



# Market Maps

High Probability Trading Techniques

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Hosted by the **cme**   
Chicago Mercantile Exchange

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## **Median Lines or Pitchforks: How and Why They Work**

**I have been working with Median Lines and their associated lines for over thirty years now. They were originally developed by Dr. Alan Andrews as a way to easily identify where price was going and how fast it would get there. Dr. Andrews was a Thermodynamics Professor at MIT, so I've found over the years that it's easiest to think about this methodology and teach it in terms of the energy that price carries as it moves forward in time.**

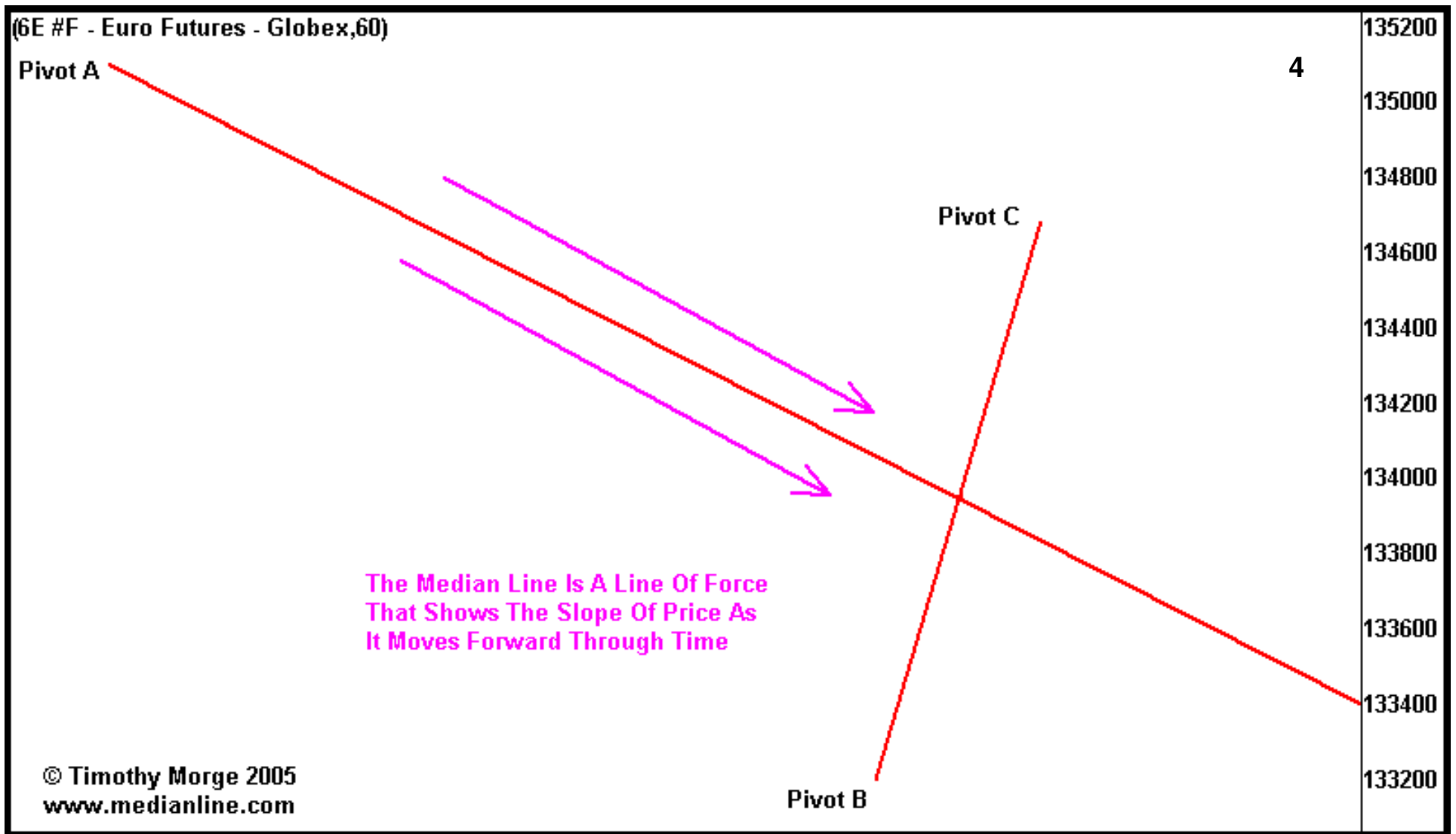
**I've also spent a great deal of time, energy and money taking these techniques that were built and tested nearly 100 years ago and bringing them into the computerized era. Real-time trading hasn't invalidated these techniques—instead, it's re-energized them! By doing careful and thorough statistics on tens of thousands of actual trades, I've identified what parts of the original materials work. And I've found many new and exciting ways to use these tools now that day trading has become “the norm.”**

**I will begin the seminar by introducing the the three parts of the Median Line and then I'll explain the role each of these three parts play when using a Pitchfork in your trading. And finally, I'll show you some of the innovations I've added to Dr. Andrews original methods, now that computers allow us to do extensive statistical analysis and rigorous real-time modeling and testing.**

**The three components of a Pitchfork are:**

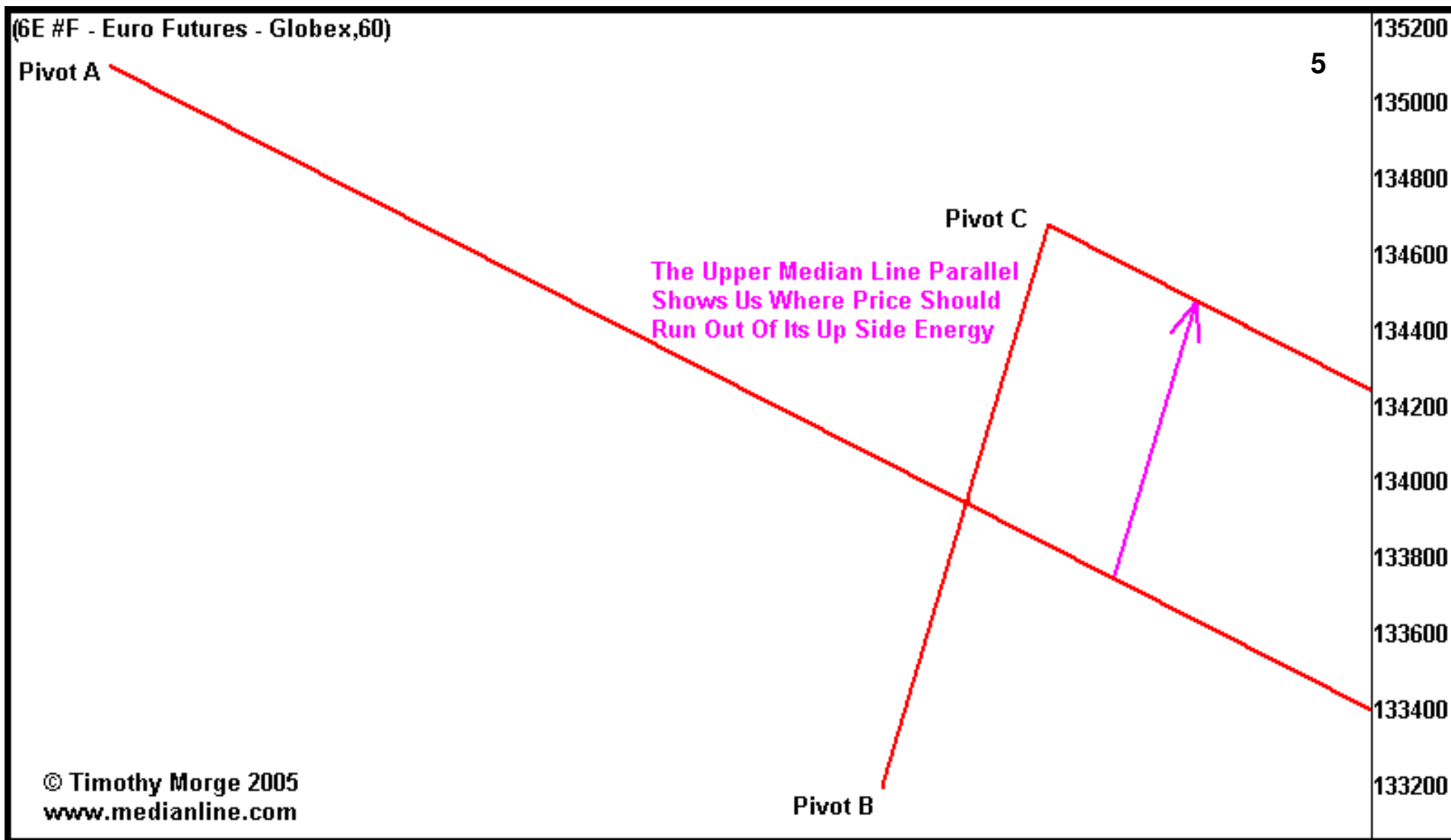
- 1. The Median Line**
- 2. The Upper Median Line Parallel**
- 3. The Lower Median Line Parallel**

**Now lets take a look at each of these three components:**

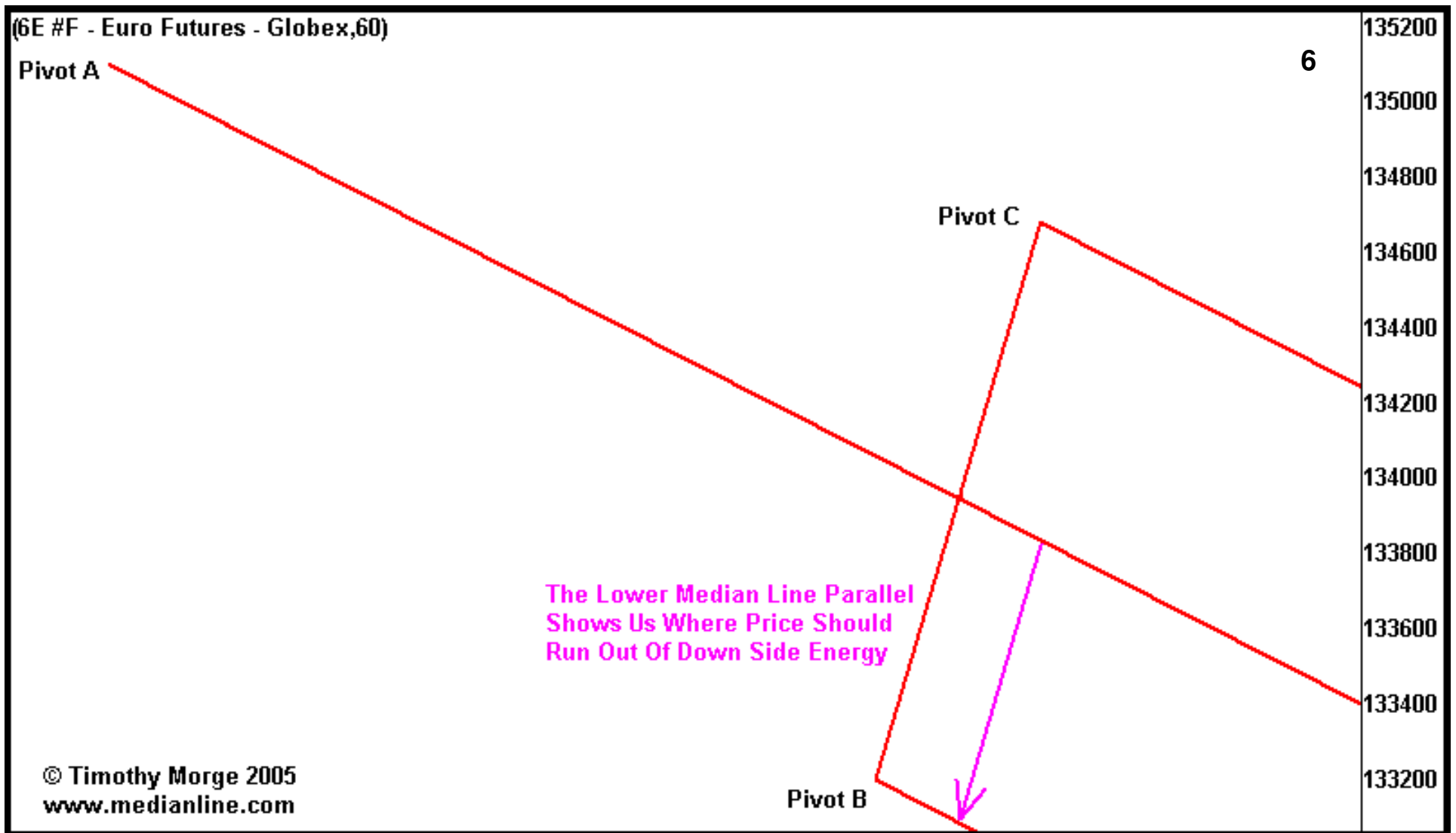


This is the Median Line. It is drawn from a set of three alternating pivots. The Median Line visually tells us two things:

- 1) It projects the slope of price as it moves forward in time. The slope of the Median Line tells us visually if price is in an up trend, in a down trend or in a range.
- 2) The steepness of the slope tells us just how fast Price is likely to move up in an up trend or down in a down trend.



This is the Upper Median Line Parallel and it marks the area where Price is most likely to run out of energy to the up side. This frequency, or measure of potential energy, is generated by the relationship between Pivots B and C as they relate to Pivot A. In later slides, you'll see how we use these lines and their ability to show us where price is likely to have expended its stored energy when trading.



This is the Lower Median Line Parallel and it marks the area where Price is most likely to run out of energy to the down side. This frequency, or measure of potential energy, is generated by the relationship between Pivots B and C as they relate to Pivot A. Again, in later slides, you'll see how we use these lines and their ability to show us where price is likely to have expended its stored energy when trading.

Now that I've explained what each part of the Median Line set does, it's important that you understand a few of the principles behind this very powerful tool. I'm going to show you some visual examples, along with some quotes directly from Dr. Andrews' original "Action Reaction Course," that he taught for many years at his homes on the East Coast as well as at his South Florida residence.

This is the single most important statement made in Dr. Andrews' original course:

*Median lines and Median Line Parallels: the Median Lines enable the user to be one of the few who can tell where the prices are headed, and the place they will reach about 80% of the time, and when approximately that place will be reached.*

After personally drawing and studying hundreds of thousands of charts in my thirty years of trading, I can tell you that I have done in-depth statistical validation of the above statement and indeed, price DOES reach the Median Line or its Upper or Lower Median Line Parallel [whichever line price is heading to next] about 80 percent of the time. This, in and of itself, is an incredibly powerful thing to know!

Now let's look at some examples of how price reacts around the Median Line and its Parallel Lines:



1. There is a high probability that: Prices will reach the latest Median Line.





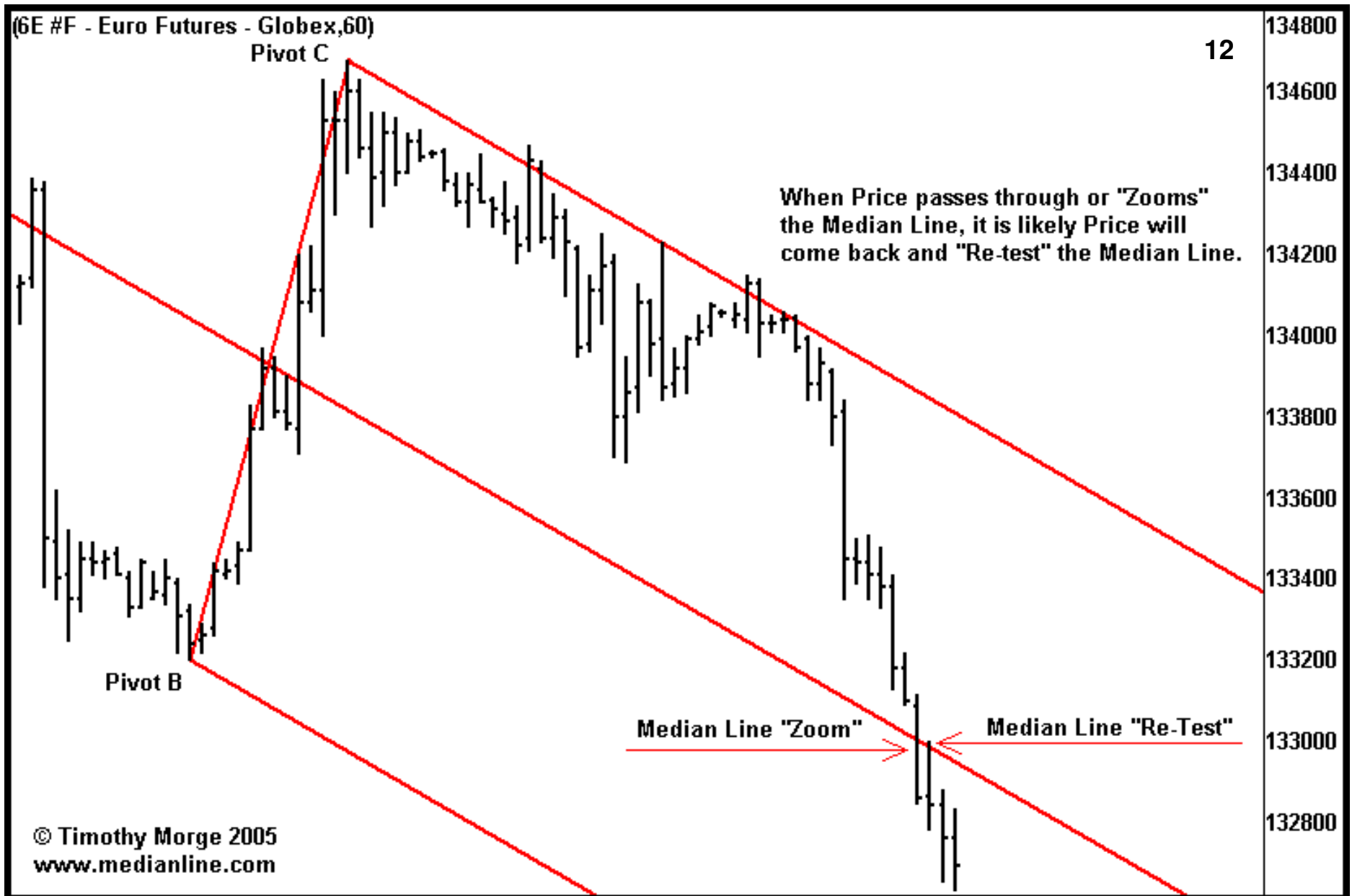
2. There is a high probability that: Prices will either reverse on meeting the Median Line or gap through it.



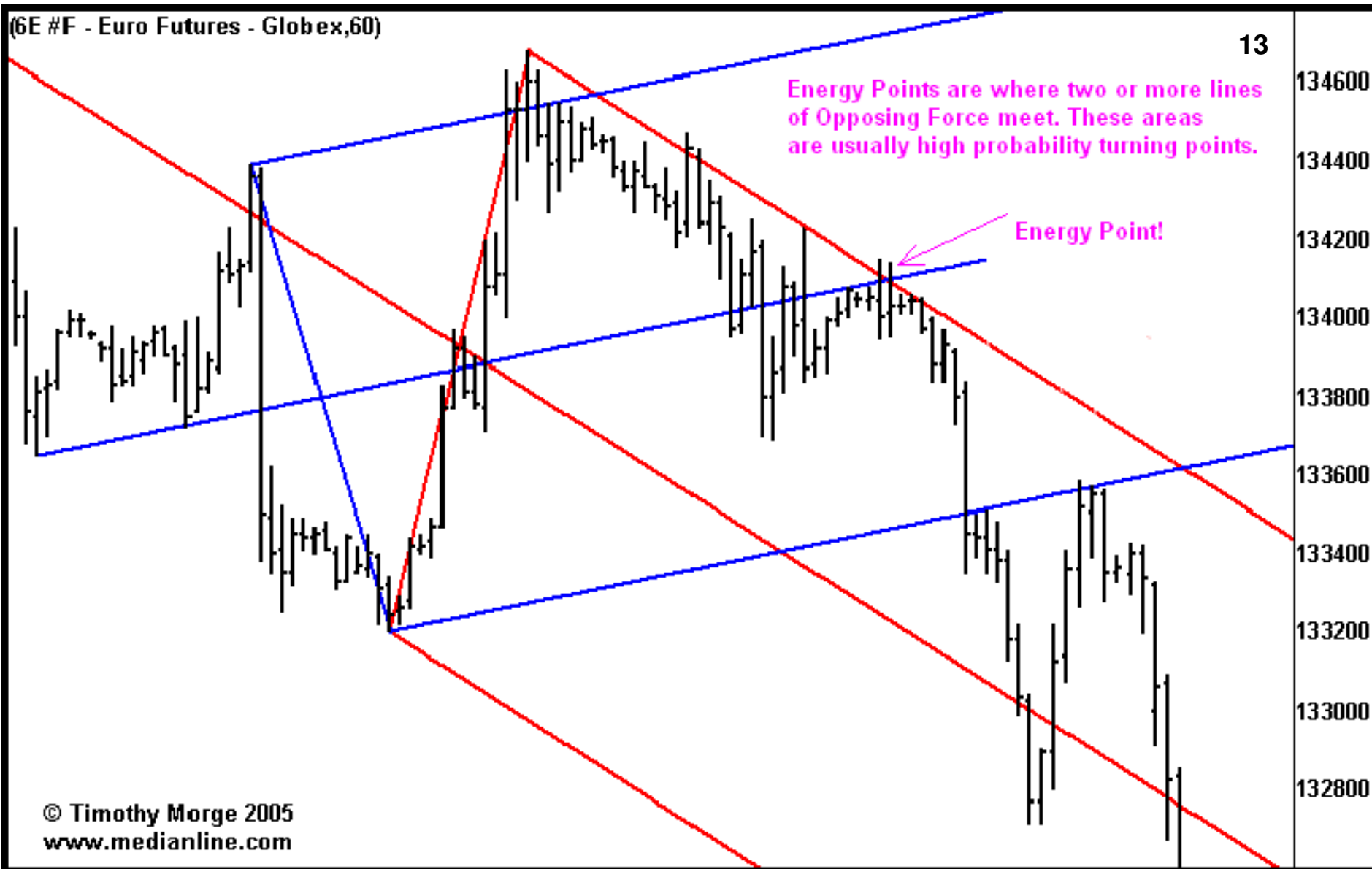
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3. There is a high probability that: When prices pass through the Median Line, they will pull back to it.



Energy Points or areas of confluence are where two or more lines of opposing force meet. My work has shown that they are high probability turning points, especially when trading with the trend.

## **Market Maps Trading Styles And Trade Set Ups**

**There are many ways to use Median Lines and their Upper and Lower Parallels. But we're going to concern ourselves with some of the examples of the trade set ups that I have shown to have high probability of success [in the 70 to 80 percent profitable range] after doing statistics on literally thousands of actual trades for each of the trade set ups I teach in the Market Maps Seminars. These trade set ups are my own, though they have their roots in Dr. Andrews' original materials.**

**In the Market Maps Seminar, I teach that we'll be buying against areas of support and selling against areas of resistance. That means that in general, we'll be selling after price rallies and buying after price declines. That does not mean that we will be "counter-trend" trading. I first show how to identify areas where it is highly probable that Price has expended its energy. Then I outline high probability trade set ups to take advantage of these areas. In general, we don't try to pick a top or bottom, just because we "think" price is likely to have expended its energy; instead, once we have learned to identify these areas, we look for confirmation from Price that it has indeed expended its directional energy. Once we identify these confirmations, I show seminar attendees a few high probability trade set ups that we can then use to enter the markets as Price begins to move in its new direction.**

**I go into great detail about what type of entry levels and orders to use and with each trade example, I show step-by-step just how I use entry orders, stop loss orders, profit orders and various other orders when I manage my trades. For each trade, we look at the risk reward ratio and we carefully weigh whether the risk ratio of a given trade is acceptable.**

**And all of this is done step-by-step, so that if questions do come up as any of the trades unfold, seminar attendees can simply stop and discuss them until the material is clear. To give you a taste of what I teach in the Market Maps Seminar, I'm now going to show you some actual CME currency futures trades, explained in the same fashion I use in the Market Maps Seminar.**

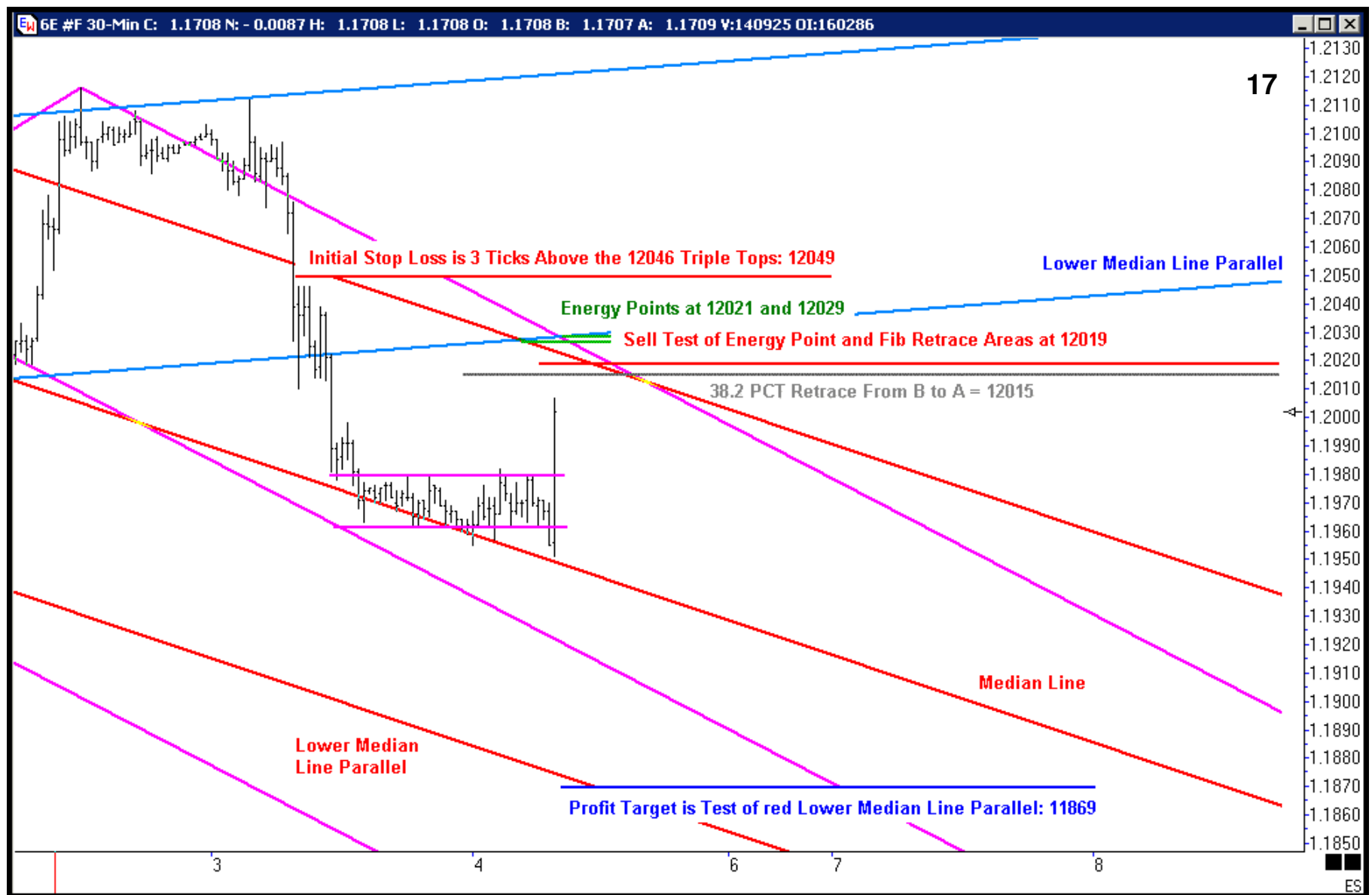


**This is a pre-market look at a 30 minute chart of the Euro FX Futures Market.**

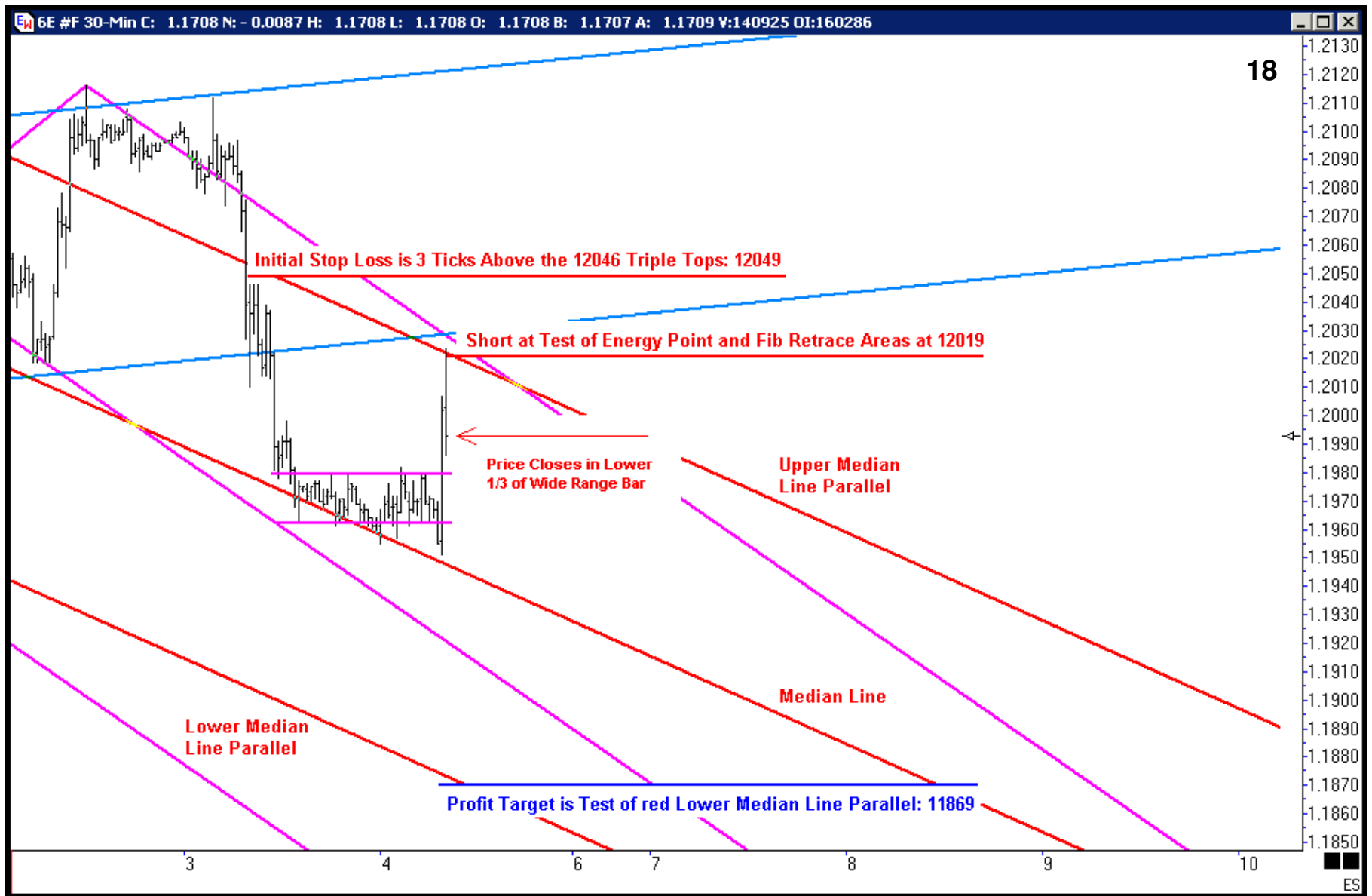


Price is in a strong down trend. I have identified several areas of strong overhead resistance: Two Energy Points, a Major Fib retracement and a Median Line that was support but is now resistance.





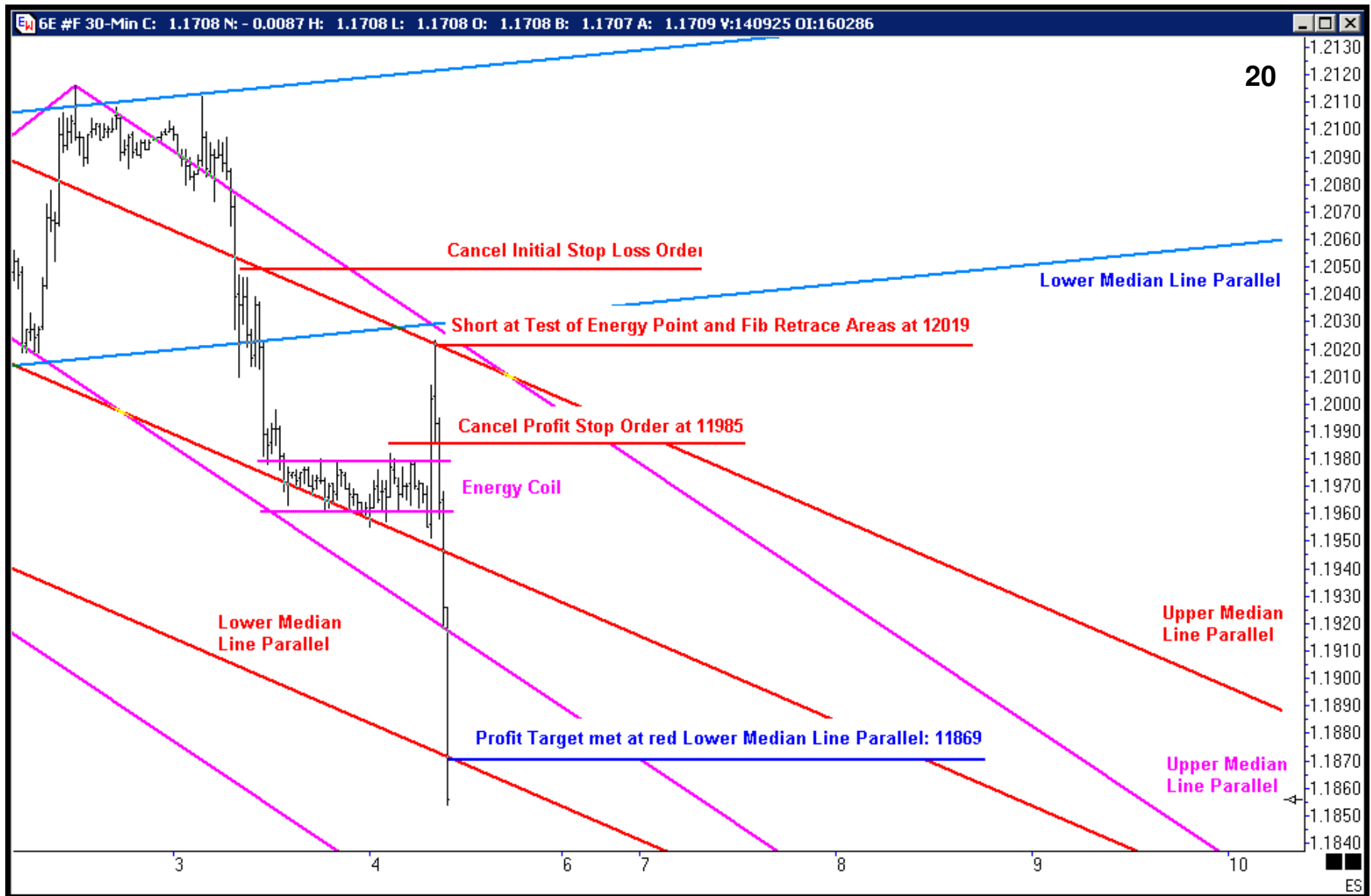
Price spikes higher after the 7:30 economic numbers. As I watch the first 30 minute bar close, I see that price is approaching a high probability trade set up area: The pair of Energy Points at 12021 and 12029, as well as the 38.2 percent Fib retracement at 12015, which should draw in other sellers. I enter orders to sell Euro FX futures at 12019 with an initial stop at 12049.



Price climbs higher, testing the red down sloping Upper Median Line Parallel and getting me short Euro FX futures at 12019 in the process. Price runs out of up side directional energy where the Median Line theory predicts it will: At the test of the Upper Median Line. Once short, I enter my profit order where price would intersect with the Lower Median Line Parallel, at 11869.



Price sprints lower, shooting through the Energy Coil and closing well below it. At this point, I have to protect some profits, so I move my stop order to 3 ticks above the top of the just penetrated Energy Coil, to 11985. I'm now playing with the market's money!

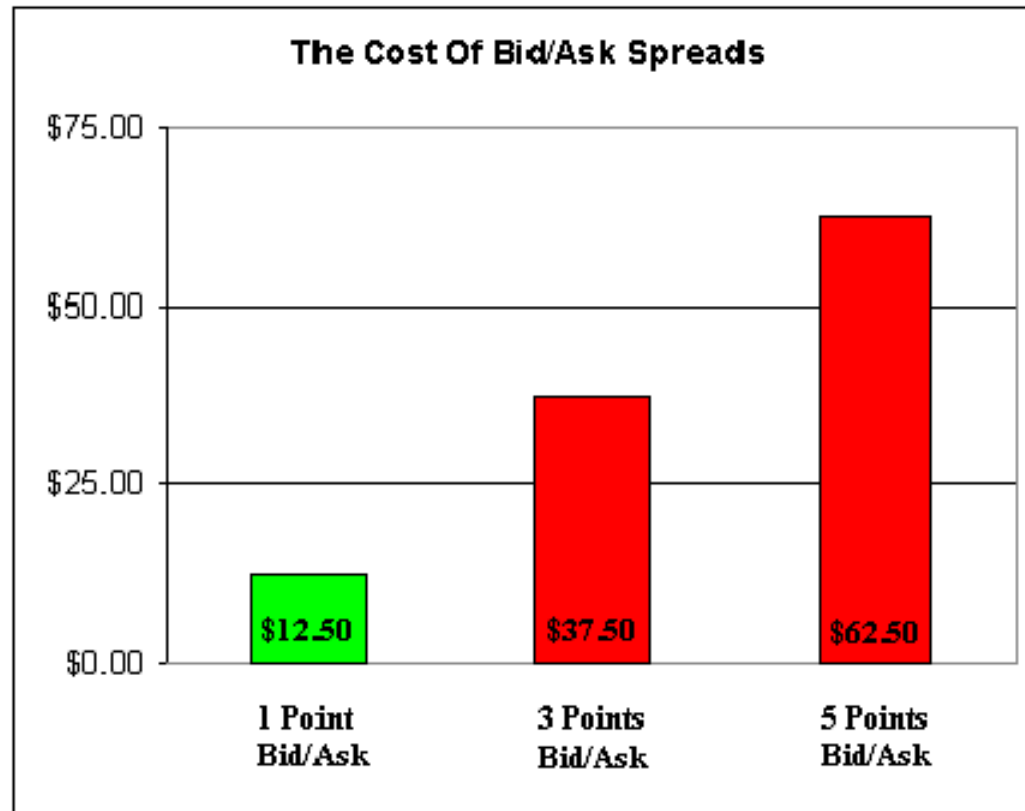


Price shot down to test the down sloping red Lower Median Line Parallel, hitting my profit order at 11869 in the process. As you can see, price declined in a vertical fashion, so booking profits here is the prudent thing to do, because the Median Line theory predicts that price may run out of directional energy here. The trade netted 150 points, which is \$1875 per contract before brokerage.

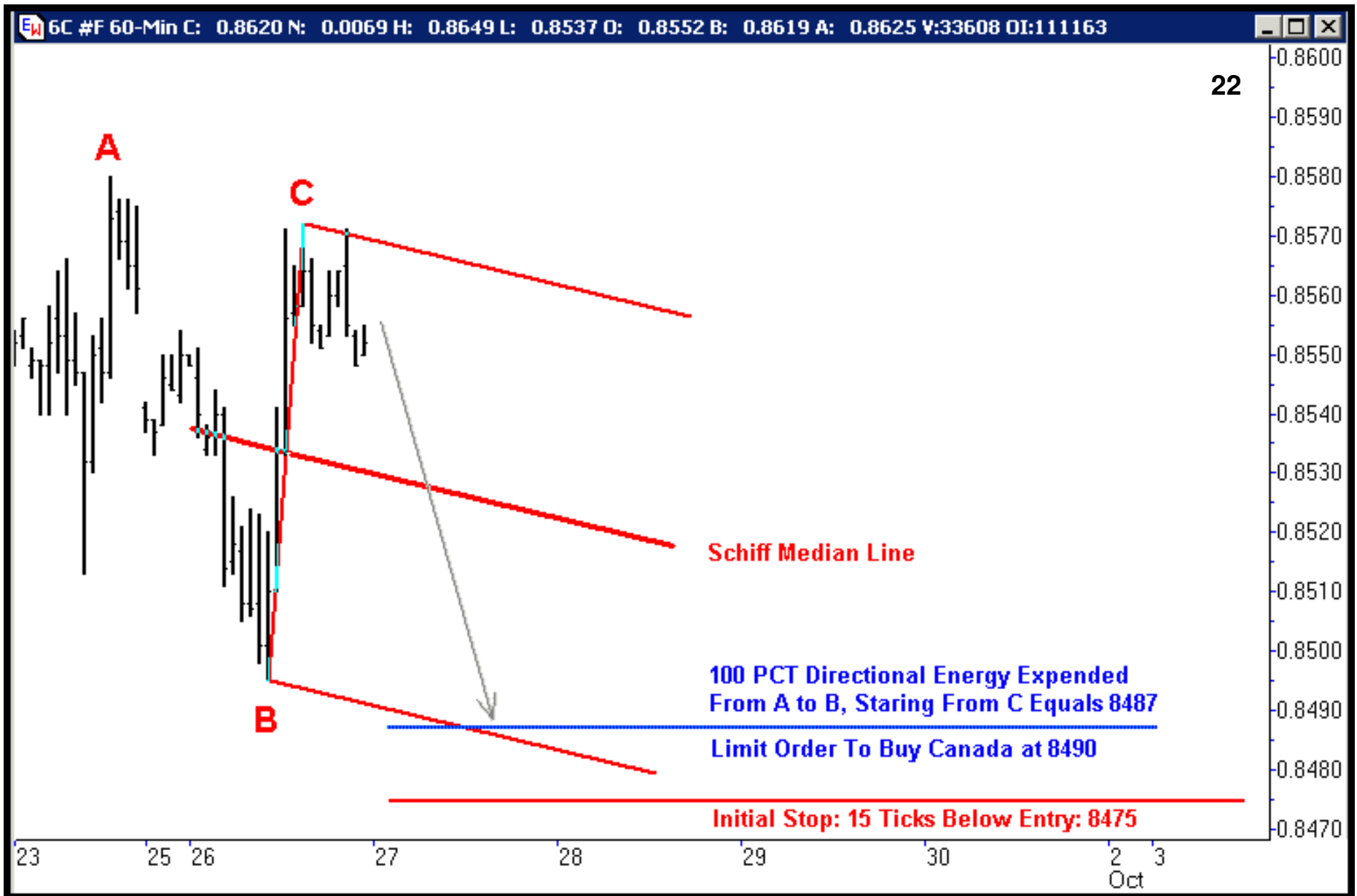
## Am I better off using CME Currency Futures or the Cash FX Market?

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For the major currencies, there is more than enough liquidity available to you at the CME. In fact, if you look at the chart below, you'll get a real understanding of just how much paying those 3-5 pip spreads your cash FX broker is charging. In the Euro FX Futures, the bid-ask spread is one point. Period. All day, all night. And you can generally buy on the bid and sell on the offer.



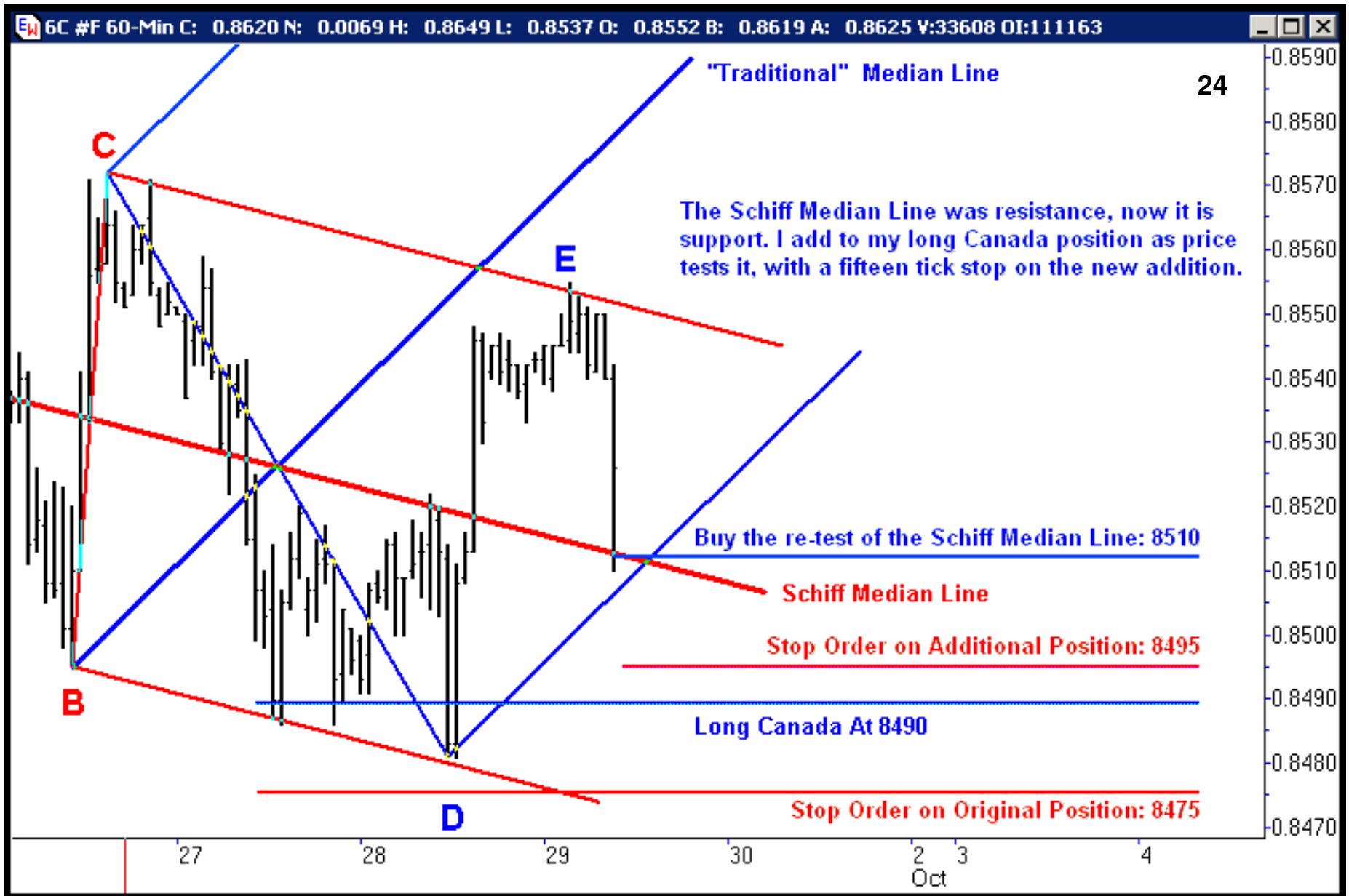
The CME isn't the only place available to trade currencies, but it is often the best place. Currencies are one of the best trending instruments available to traders today, so it only makes sense to include them in your risk and trading portfolio. Let's look at some of the less popular currencies and strategies available to you that can offer tremendous profit opportunities day in and day out.



Canada futures have been trading gently lower but are coming down into longer-term support. After I draw in a Schiff Median Line, I measure the down side distance traveled by price in its last swing lower. Note that it is confluent where price will meet the Schiff Lower Median Line Parallel, and I'll attempt to get long at that area, which comes in at roughly 8490.

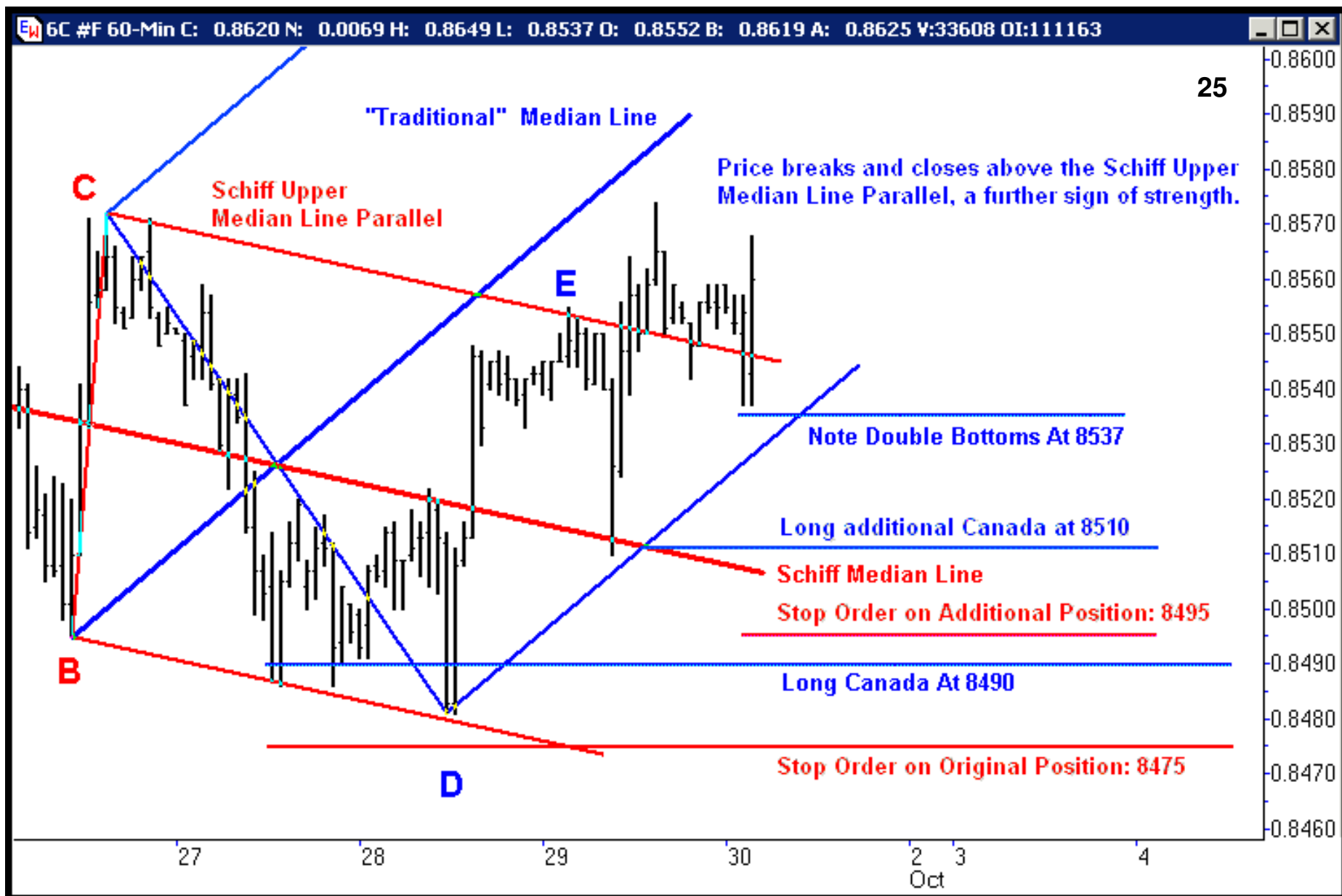


Once I'm long Canada, Price runs higher, testing the Schiff Median Line. But price doesn't break above it the first time—instead, it comes all the way back and tests the Lower Median Line Parallel before shooting back higher. On the second attempt, price breaks and holds above the Median Line.

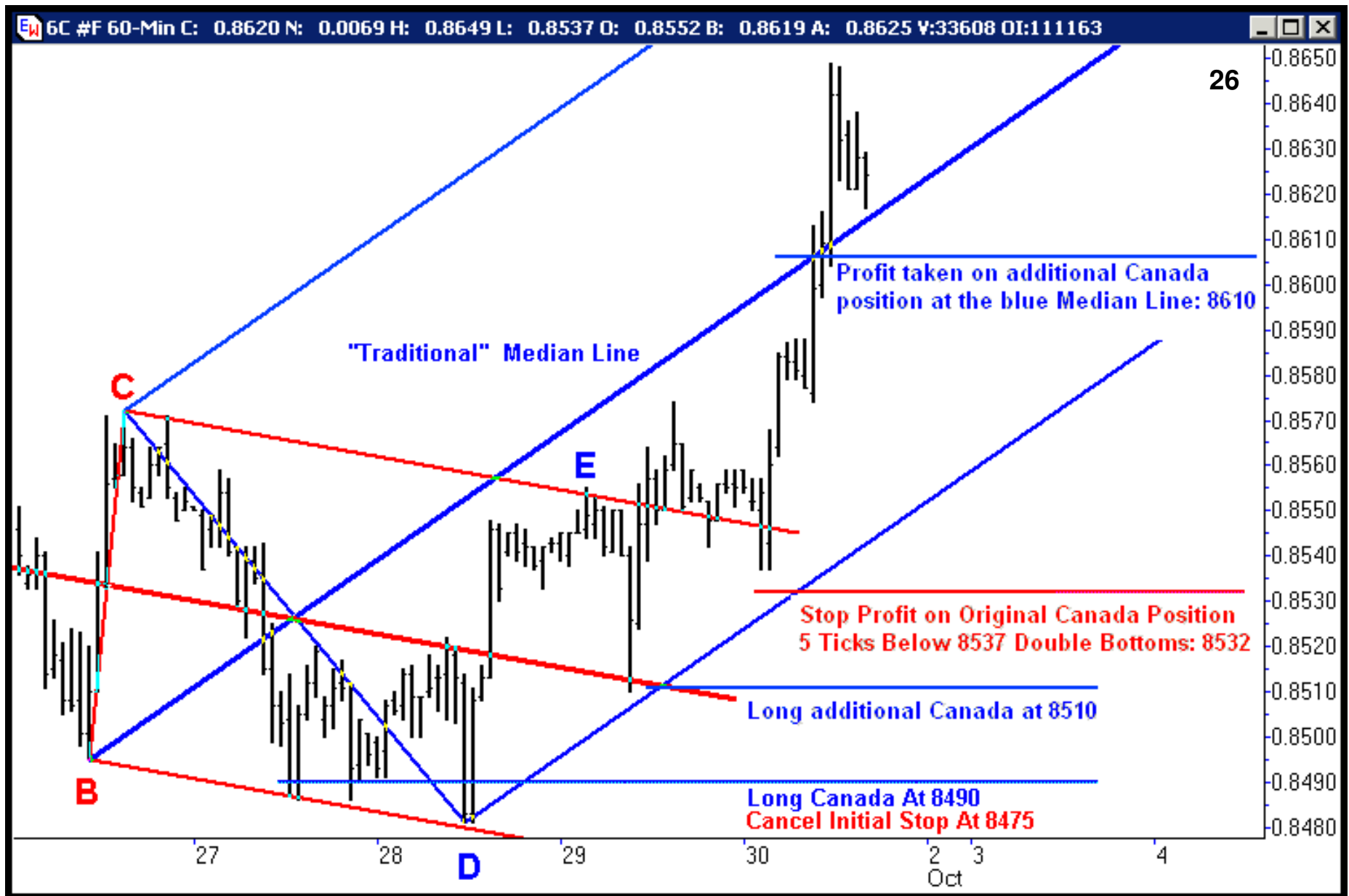


Price climbs high enough to test the Upper Median Line Parallel before falling back. When it re-tests the Schiff Median Line, I add to my long position at the Energy Coil formed by the Median Line and the Upper Median Line Parallel, with a stop order 15 ticks below the entry price on the addition.





I'm long a double position of Canada at an average of 8500. I am working two separate stop orders, one at 8475 and the second at 8495. Note that price has now climbed and closed above the down sloping Upper Median Line Parallel—a nice sign of strength—leaving double bottoms at 8537.



I closed out ½ the Canada position as prices tested the blue Median Line at 8610 and moved my stop profit order on the balance of the position to 8532. I was profit stopped out of the balance of this position two days later, at 8590, when price failed to hold above the blue Upper Median Line Parallel.

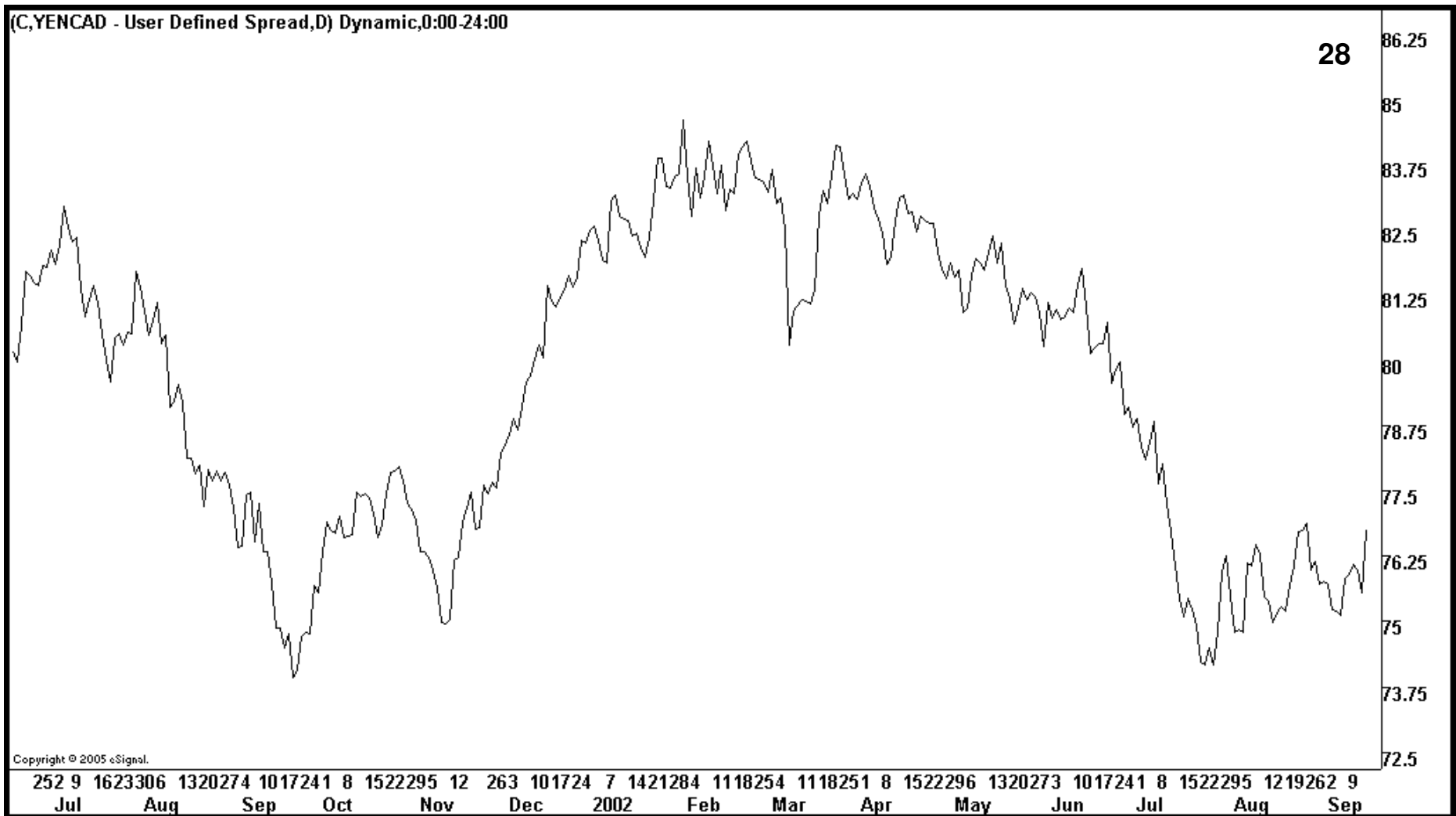
## So What Else Can You Trade?

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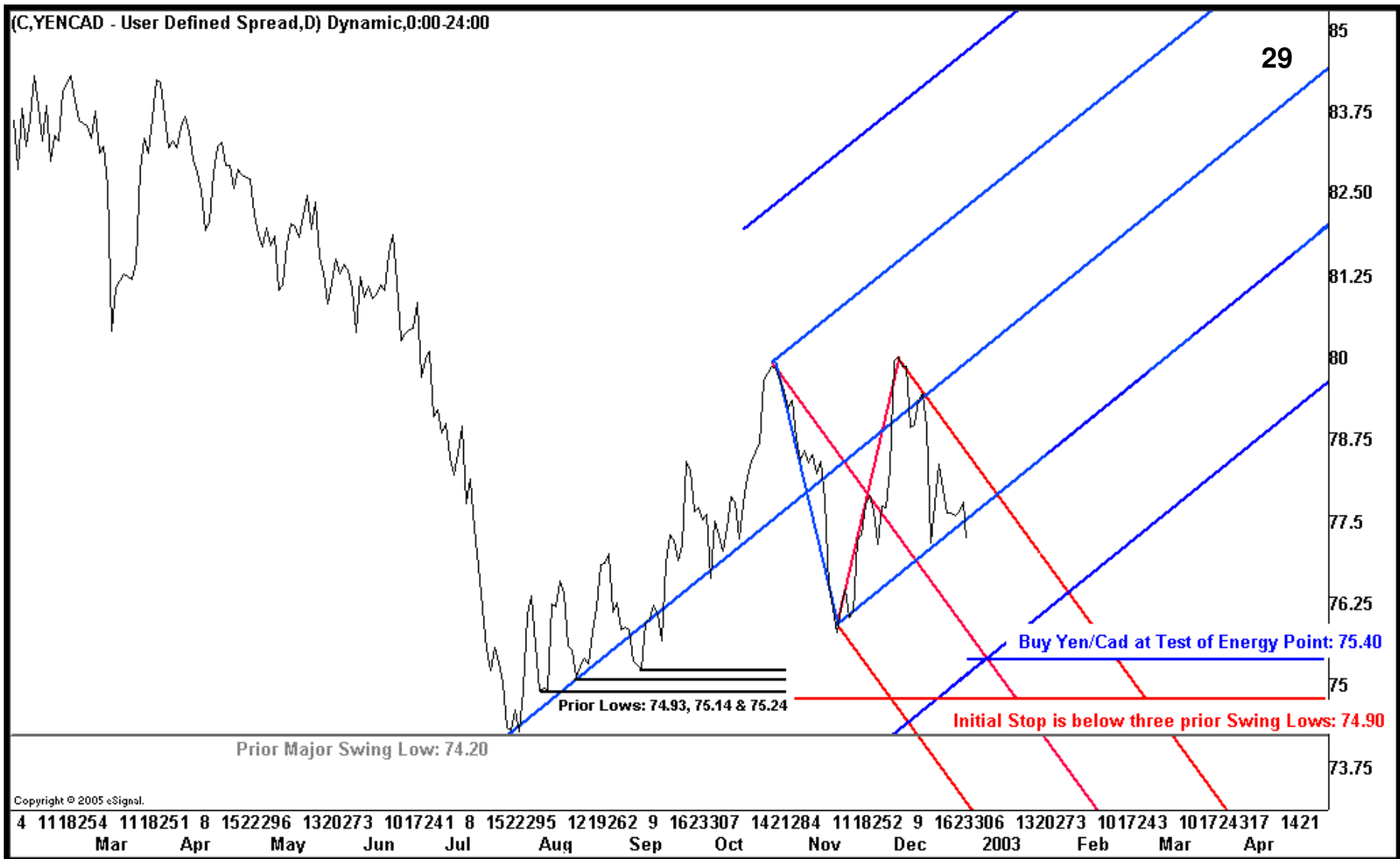
Most of you already knew the Euro FX futures and the other “Major” currency futures [British Pound, German Marks, Yen and Swiss] are liquid and are great trading vehicles. Now you can add the Canadian Dollar futures to your list to trade. Besides the “Majors,” the CME offers futures on other very tradable currencies and non-dollar based currency pairs. In this next example, I’m going to show you why proprietary trading shops, hedge funds and more experienced individual traders should be looking at and trading currency pairs—or Currency spreads, as they are called by some traders.

In early 2002, as I was updating my “longer-term” hand drawn daily and weekly charts, it struck me that we were likely heading into a prolonged period of advancing commodity prices. And although things like Copper, Gold and Soy Beans were beginning to form bullish up sloping long-term Median Lines, one of the most dramatic charts was Crude Oil. After doing several weeks of longer-term charting work, I began to wonder how best I could take advantage of the long term appreciation of the price of oil, other than trading in my Chevy Suburban for an economical hybrid commuter car.

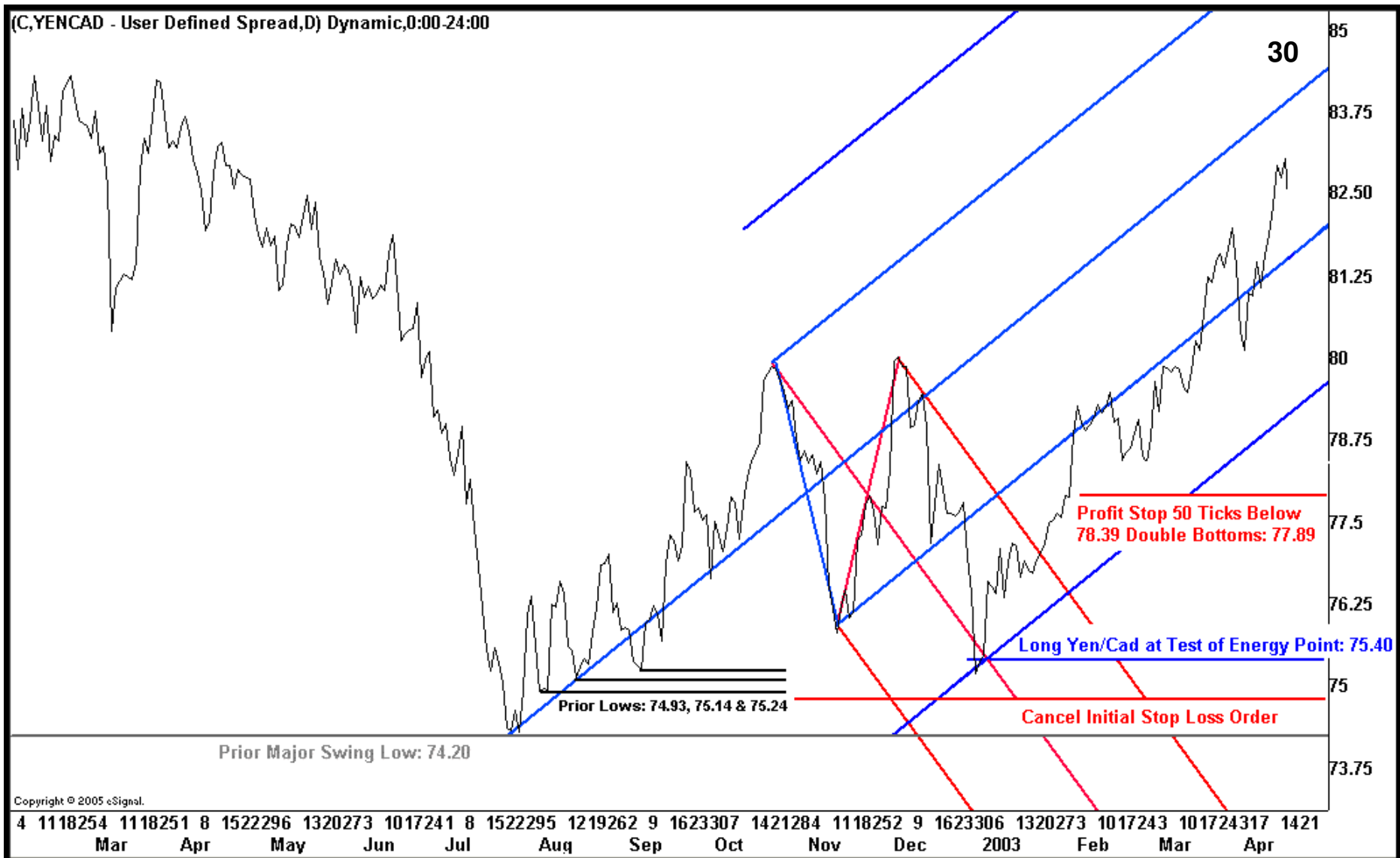
Peter Lynch used to say it’s as simple as paying attention to what’s going on around you, and in this case, as I was finishing my charting, I was reading an article in a “science” magazine that did an in-depth analysis of the larger economies and which countries produced a larger portion of their energy consumption and which countries produced a low portion of their energy consumption. And one of the conclusions I took away from this article was that if the price of oil was going to head higher and sustain these higher prices, Canada was in position to produce more energy than they consumed, while Japan produced almost none of the energy they consumed! This seemed like a fundamental expression of a cross currency trade: I’d look at my longer-term charts and begin monitoring the Yen/Canada cross currency pair for any sign that Canada was beginning to appreciate against the Yen. And if that became apparent, I’d look to find a high probability entry, paired with solid money management and a high risk reward. And of course, unlike the two prior examples, this would be a very long-term trade. If I was correct and found a successful place to enter the trade, it might take many months or perhaps years for this trade to reach its profit potential.



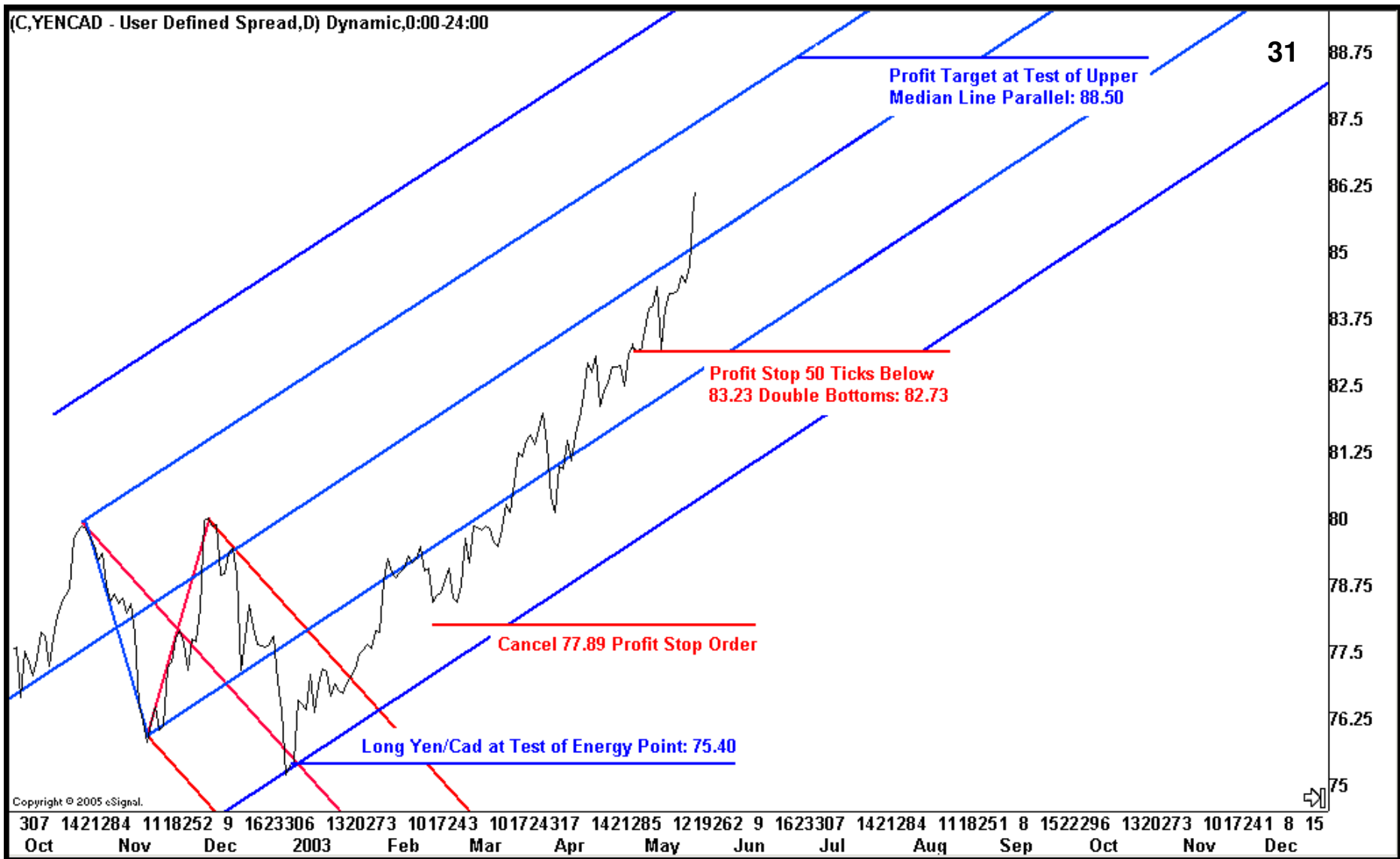
**This is a daily Yen/Canada cross currency pair bar chart. You can see that price has been in a wide range for over a year. Remember, as the price of this cross currency pair increases, the value of the Yen decreases and the value of the Canada increases. On the CME, each contract is worth 200,000 Canadian Dollars and each point [0.01] is worth 2000 Yen per contract. I am looking for a high probability trade set up to get short Yen and long Canada, meaning I want to get long this cross currency spread.**



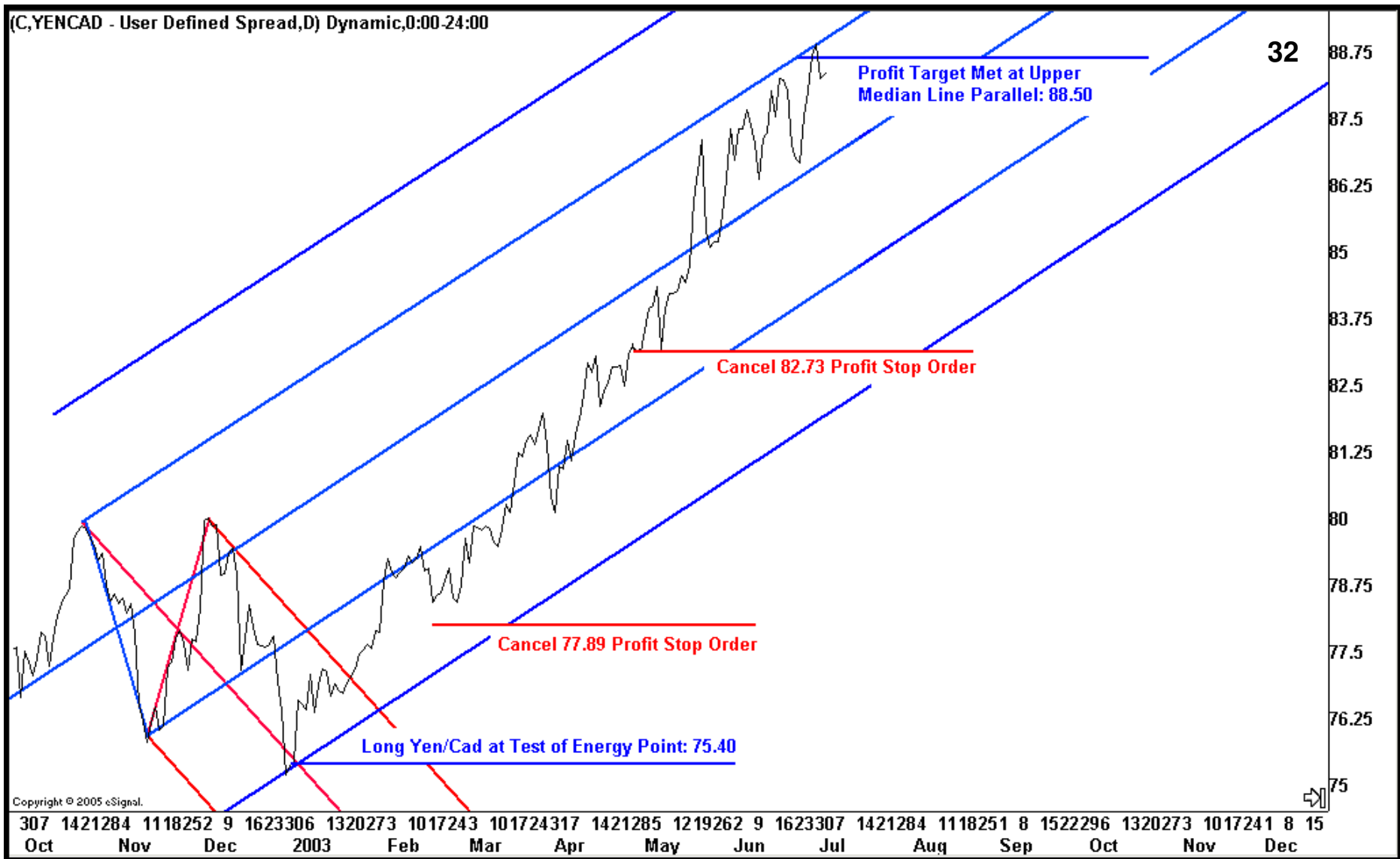
Price begins to make higher highs and higher lows in August 2002 and I start looking for a high probability trade entry area to get long this cross currency pair. I finally see an Energy Point forming when price makes a pull back, leaving me lines of opposing force that cross at roughly 75.40. I took the prior three clustered lows into consideration when deciding on stop size and placement.



I got long the Yen Canada pair at 75.40 at the Energy Point, where price should run out of downside directional energy. As you can see, the Energy Point pinpointed the turning area with near perfection. Price then made a great run higher for the next 2 ½ months before pulling back and leaving double bottoms at 78.39. Once price took out the high for this move, I moved my stops to 50 points below these double bottoms, to 77.89, to preserve the potential profit I have in this position.



Once price broke above the blue Median Line, I moved my stops, again below double bottoms at the 83.23 area, which meant my new stop was now at 82.73. The position has now been on for nearly five months and has moved more than 10 handles my favor per contract! I am looking for price to test the Upper Median Line Parallel and if it does, I will book my profit at that level—wherever that occurs.

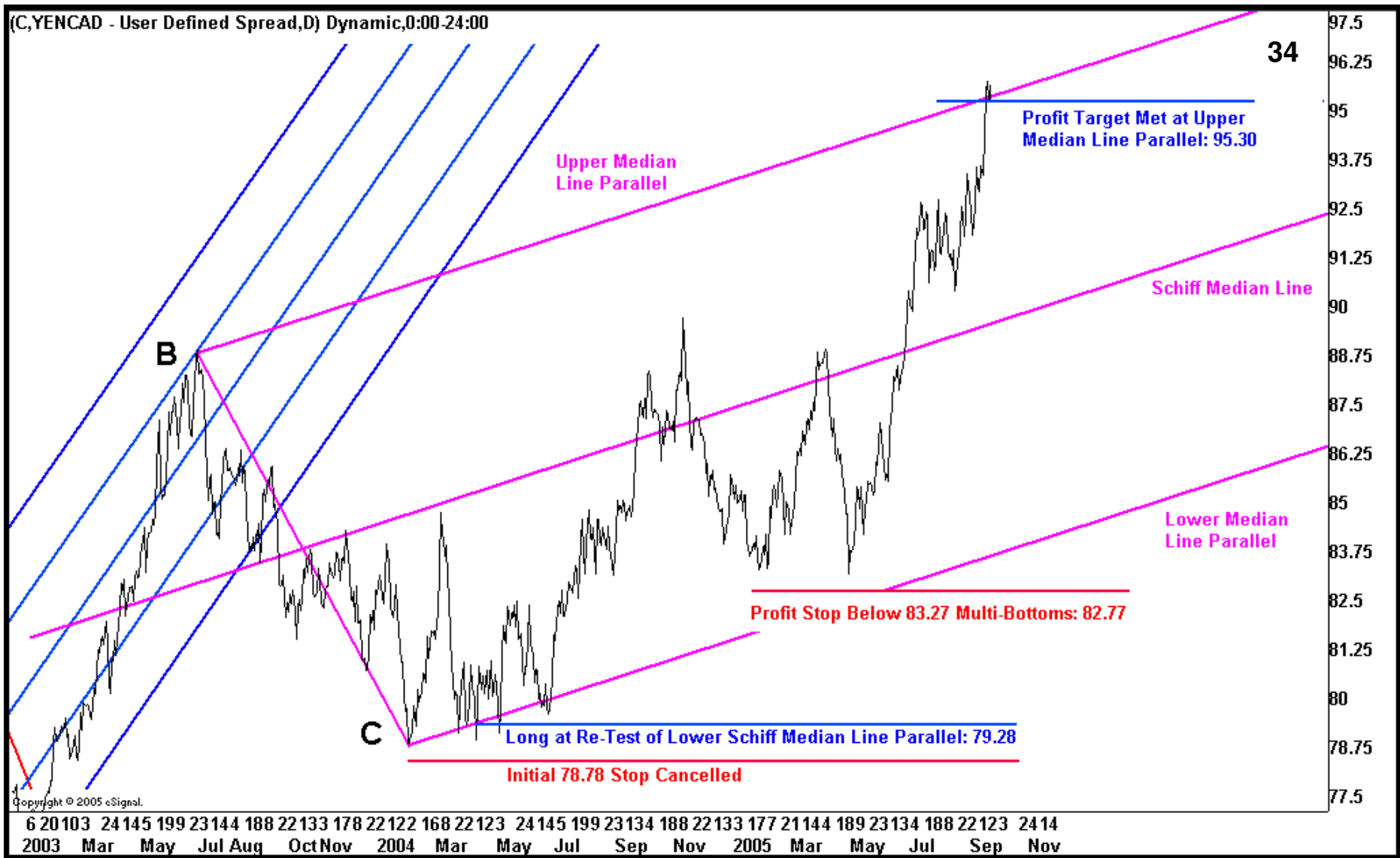


Almost exactly six months from the time I entered this trade, price hit the Upper Median Line Parallel and I exited the position at 88.50, which means I netted 1310 ticks per contract on this trade on an original 50 tick risk. The initial 50 point stop loss is roughly \$830 per contract and the net profit per contract on this trade was 1310 points times 2000 Yen per point, divided by the current exchange rate of 120 yen to the dollar: And that gives me a net profit of \$21,783 per contract on this trade!





I continued looking at the charts, waiting patiently for a serious pullback in price, as well as a high probability trade set up. It took roughly ten months for price to give me a trade opportunity that fit my criteria, but when the cross currency price retraced just over 61.8 percent of the original move and then began to head higher, I found a solid trade set up, getting me long when price came down to re-test the Schiff Lower Median Line Parallel at 79.28.



This trade went even longer than the first, and was well worth the wait! Though the ride was bit more bumpy, it was easier to “see” the concept behind the trade in the “real world,” as gas and oil prices sky rocketed. I entered the trade at 79.28, initially using a 50 point stop. I eventually moved my stop to 82.77 and finally got out at the Upper Median Line Parallel at 95.30. This trade netted nearly \$30,000 per contract [1602 points @ 2000 Yen/Pt], although it did take more than a year to play out.

## Feel Free to Ask Questions Now!

Here are some links with special savings to “Thank You” for attending this seminar:



For information on attending a full-length Market Maps seminar, either in downtown Chicago or via the internet, go to:

<http://www.marketmaps.org>

or email me at:

[tmorge@spiketradings.com](mailto:tmorge@spiketradings.com)

Trading With Median Lines



Mapping The Markets

To purchase a copy of “Trading With Median Lines,” by Timothy Morge, at a special “Thank You” price for attending this seminar, go to:

<http://www.marketmaps.com/cme.html>



To get a 30 day free trial of AutoForks software and a special “Thank You” rate on when you lease the software, go to:

<http://www.marketgeometrics.com>



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**I'll gladly try to answer any questions you may have now.**

**Thank you for attending!**

**Timothy Morge**

**Managing Director, Proprietary Trading**

**Spike Trading Services**