 0 |

Single Trade | One Day's Trade | One Month's Trades | New Month | Clear Trades

| | P/L | Account Balance |
|---|---|---|
| Month to date | ($202.72) | $24,797.28 |
| Stops rolled forward | -1 | |

**Simulated Trades**

| Win or Loss | Trade P/L | Account Balance | Runs | Running P/L |
|---|---|---|---|---|
| Win | $242.29 | $25,388.85 | 2 | $388.85 |
| Win | $251.43 | $25,640.28 | 3 | $640.28 |
| Loss | ($248.03) | $25,392.25 | -1 | $392.25 |
| Win | $30.23 | $25,422.48 | 1 | $422.48 |
| Loss | ($230.31) | $25,192.17 | -1 | $192.17 |
| Loss | ($232.08) | $24,960.09 | -2 | ($39.91) |
| Loss | ($250.09) | $24,710.00 | -3 | ($290.00) |
| Loss | ($253.54) | $24,456.46 | -4 | ($543.54) |
| Win | $444.30 | $24,900.76 | 1 | ($99.24) |
| Loss | ($241.64) | $24,659.12 | -1 | ($340.88) |
| Win | $31.60 | $24,690.72 | 1 | ($309.28) |
| Win | $106.56 | $24,797.28 | 2 | ($202.72) |

**Month**

Note that even with a 70 percent winning percentage, this test of the 20 trades gave us a losing month. And even with that high a winning rate, we experienced four losing trades in a row!

For these 20 trades, we have a 50 percent chance of having a winning trade. But for each dollar we risk, we can only make one dollar [ giving us a Risk Reward of 1:1 ].

Welcome | Risk of Ruin | Position Size | Volatility

**Inputs**

| | |
|---|---|
| Starting Account Size | 25000 |
| $100 000 Contracts | 1 |
| Average Risk Reward | 1 |
| Average Winning Percentage | 50 |
| Average Trades a Month | 20 |
| Max Stop per Contract | 250 |
| Human Error (Hit Rate) | 10 |

**System Averages**

| | |
|---|---|
| Average Risk Per Contract | 1.00 % |
| Average Profit Per Contract | $250.00 |
| Expectancy | $100.00 |

**Aberrant Runs**

| In a Row | Wins | Losses |
|---|---|---|
| 1 | 6 | 5 |
| 2 | 1 | 4 |
| 3 | 0 | 3 |
| 4 | 0 | 1 |
| 5 | 0 | 1 |

Single Trade | One Day's Trade | One Month's Trades | New Month | Clear Trades

| | P/L | Account Balance |
|---|---|---|
| Month to date | ($2,474.60) | $22,525.40 |
| Stops rolled forward | -10 | |

**Simulated Trades**

| Win or Loss | Trade P/L | Account Balance | Runs | Running P/L |
|---|---|---|---|---|
| Win | $6.00 | $24,309.42 | 1 | ($690.58) |
| Loss | ($248.03) | $24,061.39 | -1 | ($938.61) |
| Loss | ($244.17) | $23,817.22 | -2 | ($1,182.78) |
| Loss | ($243.67) | $23,573.55 | -3 | ($1,426.45) |
| Loss | ($228.63) | $23,344.92 | -4 | ($1,655.08) |
| Loss | ($254.45) | $23,090.47 | -5 | ($1,909.53) |
| Win | $437.90 | $23,528.37 | 1 | ($1,471.63) |
| Loss | ($260.77) | $23,267.60 | -1 | ($1,732.40) |
| Loss | ($231.18) | $23,036.42 | -2 | ($1,963.58) |
| Win | $150.88 | $23,187.30 | 1 | ($1,812.70) |
| Loss | ($239.96) | $22,947.34 | -1 | ($2,052.66) |
| Loss | ($252.33) | $22,695.01 | -2 | ($2,304.99) |
| Loss | ($246.78) | $22,448.23 | -3 | ($2,551.77) |

**Month**

Note that even with a 50 percent winning percentage, this test of the 20 trades gave us a losing month. And even with an equal winning rate, we experienced five losing trades in a row!

For these 20 trades, we have a 50 percent chance of having a winning trade. But for each dollar we risk, we can now make three dollars [ giving us a Risk Reward of 3:1 ].

Welcome | Risk of Ruin | Position Size | Volatility

**Inputs**

| | |
|---|---|
| Starting Account Size | 25000 |
| $100 000 Contracts | 1 |
| Average Risk Reward | 3 |
| Average Winning Percentage | 50 |
| Average Trades a Month | 20 |
| Max Stop per Contract | 250 |
| Human Error (Hit Rate) | 10 |

**System Averages**

| | |
|---|---|
| Average Risk Per Contract | 1.00 % |
| Average Profit Per Contract | $750.00 |
| Expectancy | $300.00 |

**Aberrant Runs**

| In a Row | Wins | Losses |
|---|---|---|
| 1 | 5 | 5 |
| 2 | 1 | 3 |
| 3 | 1 | 2 |
| 4 | 1 | 1 |
| 5 | 1 | 1 |

Single Trade | One Day's Trade | One Month's Trades | New Month | Clear Trades

| | P/L | Account Balance |
|---|---|---|
| Month to date | $3,440.51 | $28,440.51 |
| Stops rolled forward | 13 | |

**Simulated Trades**

| Win or Loss | Trade P/L | Account Balance | Runs | Running P/L |
|---|---|---|---|---|
| Win | $1,169.74 | $26,169.74 | 1 | $1,169.74 |
| Win | $1,151.91 | $27,321.65 | 2 | $2,321.65 |
| Win | $1,313.70 | $28,635.35 | 3 | $3,635.35 |
| Win | $415.62 | $29,050.97 | 4 | $4,050.97 |
| Win | $1,457.67 | $30,508.64 | 5 | $5,508.64 |
| Loss | ($232.77) | $30,275.87 | -1 | $5,275.87 |
| Loss | ($251.27) | $30,024.60 | -2 | $5,024.60 |
| Loss | ($255.23) | $29,769.37 | -3 | $4,769.37 |
| Win | $389.56 | $30,158.93 | 1 | $5,158.93 |
| Loss | ($245.23) | $29,913.70 | -1 | $4,913.70 |
| Loss | ($254.51) | $29,659.19 | -2 | $4,659.19 |
| Win | $13.92 | $29,673.11 | 1 | $4,673.11 |
| Loss | ($241.74) | $29,431.37 | -1 | $4,431.37 |

**Month**

Note that with a 50 percent winning percentage, this test of 20 trades gave us a nice profitable month. And with an equal winning rate, we still experienced three losing trades in a row!

For these 20 trades, we have a 70 percent chance of having a winning trade. But for each dollar we risk, we can now make three dollars [ giving us a Risk Reward of 3:1 ].

Welcome | Risk of Ruin | Position Size | Volatility

**Inputs**

| | |
|---|---|
| Starting Account Size | 25000 |
| $100 000 Contracts | 1 |
| Average Risk Reward | 3 |
| Average Winning Percentage | 70 |
| Average Trades a Month | 20 |
| Max Stop per Contract | 250 |
| Human Error (Hit Rate) | 10 |

**System Averages**

| | |
|---|---|
| Average Risk Per Contract | 1.00 % |
| Average Profit Per Contract | $750.00 |
| Expectancy | $450.00 |

**Aberrant Runs**

| In a Row | Wins | Losses |
|---|---|---|
| 1 | 5 | 5 |
| 2 | 3 | 2 |
| 3 | 3 | 0 |
| 4 | 1 | 0 |
| 5 | 1 | 0 |

Single Trade | One Day's Trade | One Month's Trades | New Month | Clear Trades

| | P/L | Account Balance |
|---|---|---|
| Month to date | $9,102.18 | $34,102.18 |
| Stops rolled forward | 36 | |

**Simulated Trades**

| Win or Loss | Trade P/L | Account Balance | Runs | Running P/L |
|---|---|---|---|---|
| Win | $844.79 | $31,809.30 | 1 | $6,809.30 |
| Win | $252.47 | $32,061.77 | 2 | $7,061.77 |
| Win | $540.40 | $32,602.17 | 3 | $7,602.17 |
| Win | $469.10 | $33,071.27 | 4 | $8,071.27 |
| Win | $837.92 | $33,909.19 | 5 | $8,909.19 |
| Win | $587.01 | $34,496.20 | 6 | $9,496.20 |
| Loss | ($260.64) | $34,235.56 | -1 | $9,235.56 |
| Loss | ($258.46) | $33,977.10 | -2 | $8,977.10 |
| Win | $76.99 | $34,054.09 | 1 | $9,054.09 |
| Loss | ($247.38) | $33,806.71 | -1 | $8,806.71 |
| Win | $526.71 | $34,333.42 | 1 | $9,333.42 |
| Loss | ($231.24) | $34,102.18 | -1 | $9,102.18 |

**Month**

Note that even with a 70 percent winning percentage, this test of the 20 trades gave us a very profitable month. And with a 70 percent winning rate, we only had two losing trades in a row!

For these 20 trades, we have a 40 percent chance of having a winning trade. But for each dollar we risk, we can now make three dollars [ giving us a Risk Reward of 3:1 ].

Welcome | Risk of Ruin | Position Size | Volatility

**Inputs**

| | |
|---|---|
| Starting Account Size | 25000 |
| $100 000 Contracts | 1 |
| Average Risk Reward | 3 |
| Average Winning Percentage | 40 |
| Average Trades a Month | 20 |
| Max Stop per Contract | 250 |
| Human Error (Hit Rate) | 10 |

**System Averages**

| | |
|---|---|
| Average Risk Per Contract | 1.00 % |
| Average Profit Per Contract | $750.00 |
| Expectancy | $225.00 |

**Aberrant Runs**

| In a Row | Wins | Losses |
|---|---|---|
| 1 | 6 | 7 |
| 2 | 2 | 4 |
| 3 | 0 | 1 |
| 4 | 0 | 1 |
| 5 | 0 | 0 |

Single Trade | One Day's Trade | One Month's Trades | New Month | Clear Trades

| | P/L | Account Balance |
|---|---|---|
| Month to date | $1,867.20 | $26,867.20 |
| Stops rolled forward | 7 | |

**Simulated Trades**

| Win or Loss | Trade P/L | Account Balance | Runs | Running P/L |
|---|---|---|---|---|
| Loss | ($237.04) | $24,762.96 | -1 | ($237.04) |
| Loss | ($253.86) | $24,509.10 | -2 | ($490.90) |
| Win | $944.88 | $25,453.98 | 1 | $453.98 |
| Loss | ($239.90) | $25,214.08 | -1 | $214.08 |
| Loss | ($237.13) | $24,976.95 | -2 | ($23.05) |
| Loss | ($237.72) | $24,739.23 | -3 | ($260.77) |
| Loss | ($257.90) | $24,481.33 | -4 | ($518.67) |
| Win | $1,098.44 | $25,579.77 | 1 | $579.77 |
| Win | $362.15 | $25,941.92 | 2 | $941.92 |
| Loss | ($255.23) | $25,686.69 | -1 | $686.69 |
| Win | $30.33 | $25,717.02 | 1 | $717.02 |
| Win | $67.40 | $25,784.42 | 2 | $784.42 |
| Loss | ($237.19) | $25,547.23 | -1 | $547.23 |

**Month**

Note that even with a 40 percent winning percentage, this test of the 20 trades gave us a winning month. With a 40 percent winning rate, we experienced four losing trades in a row!

For these 20 trades, we have a 30 percent chance of having a winning trade. But for each dollar we risk, we can now make three dollars [ giving us a Risk Reward of 3:1 ].

Welcome | Risk of Ruin | Position Size | Volatility

**Inputs**

| | |
|---|---|
| Starting Account Size | 25000 |
| $100 000 Contracts | 1 |
| Average Risk Reward | 3 |
| Average Winning Percentage | 30 |
| Average Trades a Month | 20 |
| Max Stop per Contract | 250 |
| Human Error (Hit Rate) | 10 |

**System Averages**

| | |
|---|---|
| Average Risk Per Contract | 1.00 % |
| Average Profit Per Contract | $750.00 |
| Expectancy | $150.00 |

**Aberrant Runs**

| In a Row | Wins | Losses |
|---|---|---|
| 3 | 0 | 3 |
| 4 | 0 | 2 |
| 5 | 0 | 2 |
| 6 | 0 | 1 |
| 7 | 0 | 0 |

Single Trade | One Day's Trade | One Month's Trades | New Month | Clear Trades

| | P/L | Account Balance |
|---|---|---|
| Month to date | $548.54 | $25,548.54 |
| Stops rolled forward | 2 | |

**Simulated Trades**

| Win or Loss | Trade P/L | Account Balance | Runs | Running P/L |
|---|---|---|---|---|
| Loss | ($238.25) | $24,761.75 | -1 | ($238.25) |
| Loss | ($256.75) | $24,505.00 | -2 | ($495.00) |
| Loss | ($227.66) | $24,277.34 | -3 | ($722.66) |
| Loss | ($241.12) | $24,036.22 | -4 | ($963.78) |
| Loss | ($238.34) | $23,797.88 | -5 | ($1,202.12) |
| Win | $529.44 | $24,327.32 | 1 | ($672.68) |
| Win | $1,212.25 | $25,539.57 | 2 | $539.57 |
| Loss | ($240.12) | $25,299.45 | -1 | $299.45 |
| Win | $539.03 | $25,838.48 | 1 | $838.48 |
| Win | $683.00 | $26,521.48 | 2 | $1,521.48 |
| Loss | ($242.49) | $26,278.99 | -1 | $1,278.99 |
| Loss | ($241.99) | $26,037.00 | -2 | $1,037.00 |
| Loss | ($254.35) | $25,782.65 | -3 | $782.65 |

**Month**

Note that even with a 30 percent winning percentage, this test of 20 trades still gave us a winning month. But with a 30 percent winning rate, we experienced six losing trades in a row!

These sample tests are meant to be representative of what happens to trading results when you vary winning percentage and more important, the amount risked versus the potential profit. *Note that each time you run the simulations, the results will vary – just as the results will vary when you flip a coin 1000 times in a row in ten different simulations.*

I hope you now understand that the Risk Reward of a potential trade is as important if not more important than the expected winning percentage of the method you are using. If you only choose trades that have a Risk Reward of better than 3 to 1, you are well on your way to becoming a more consistently profitable trader.

# Taking apart my favorite trading setup: Theory into Practice!

**Dr. Alan Andrews and Roger Babson were devotees of Sir Isaac Newton**

**Sir Isaac Newton was an Alchemist first and a student of Math and Physics second. *The Emerald Tablet,* one of the most revered documents in the Western World, has become synonymous with ancient wisdom. Sir Isaac Newton's translation of this epic tome remains the authoritative version to this day.**

**Newton's translation of the Emerald Tablet**

*A translation by Isaac Newton is found among his alchemical papers that are currently housed in King's College Library, Cambridge University:*

Tis true without lying, certain & most true.
That which is below is like that which is above & that which is above is like that which is below
to do the miracles of one only thing
And as all things have been & arose from one by the mediation of one: so all things have their birth from this one thing by adaptation.
The Sun is its father, the moon its mother, the wind hath carried it in its belly, the earth is its nurse.
The father of all perfection in the whole world is here.
Its force or power is entire if it be converted into earth.
Separate thou the earth from the fire, the subtile from the gross sweetly with great indoustry.
It ascends from the earth to the heaven & again it descends to the earth & receives the force of things superior & inferior.
By this means you shall have the glory of the whole world
& thereby all obscurity shall fly from you.
Its force is above all force. For it vanquishes every subtile thing & penetrates every solid thing.
So was the world created.
From this are & do come admirable adaptations whereof the means (or process) is here in this.
Hence I am called Hermes Trismegist, having the three parts of the philosophy of the whole world
That which I have said of the operation of the Sun is accomplished & ended.

‘That which is below is like that which is above & that which is above is like that which is below’

Was later transformed by Newton in his working papers as:

**‘As Above, So Below’**

And many scholars believe it is the basis for his Three Laws of Motion.

# Newton’s Third Law of Motion

In the original Latin of Newton's Principia:

*Lex III: Actioni contrariam semper et æqualem esse reactionem: sive corporum duorum actiones in se mutuo semper esse æquales et in partes contrarias dirigi.*

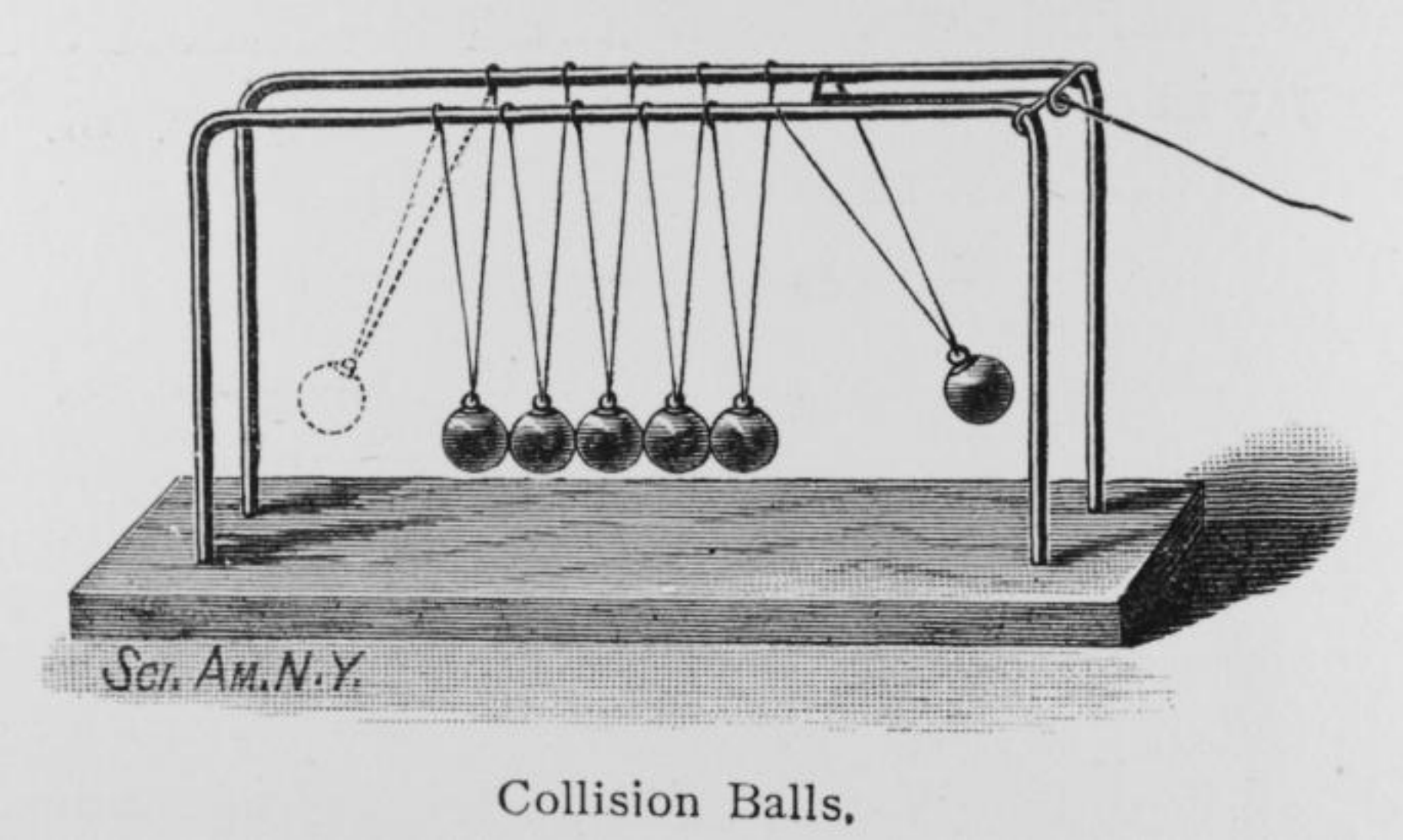
Translated to English in Motte's 1729 translation

*Law III: To every action there is always an equal and opposite reaction: or the forces of two bodies on each other are always equal and are directed in opposite directions.*

## How does Newton’s Third Law of Motion relate to Median Lines?

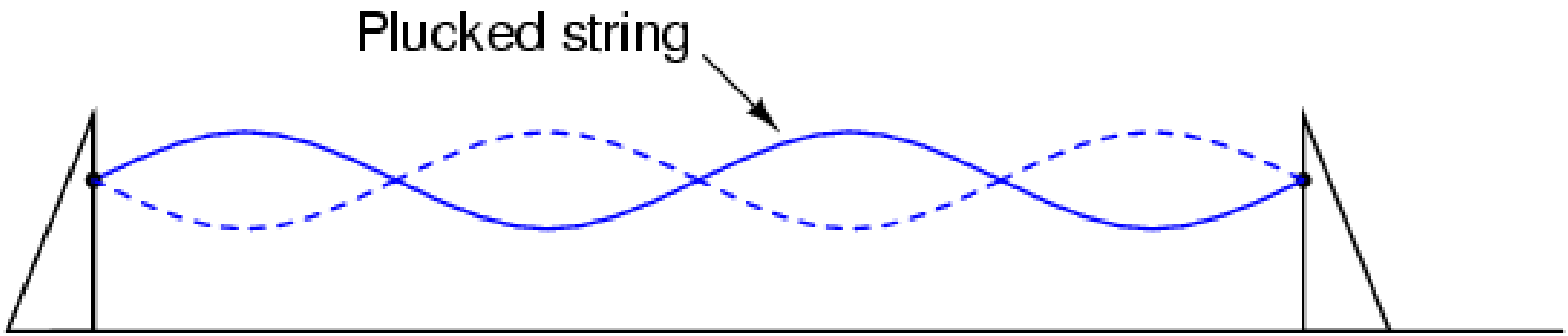
The common translation of Newton’s Third Law is:

**For every action, there is an equal and opposite reaction**

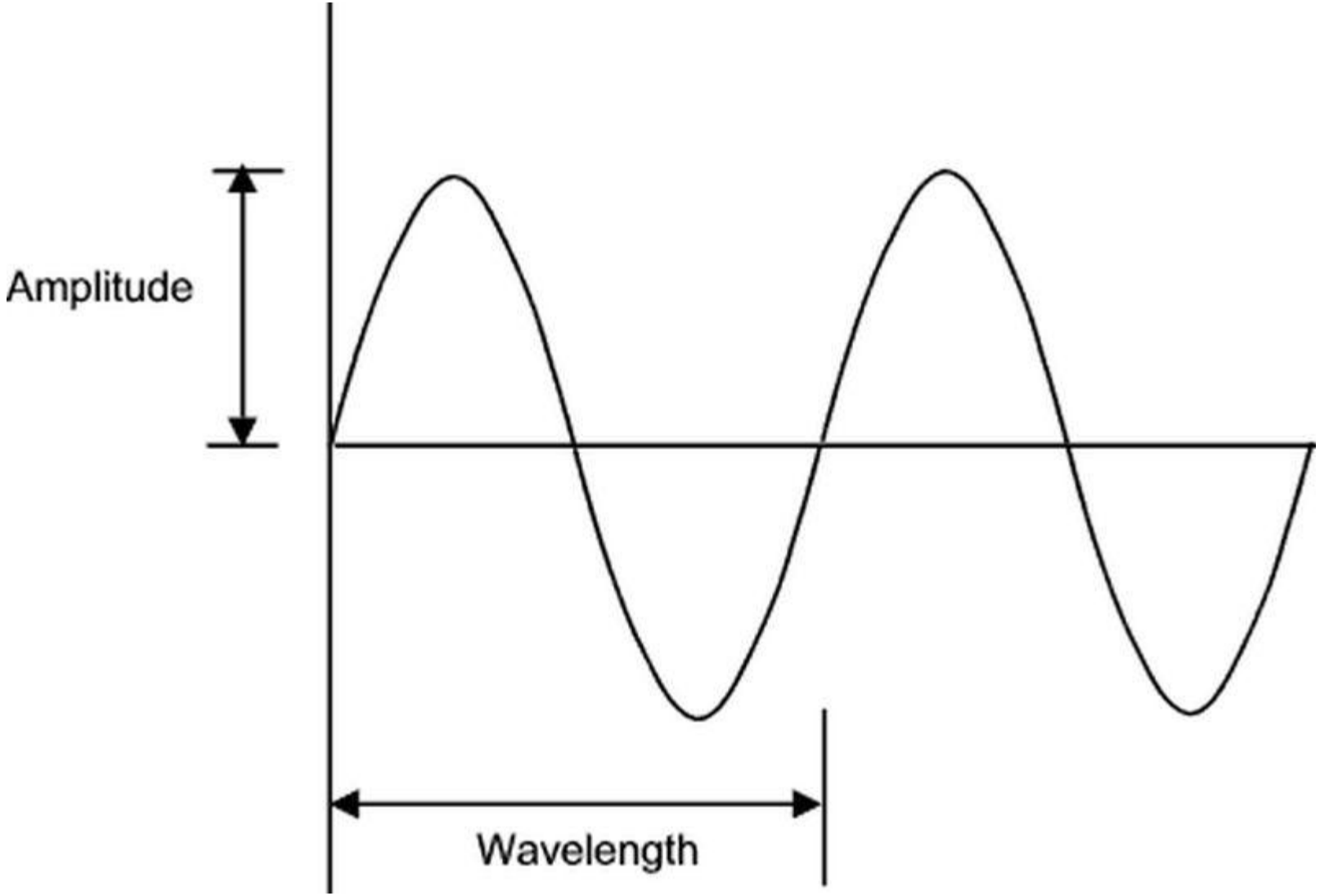



Collision Balls.

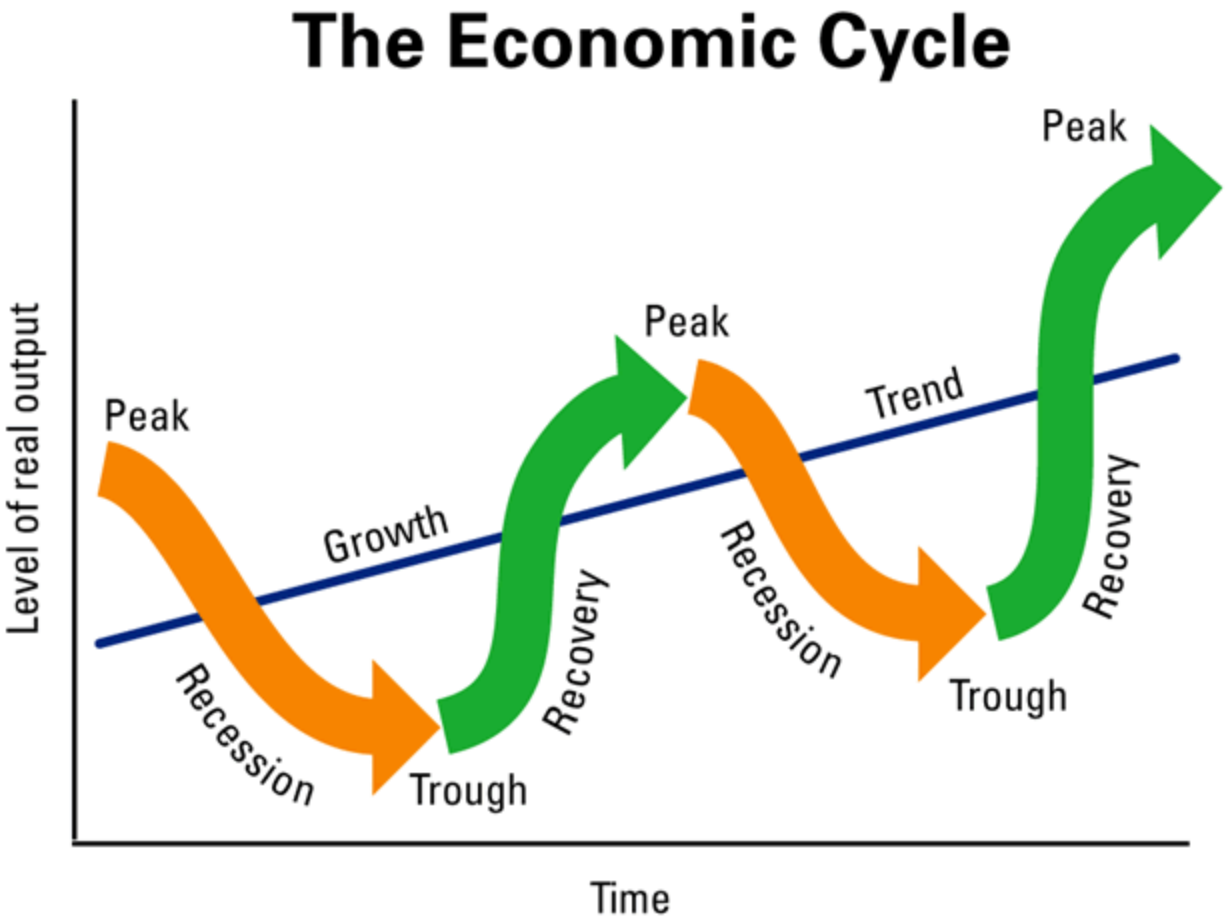
**This is a classic demonstration of Newton's Third Law**



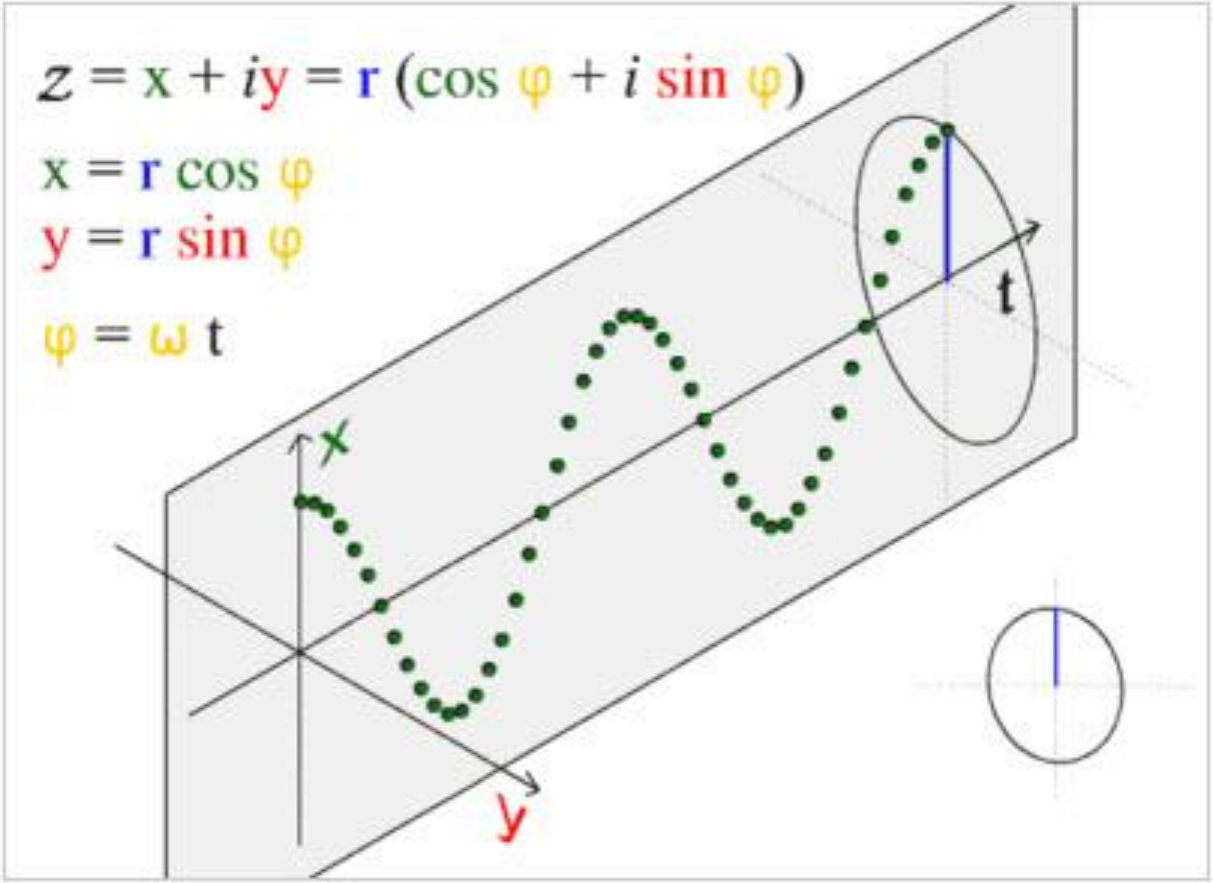

In 1924, Dr. Alan Andrews took a handful of Graduate Students from MIT's Math Department and began four years of hands on experiments, dealing directly with Isaac Newton's ideas and the movements of the stock market. We know from documents of the time the group experimented with string stretched from one pin to another on boards. The strings were then plucked and the string's length of movement in the opposite direction was carefully recorded. They also experimented with wooden balls on one end of a piece of stretchy string tied to a pin; when the wooden balls were pulled back a certain distance and released, the length of travel was then recorded. These experiments were attempts to validate equal Action and Reaction.




**As a Thermodynamics Professor, Andrews was familiar with Sine Waves**

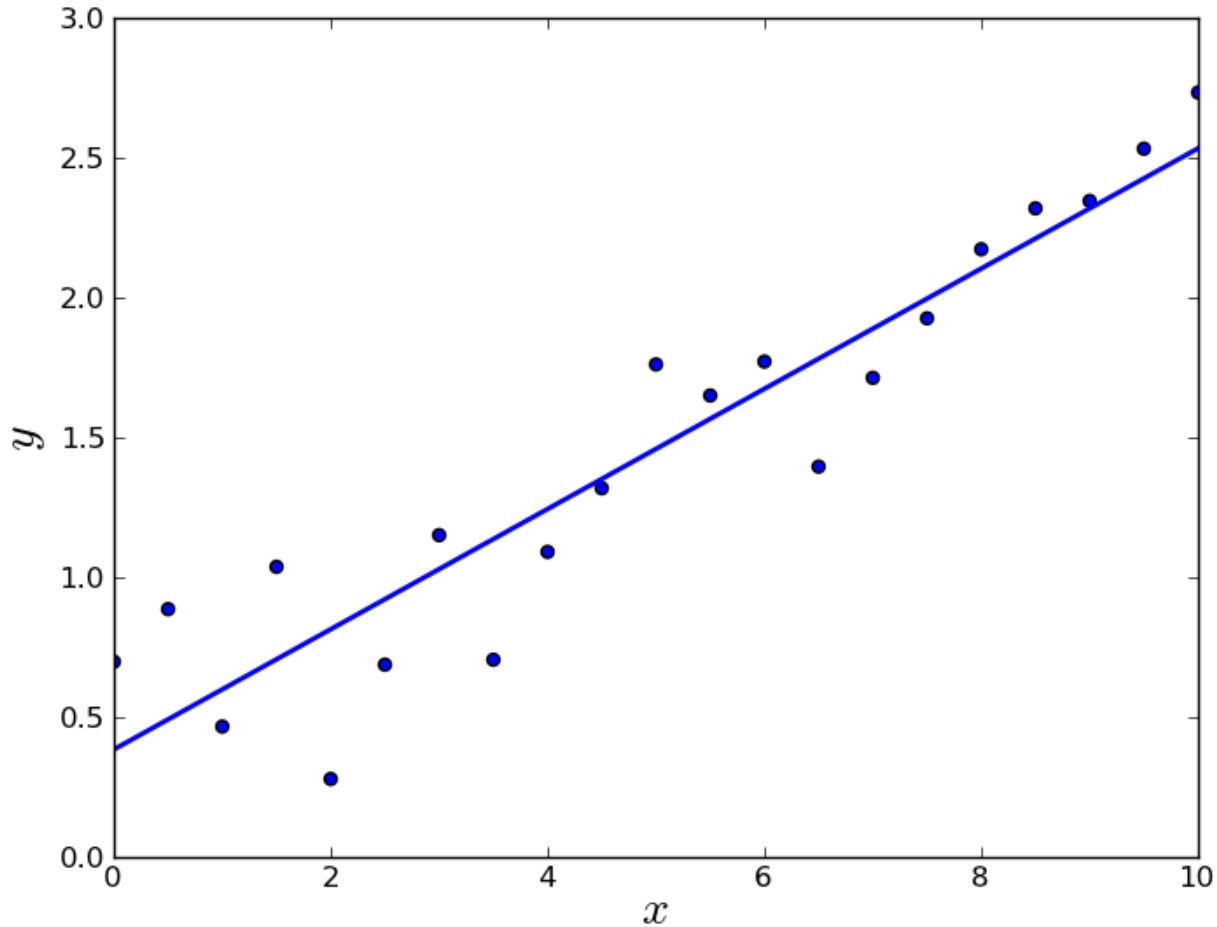



**This is a modern representation of Roger Babson's Babson Charts.**



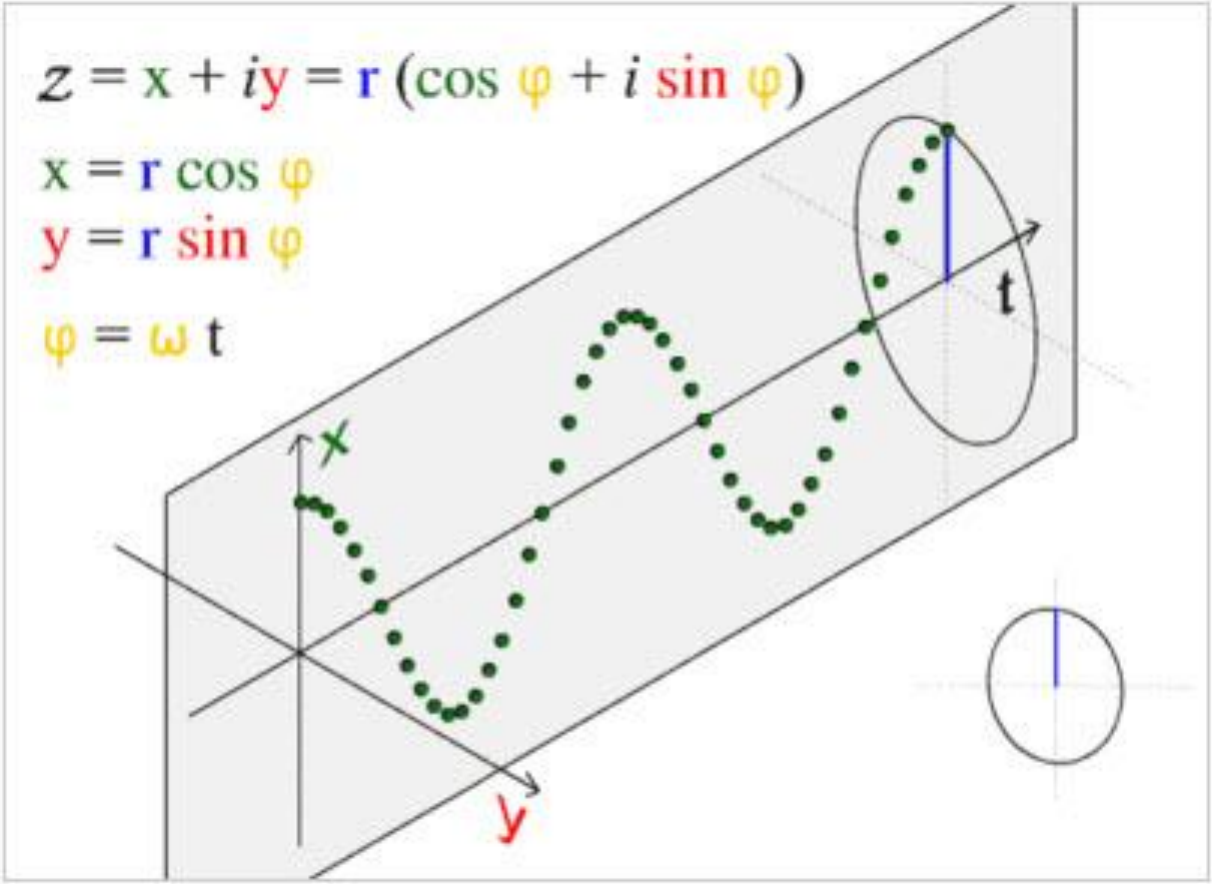

Illustrating the cosine wave's fundamental relationship to the circle.

**It's quite easy to see the relationship between Babson Charts and Sine Waves.**



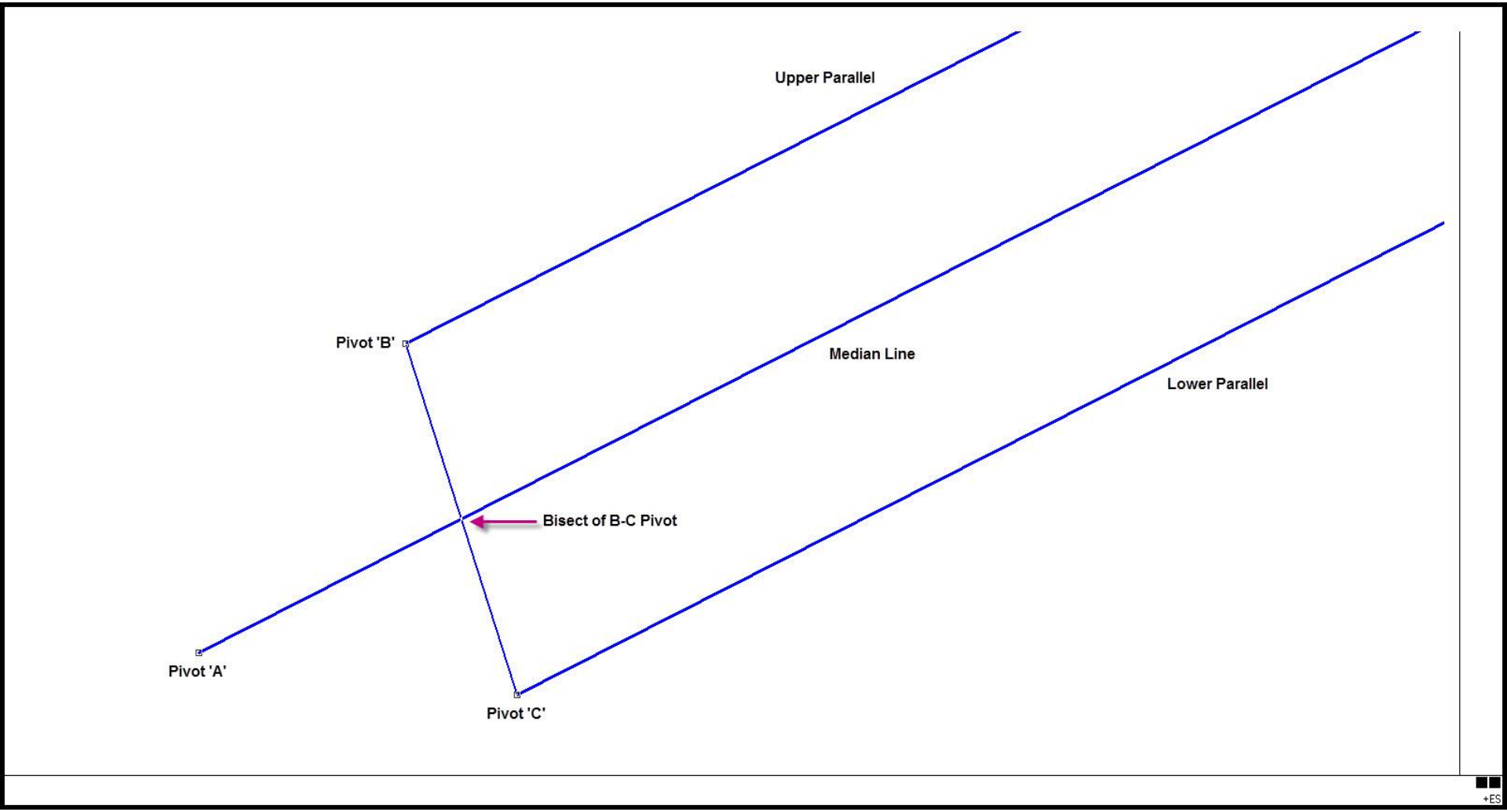

The method of least squares grew out of the fields of astronomy in the early 1800's. The linear fit that matches the pattern of a set of paired data closely is called a Least Squares Linear Regression Line. If you look at the sloped line above, it is a curve fit 'Center Line'; Andrews would take Action Reaction Lines and produce Median Lines from their concepts in the 1940's as a mathematically sound method to project the Probable Path of Price forward in Price and Time.

# From Theory to Practice: Linear Regression Lines, Sine Waves, Alchemy and Physics give us Median Lines

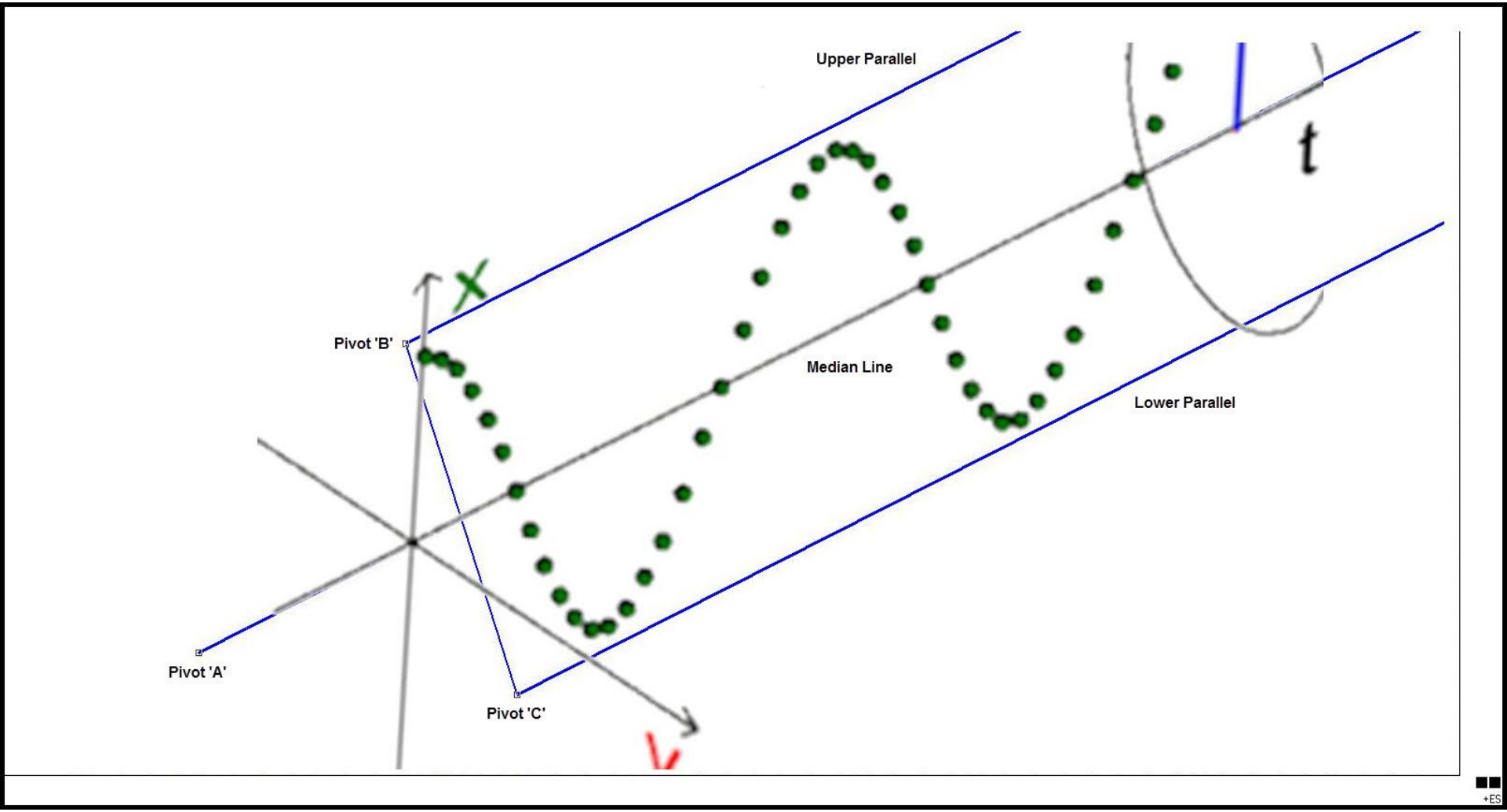



Illustrating the cosine wave's fundamental relationship to the circle.

**Let's start out with a basic Sine Wave function, plotted with an upward slope.**



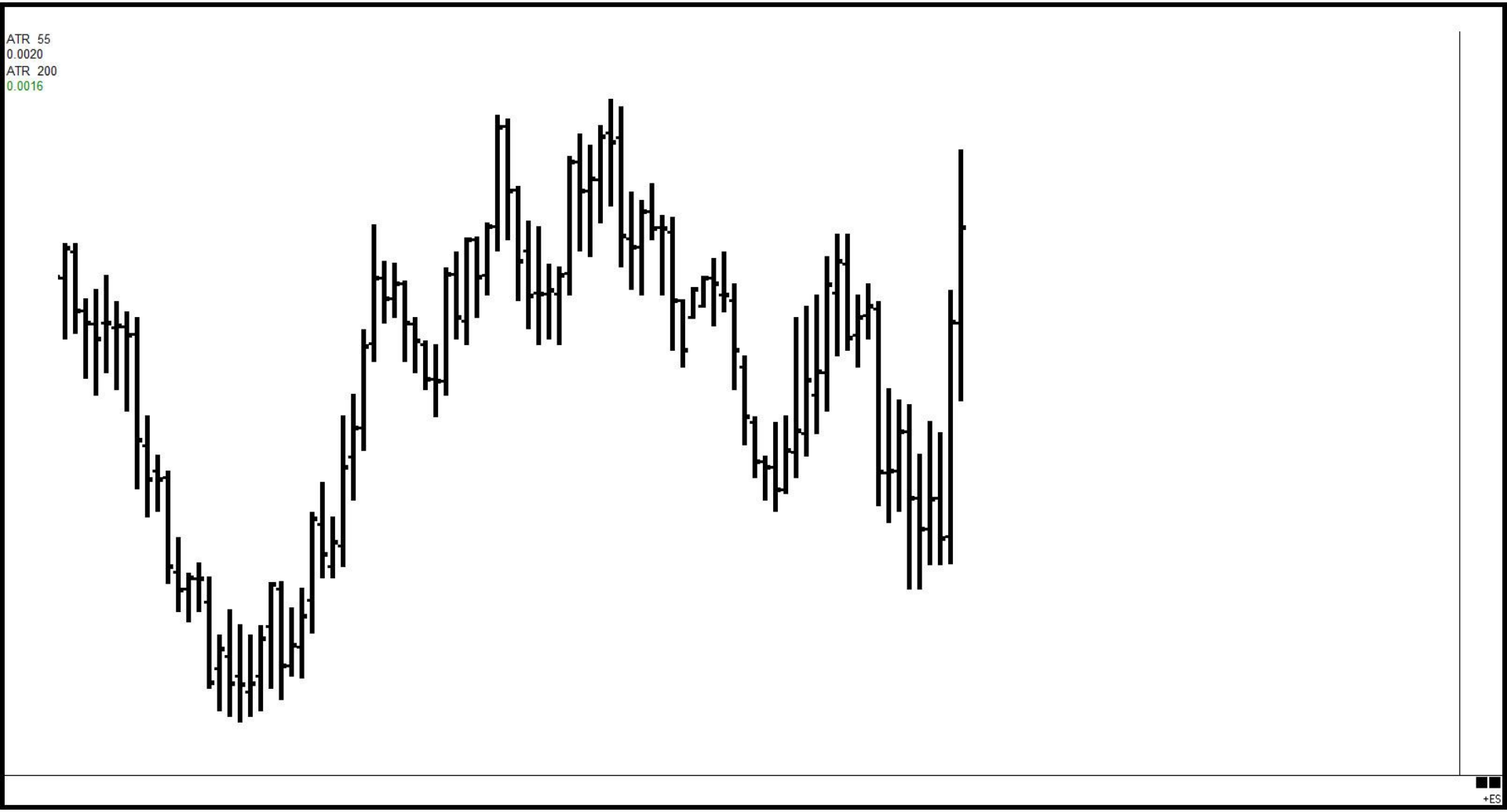

**Here's a basic Median Line and its Parallels, with all its parts labeled.**



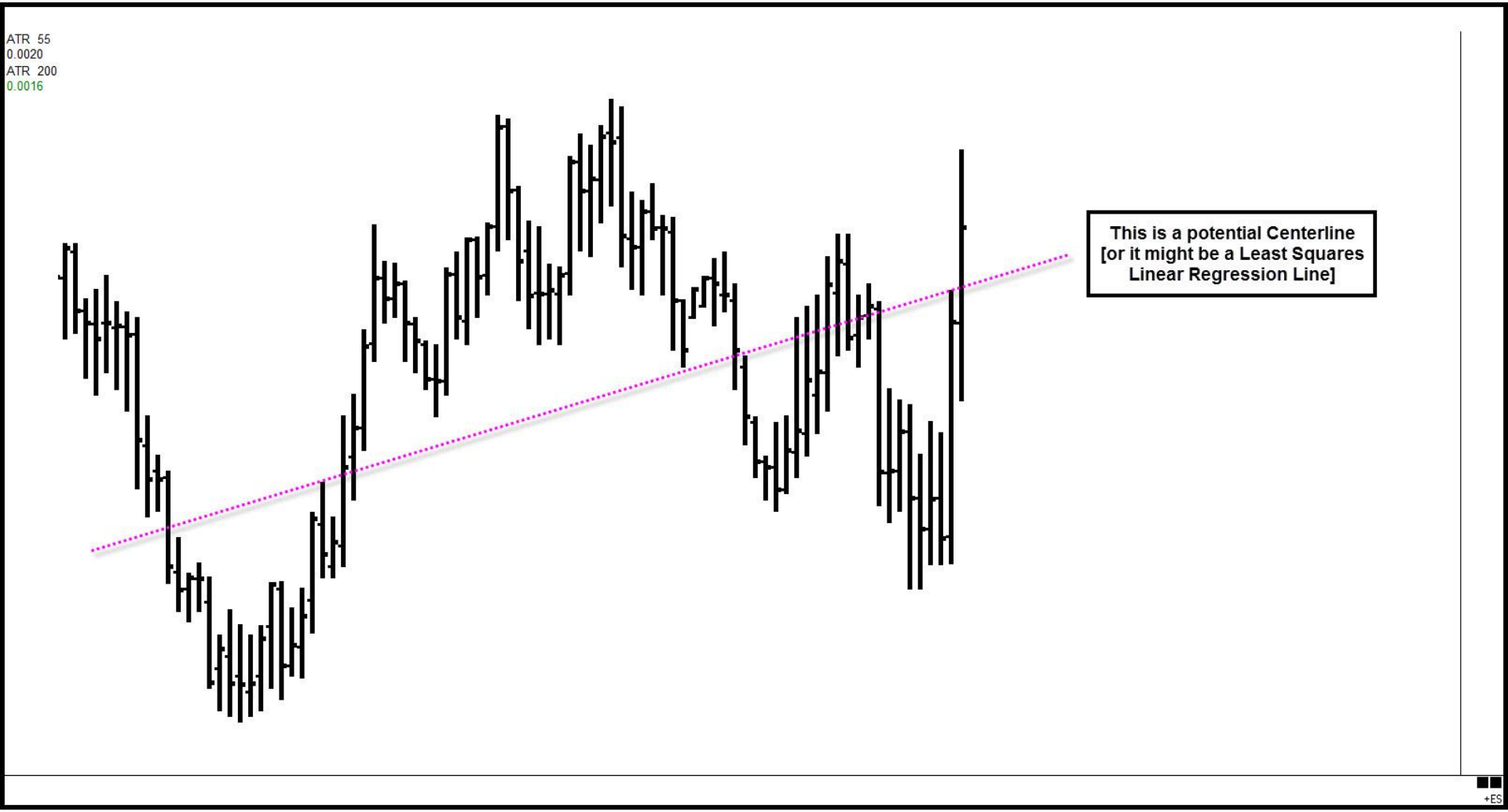

**Here is the Sine Wave Function laid over the basic Median Line.**

**As with a Sine Wave Function, as with a Linear Regression Set, Price Fluctuates. It is our job to use our tools to Project the Probable Path of these Fluctuations and take advantage of them.**

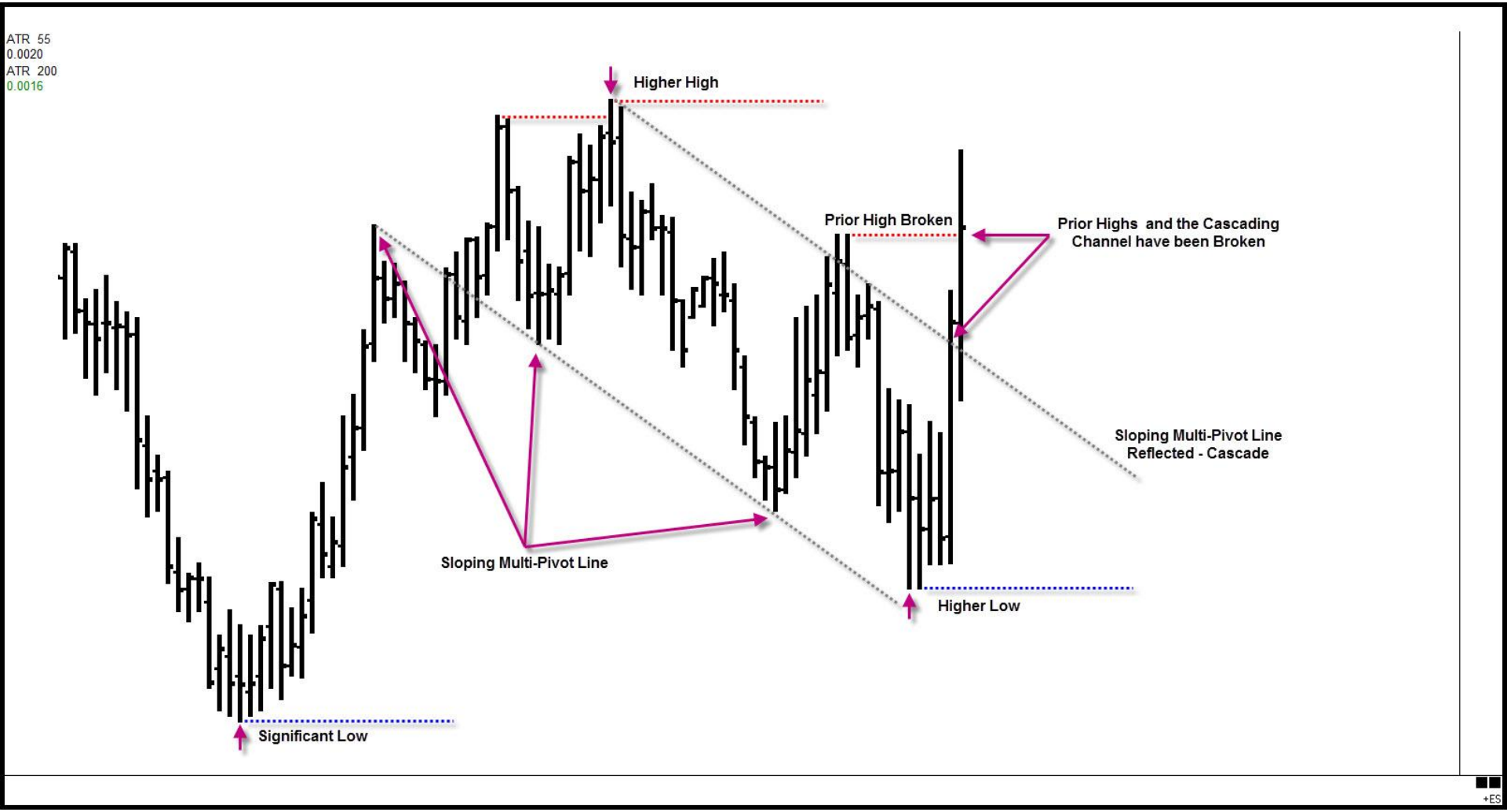
**Let’s look at my favorite ways to use Median Lines to take advantage of the Fluctuations of Price!**



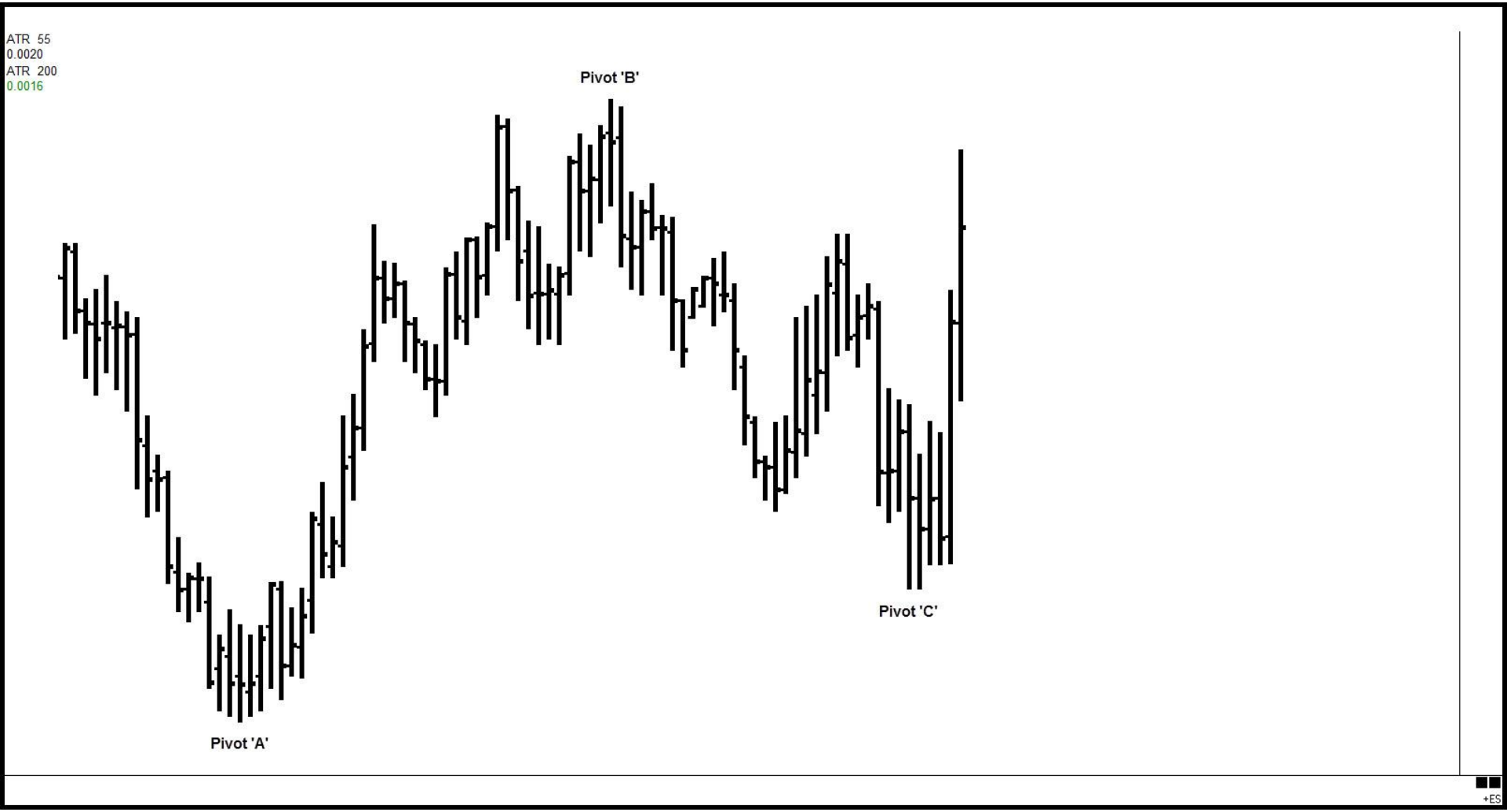

**Here is an image of basic Price action on a currency future, the Yen.**



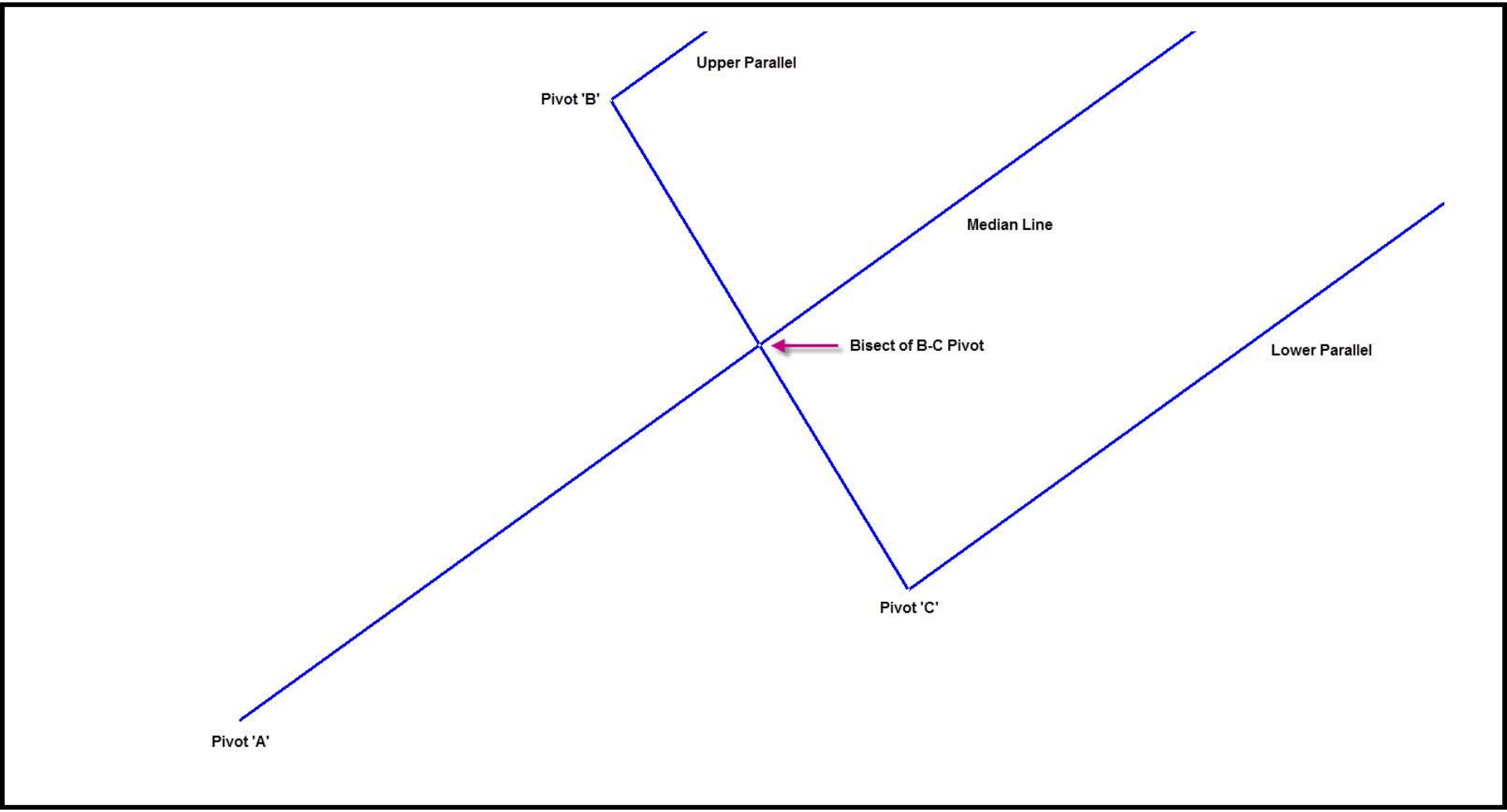

**As I look at the Price action, my eyes 'see' a potential Center Line.**



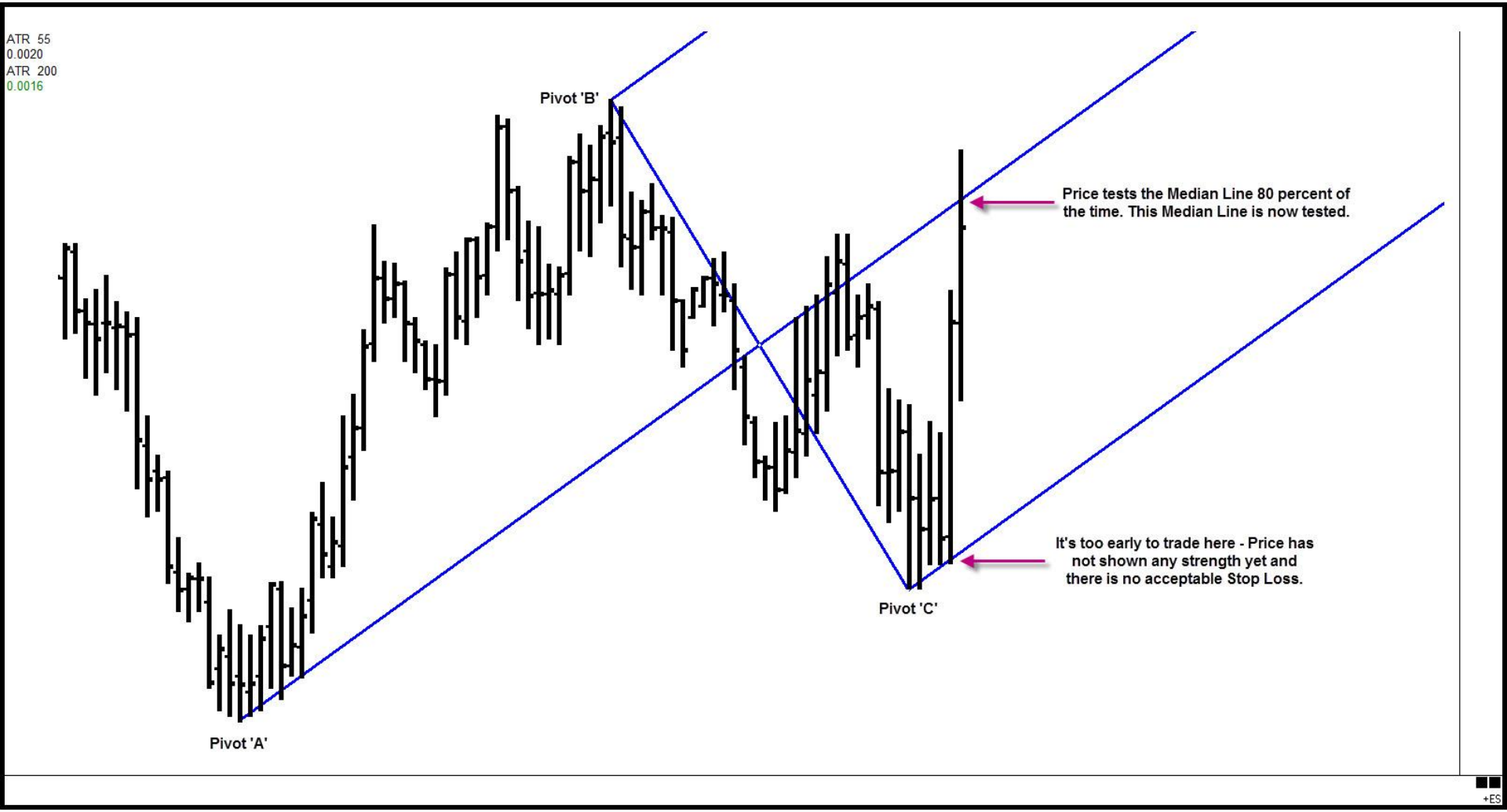

**Now I annotate the various important pieces of Market Structure.**




**I can see the Median Line already. Can you see it?**

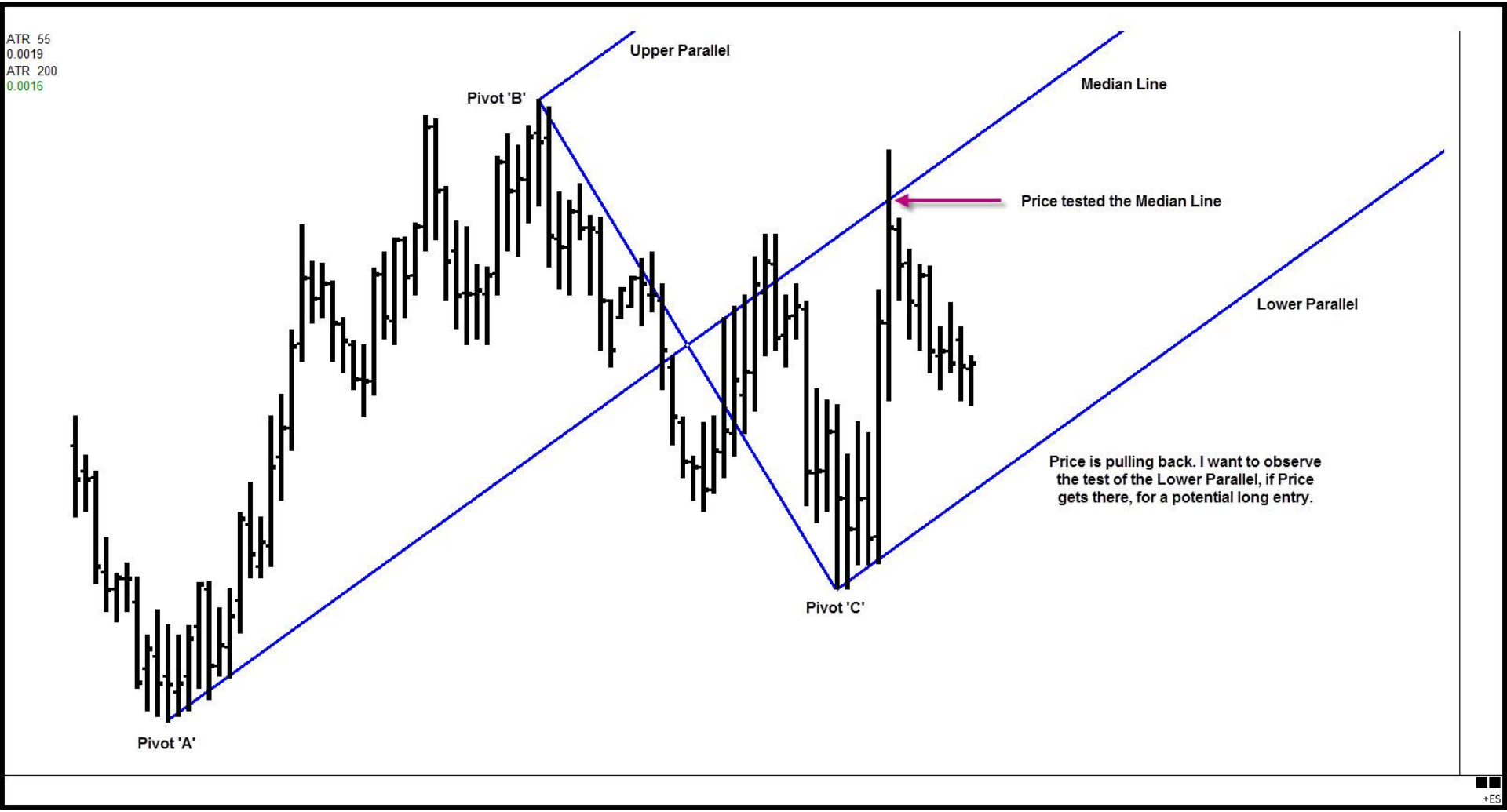



**If I clear the bars off the chart, I ‘see’ this Median Line!**

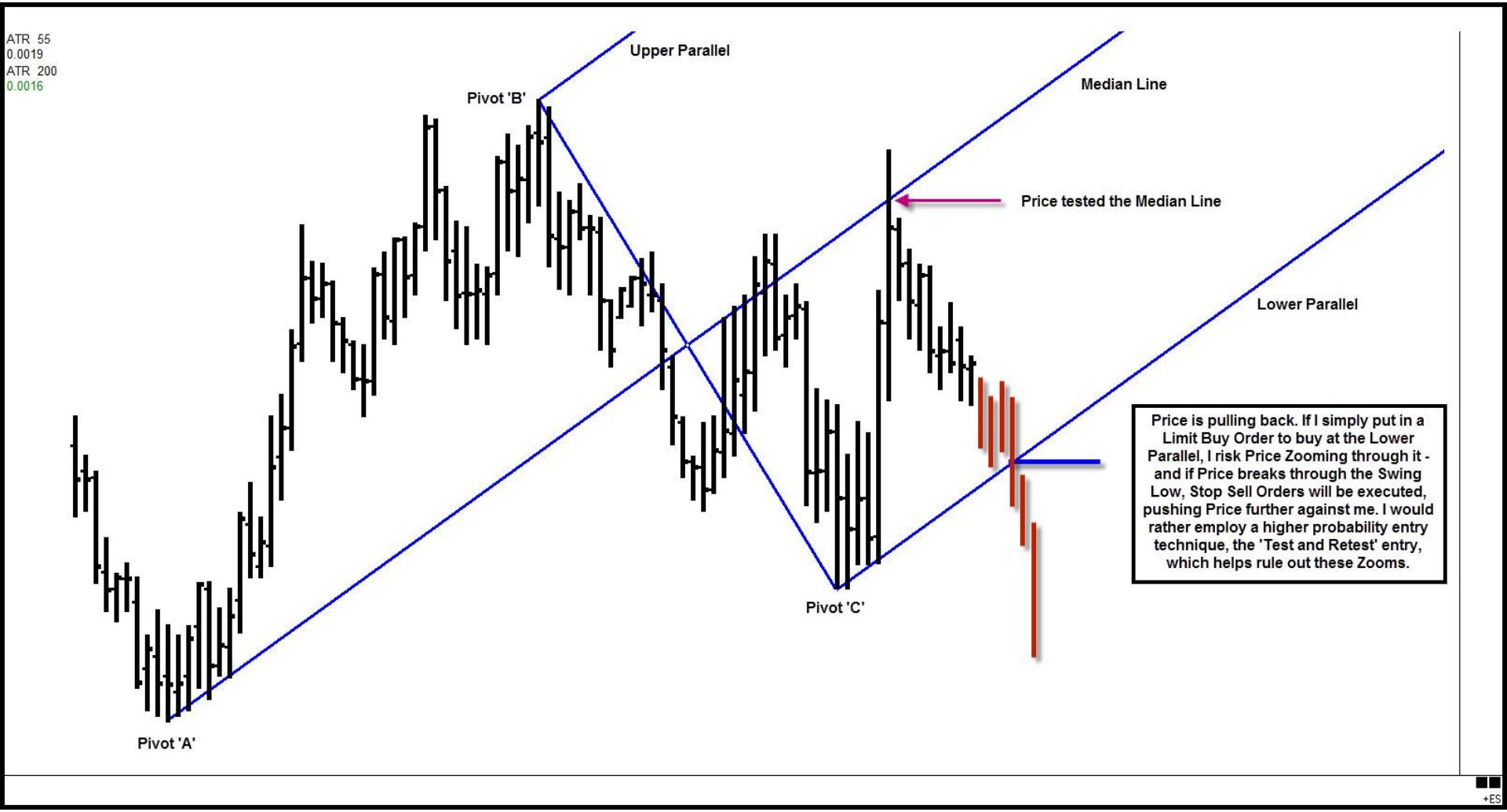



**I draw a traditional Median Line on the chart using the Price Extremes.**

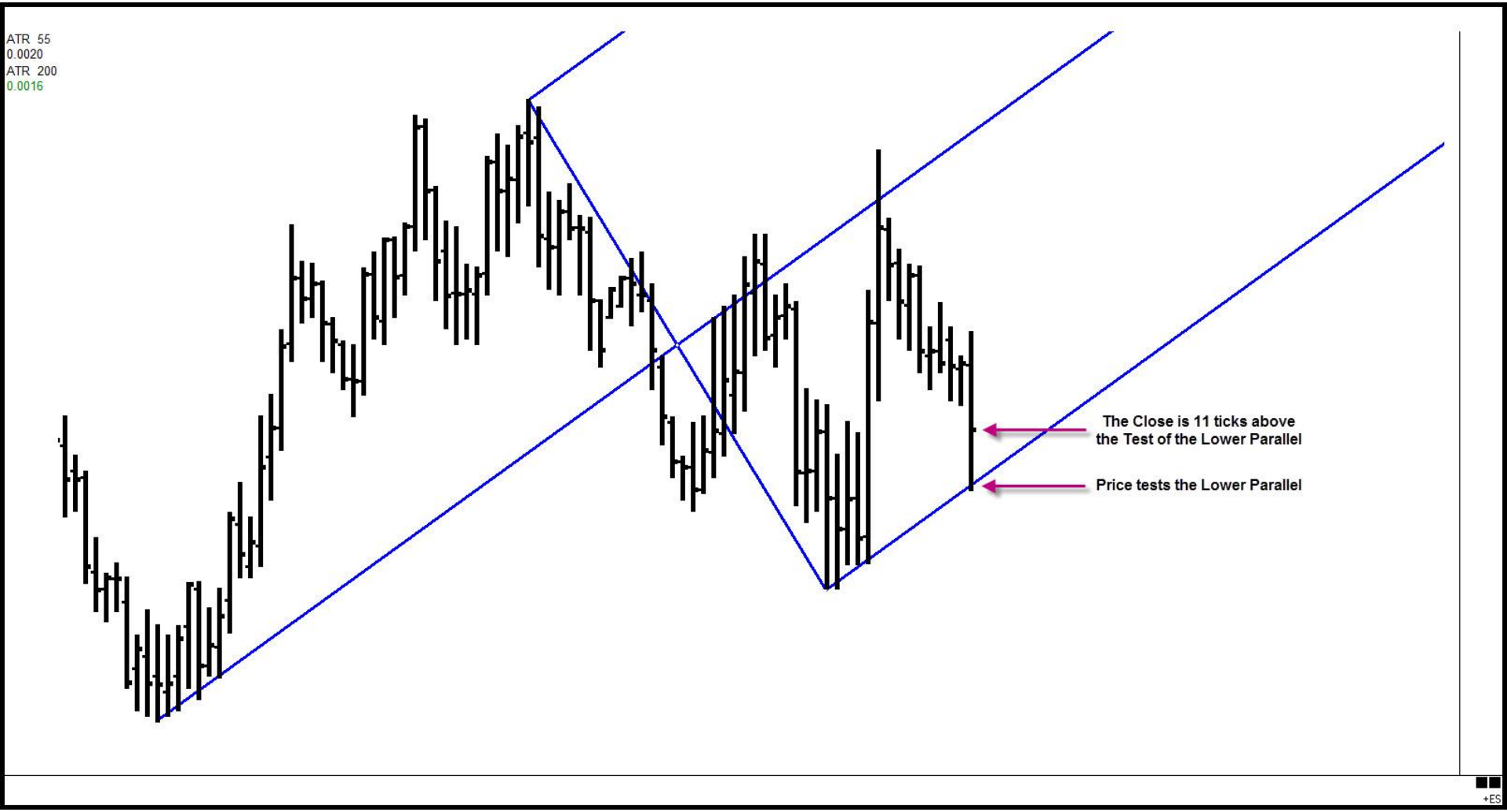
**My eyes, my intuition, the probable Center Line and the Median Line tell me there MAY be an opportunity for a long trade here. But I need to watch for Price Action to unfold further.**



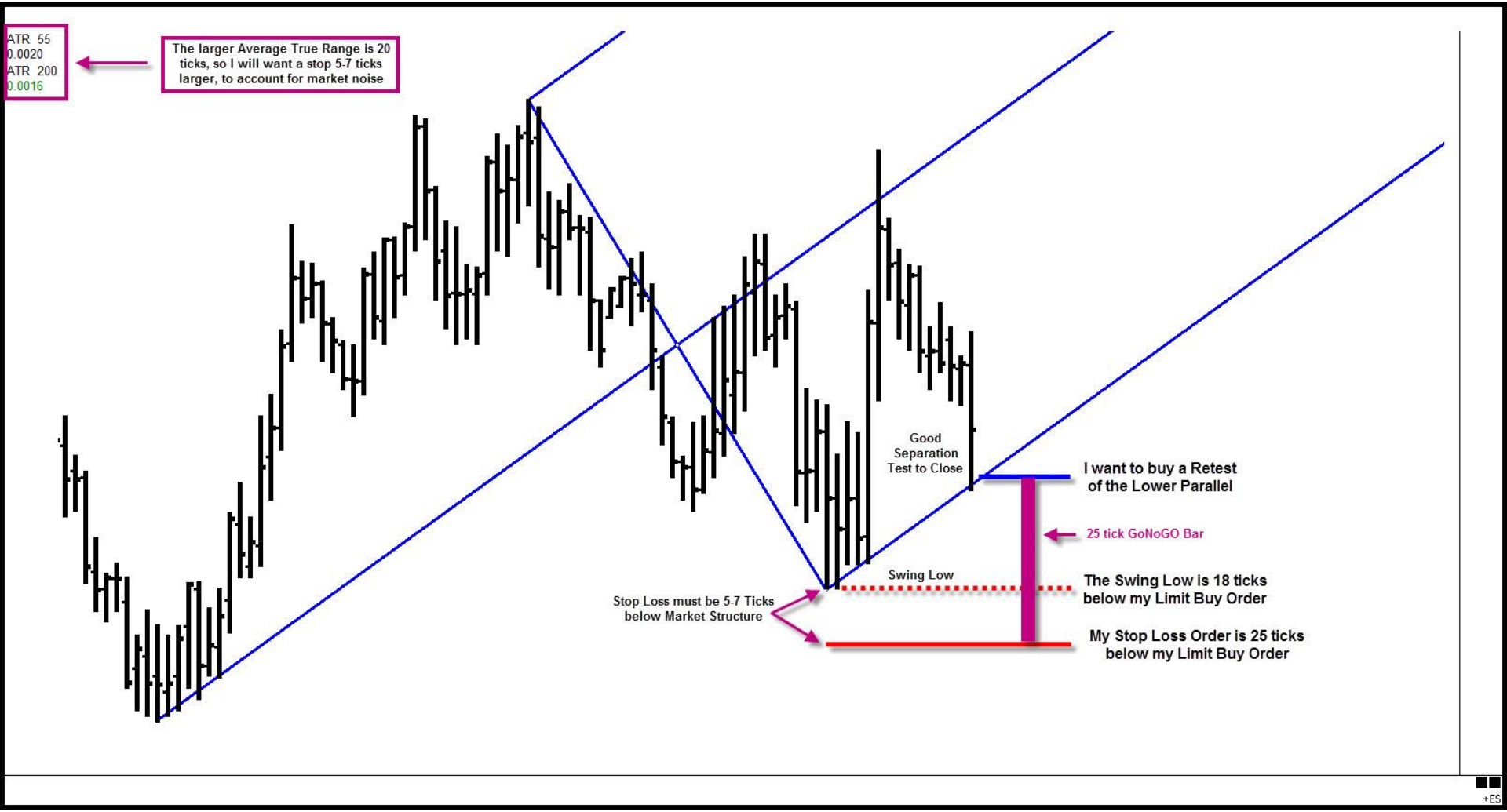

**I am stalking a potential long entry. I want a high probability entry, so I will be examining specific things IF Price tests the Lower Parallel.**



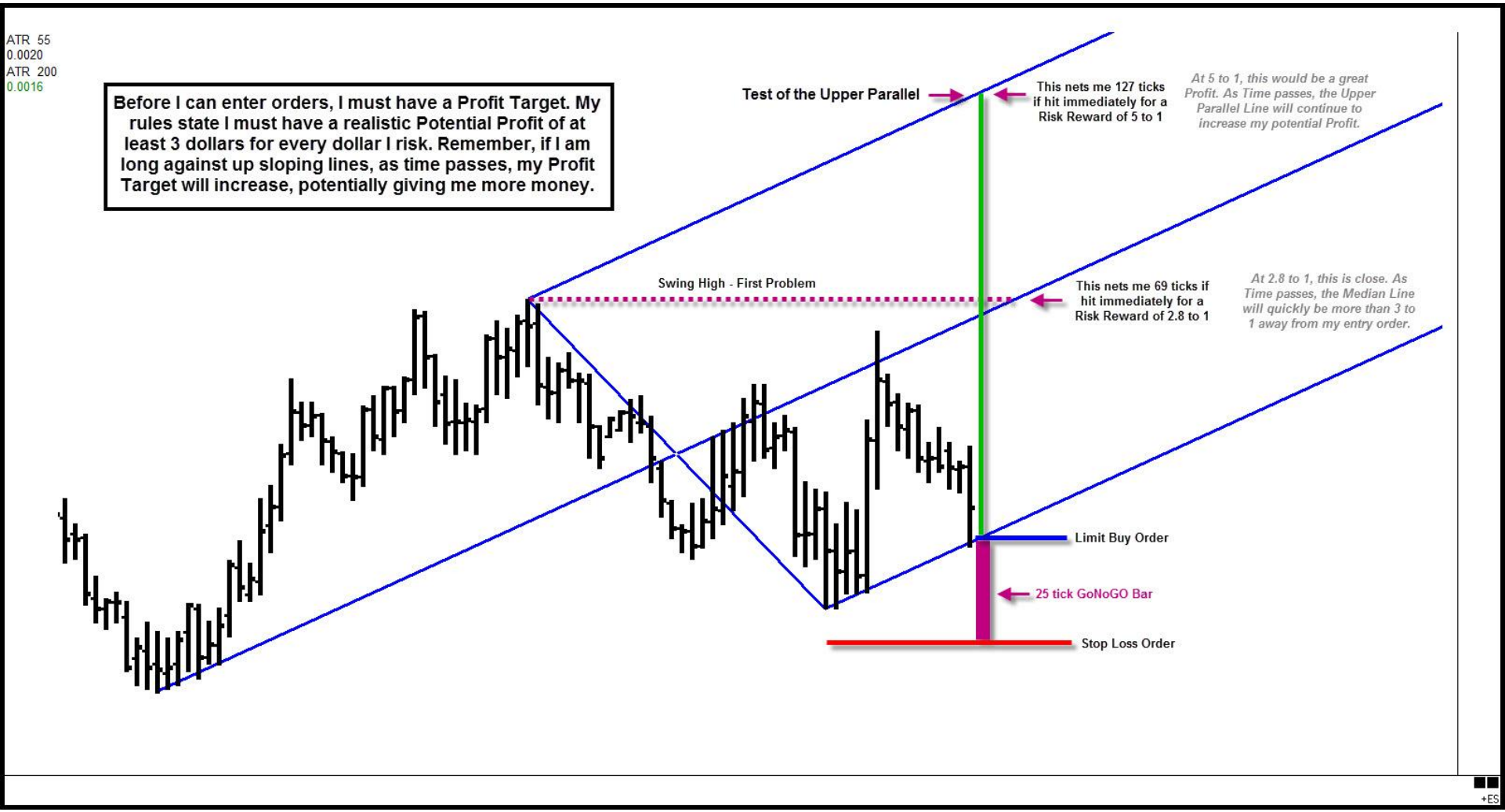

Upon reaching the Median Line or its Parallels, Price will do one of three things: Reverse, Congest, or Accelerate [Zooming the line in the process]. Price rarely congests [about 10 percent of the time] but by using a Test and Retest strategy, Acceleration is ruled out 80 PCT of the time.



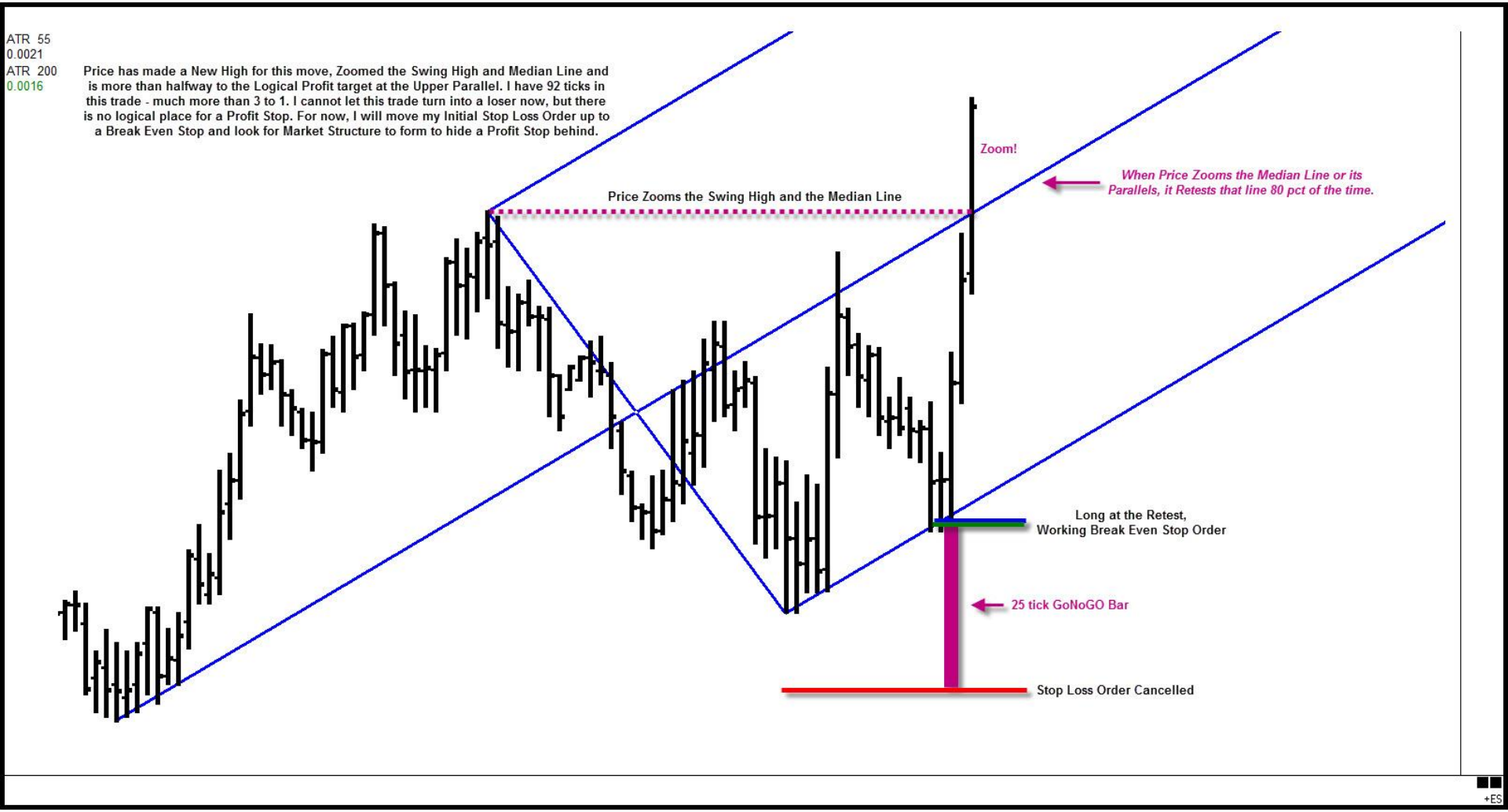

**Price tests the Lower Parallel. Since Price closed 11 ticks higher than the test, this test has 'Good Separation'. By waiting for a test with Good Separation, I increase the likelihood that price will either congest or reverse at the Lower parallel, instead of plunging lower.**



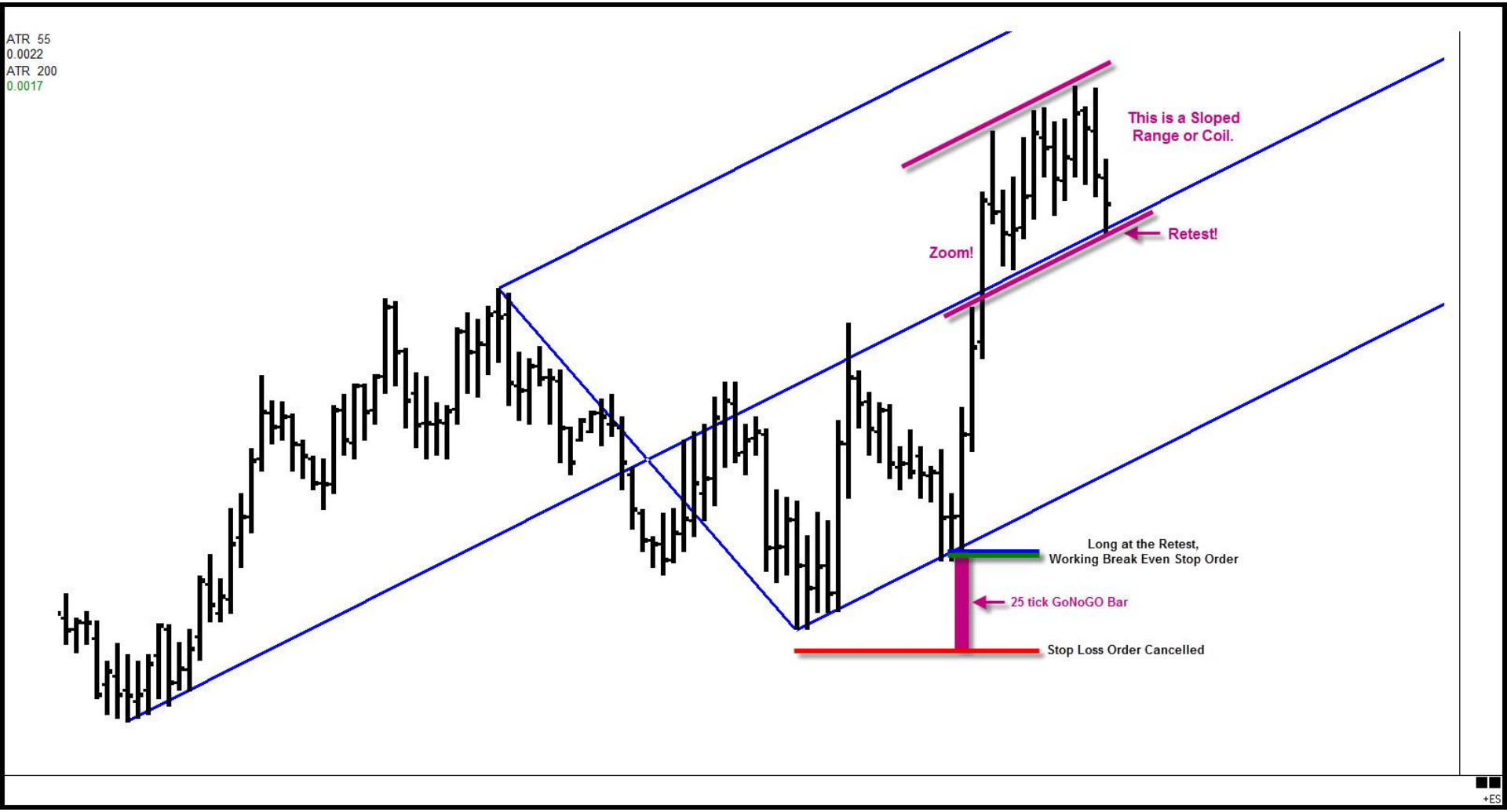

I like the Separation on the test of the Lower Parallel – I want to try to buy a Retest of the Lower Parallel. I need a proper Stop Loss Order: I want my Stop Loss Order to be at least 5-7 ticks below Major Structure. The ATR tells me I need to use at least a 25 tick Stop. Checking the chart, I see I can place a Stop Loss Order 25 ticks below my entry and meet these criteria.



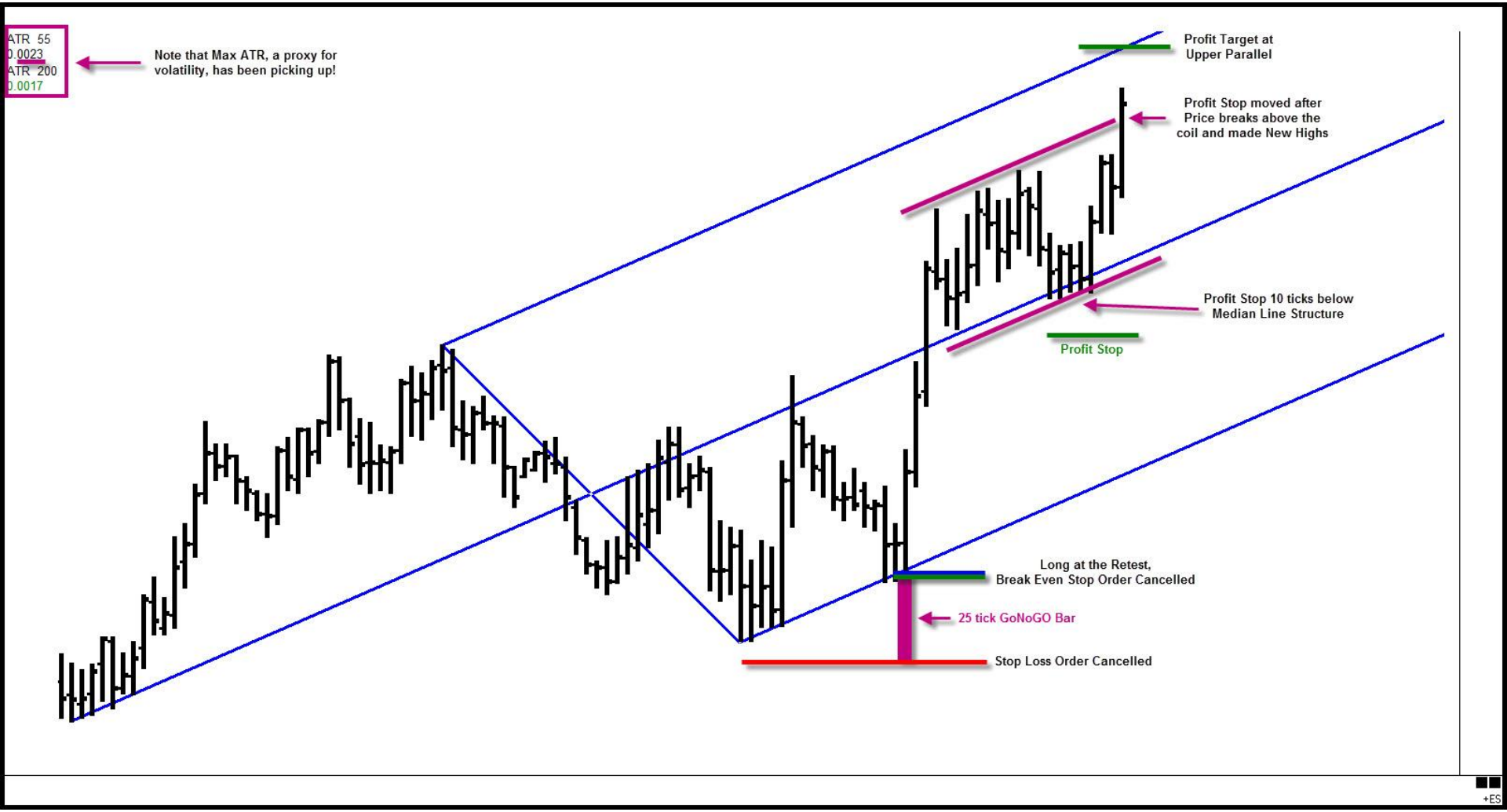

**Choosing a realistic Profit Target is a key part of framing any potential trade. Most people trade without a Profit Target, instead 'Going along for the ride, until the ride is over'. Similarly, most people do not look at the potential Risk Reward of their trades – Framing trades with Risk Rewards greater than 3 to 1 is key to improving your profitability and will help decrease negative abhorrent runs, as well as helping you survive them.**



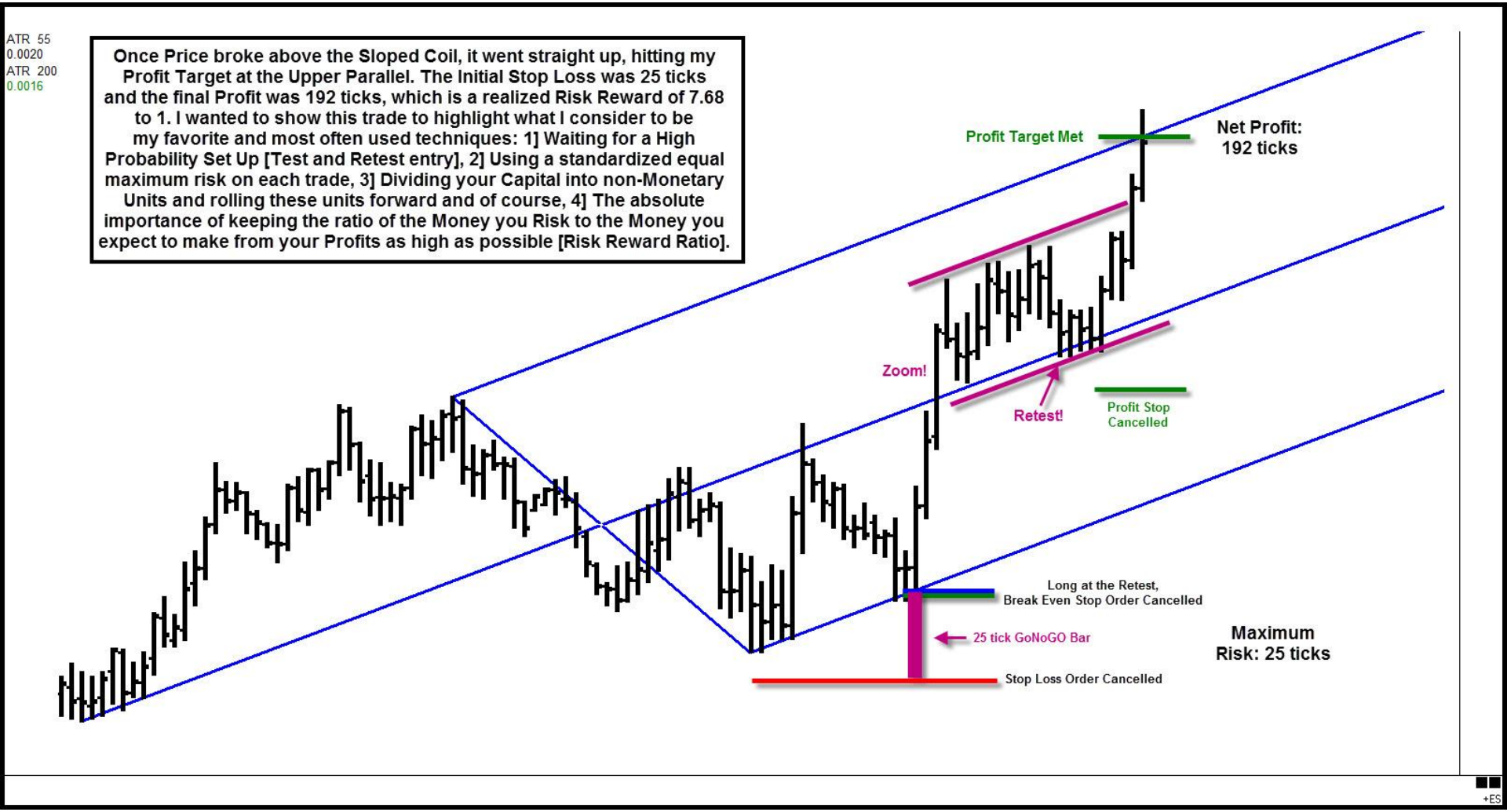

Price Retests the Lower Parallel, filling my Limit Buy Order. Three bars later, Price Zoomed the Median Line and the Swing High. Price should Retest the Median Line. Perhaps it will leave Market Structure where I can hide Profit Stops. My Profit Target remains the Upper Parallel.




Price finally Retests the Median Line after forming a sloped coil. If you turn your head to the left, you will see the simple support formed by this coil right at the up sloping Median Line. If Price can stay above the Median Line, it should eventually work its way above the top of the coil and head towards the Profit Target at the Upper Parallel. Remember, Time is on my side here!




**Price breaks above the Sloped Coil, making a New High for the move. As the bar closes, I enter a Profit Stop Order 10 ticks below the clumped low of the coil. I measure where Price would currently intersect with the Upper Parallel and then update my Profit Order. I have 72 ticks locked into this trade.**




This was a very good example of my 'Bread and Butter' day in and day out trading techniques. It is much easier to trade when you think in terms of standard units rather than money; I find the higher probability 'Test and Retest' entry my favorite and of course, keeping the Risk Reward Ratio as high as possible [and certainly over 3 to 1] will help improve your trading.

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**Yarrr! There be Whales in these waters!**

**Thank You for taking the time to attend this session. Questions?**

**"Master your tools, master yourself."**

®Timothy Morge

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# Back to Basics-Trading setups Utilizing Principles of Money Management and Risk/Reward

Presenter: Tim Morge
January 9, 2014

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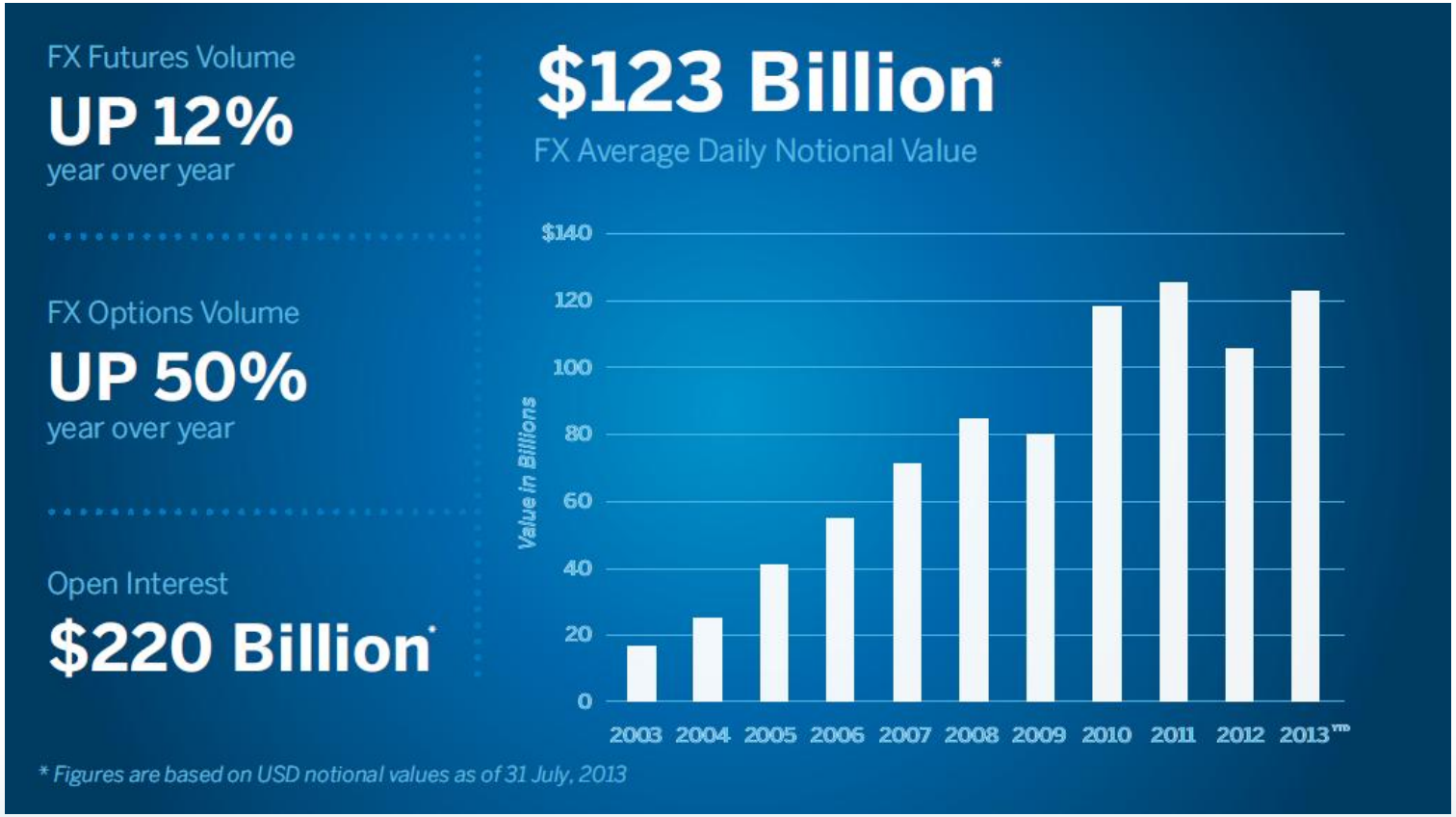


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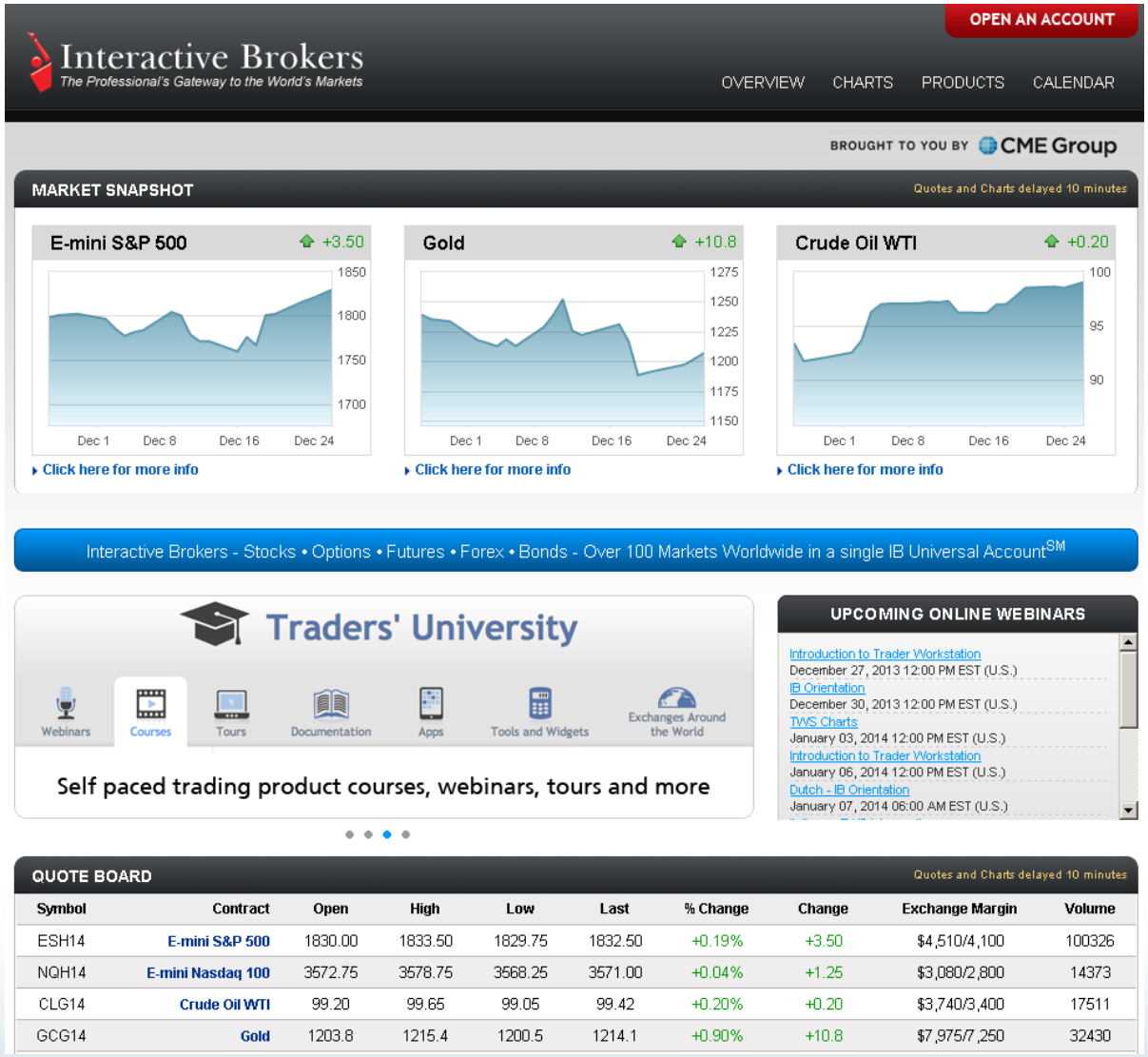


| Symbol | Contract | Open | High | Low | Last | % Change | Change | Exchange Margin | Volume |
|---|---|---|---|---|---|---|---|---|---|
| ESH14 | E-mini S&P 500 | 1830.00 | 1833.50 | 1829.75 | 1832.50 | +0.19% | +3.50 | $4,510/4,100 | 100326 |
| NQH14 | E-mini Nasdaq 100 | 3572.75 | 3578.75 | 3568.25 | 3571.00 | +0.04% | +1.25 | $3,080/2,800 | 14373 |
| CLG14 | Crude Oil WTI | 99.20 | 99.65 | 99.05 | 99.42 | +0.20% | +0.20 | $3,740/3,400 | 17511 |
| GCG14 | Gold | 1203.8 | 1215.4 | 1200.5 | 1214.1 | +0.90% | +10.8 | $7,975/7,250 | 32430 |

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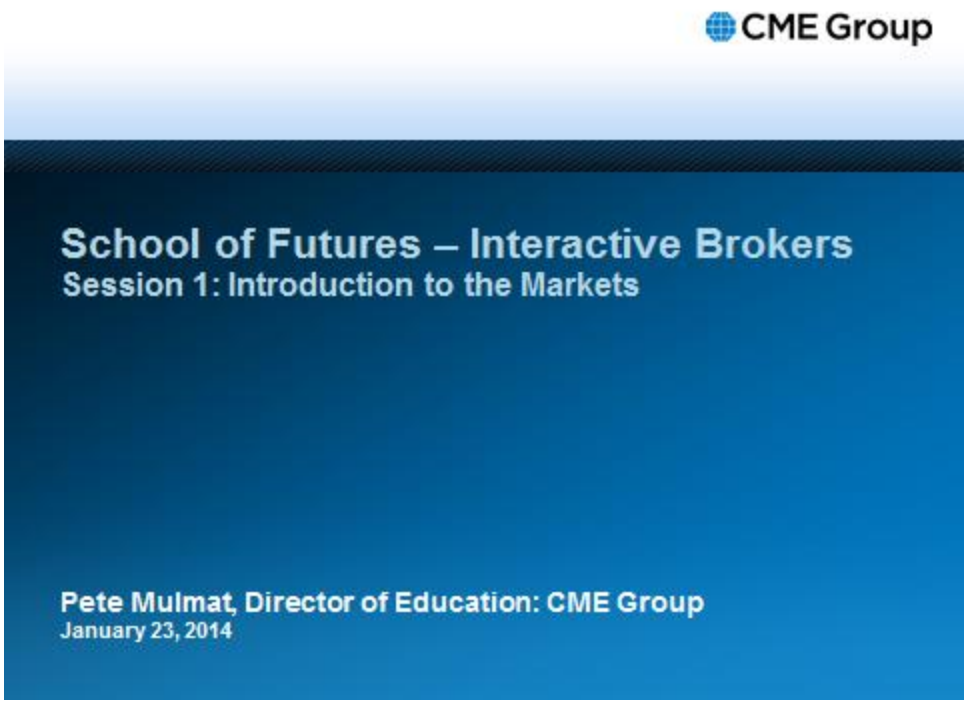


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# Tim Morge

Timothy Morge has worked as a professional trader , author, educator and mentor for over 35 years.

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