

Special Report Part II of II



Perceiving Forex Volatility via Descriptive Statistics... Deriving Trending and Reversals

By Mark Whistler • Edited by Joe O'Connor

Even when traders embody substantial technical and fundamental knowledge, risk prevails without the proper understanding of the larger probability/volatility paradigm behind currency trading. Here, traders are encouraged to boldly challenge typical pre-conceived notions of charting, in an effort to see beyond the fallacy of technical analysis. In the end, traders who understand descriptive statistics will find greater clarity and perception of volatility, before it even appears.

Words of Caution

4. Within Forex, there is no "holy grail", so please do not read this article thinking that what I am about to show you will solve any/all trading issues. What you are about to learn is an incredibly effective guidance tool that helps identify trending, volatility and at times, reversals; however, it must be used with common sense.
5. You are about to read about descriptive statistics, which within itself has many different approaches, methodologies and studies. I will not delve into the math underneath the model in this article. **Instead I am presenting descriptive statistics from a simple, conceptual framework.** However, there are many resources available to explain the empiricism of descriptive statistics; you will find several at the end of this article.
6. Never forget that economics and fundamentals rule all. Traders who do not take the time to properly uncover the true economic paradigm within the market – and the future possibilities of such – will likely often find themselves on the wrong side of the trade, especially those who hold for longer timeframes.

Note: The information provided here is a small snapshot from my upcoming book on Forex. I am expecting the book to be available in late October / early November 2008.

If you would like to receive information about the book and the expected release date, please email:

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Technicals lie, fundamentals do not.

In Part I of this special series, we covered the basics behind descriptive statistics and how the concepts apply to Forex markets. Now, in Part II, we will attempt to take the conceptual framework one-step further, thus putting the theory into action within our day-to-day trading.

Forex markets often display relentless volatility for most traders as currencies display jagged and often seemingly unpredictable moves. Because of the underlying “volatility paradigm”, many traders – both new and seasoned – stand significant risk of unforeseen losses should their trades move against order flow. Moreover, while order flow may not seem like a reasonably transparent variable in Forex, in reality, through descriptive statistics, we may not only predict where order flow will taper, but also increase the probability that we may catch the tide of a larger trend.

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The Probability Paradigm Shift

At some level, I expect these concepts to be met with some sense of resistance, as traders find difficulty in leaving the old “notions” of technical analysis behind. By this I mean, often when “the old way of looking at things” is challenged, some have trouble letting go of the information that has been engrained for so long. As the 19th Century playwright Henrik Ibsen stated in the 1882 play *An Enemy of the People* (1882) “a minority may be right -- a majority is always wrong.”

When truly looking into the markets, one thing is for sure; technicals can often lie to us by providing false signals or even worse, incredibly confusing signals as they unfold in real time. Regardless, many people continually take simple occurrences within technical analysis as fact, without ever actually considering the true paradigm of why the events are occurring on the charts anyway.

Really, technical analysis is only true so far as enough people are acting on the same information at the same time. You may know this as “the self-fulfilling prophecy of technical analysis.” **But what if the majority are wrong most of the time?** Did you know that statistically about 95 percent to 98 percent of all retail Forex traders lose money?

However, if we are able to take a moment to step back from the larger concepts of technical and fundamental analysis, we just may very well be able to see that regardless of the action unfolding, at the end of the day, the outcome is nothing more than data. **However, that data is telling us more than just a few simple facets of technical analysis; the data is actually giving us**

significant insights into both probability and the fundamental underpinnings truly moving markets.

Unfortunately, it is here that many may have trouble breaking away from the larger mindset of fundamentals and economics, to truly begin to see that really, all markets have the capacity to predict volatility based on nothing more than probability itself. Let me step back for a moment and clarify. I'm not asking traders to completely let go of traditional fundamental and technical analysis, but instead, to simply understand that both economics and technicals as not only transparent through probability, but perhaps even predictable.



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Fact is, technical analysis generally only perceives events in the past. What this means is that technical analysis is really the measurement and deciphering of information that has already occurred. In essence, technical analysis is nothing more than a study of history. There are those who will argue technical analysis can predict the future.

I can assure you that when these people grow sick and tired of losing money, they will finally either quit, or start putting in the time.

Regardless, trading purely off technicals is similar to looking for Braille in the drive-thru.

While this may be true in some circumstances, fact is, technicals sometimes lie. Have you ever entered a trade based on an overbought or oversold indicator, only to see the technicals breakdown and the trade move against you?

Case in point, in the amazing book Technical Analysis for the Trading Professional by Constance Brown, in Chapter 6 the author inquires, **"How did I miss such an obvious signal like that one?"**

Constance Brown was/is truly correct, because many traders really do not ever look into "why" what is happening - is actually happening. Repeatedly, I see traders completely disregard the philosophical, fundamental, mathematical and commonsense reasoning behind the charts they trade from. I can assure you that when these people grow sick and tired of losing money, they will finally either quit, or start putting in the time. Regardless, trading purely off technicals is similar to looking for Braille in the drive-thru.



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"How did I miss such an obvious signal like that one?" Chances are that you did not miss the signal; it may not have been presented when you were considering the trade. Many traders suspect that signals may have appeared differently to them in real time, but few really take the time to explore the character of the indicators from which they trade."

Constance Brown
Technical Analysis for the
Trading Professional

Thank you Ed Carson for sending me this book, I am so very grateful!

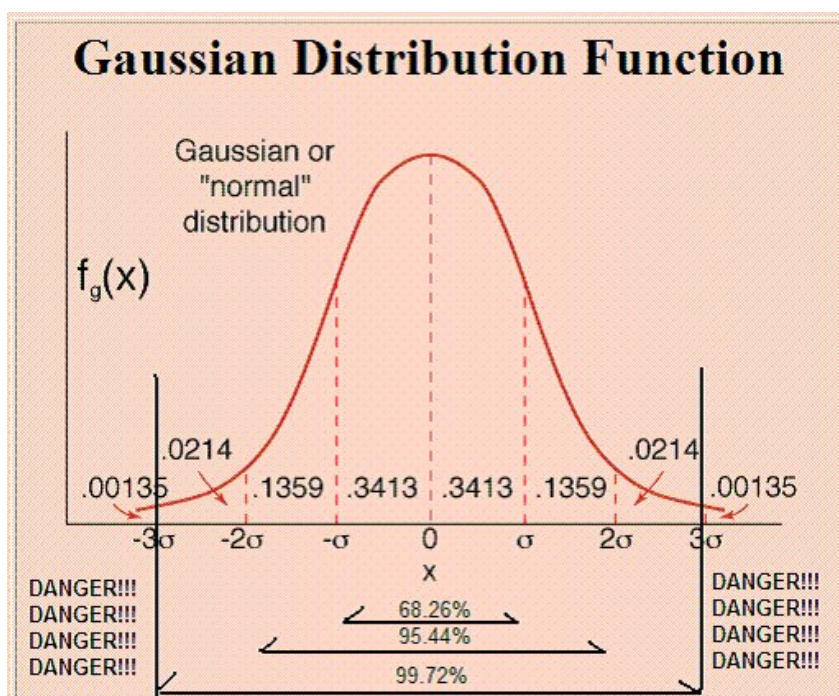
The reason behind why technicals lie is simply that at times, while many are inferring a possible outcome, the real money driving the outcome truly felt an entirely different way. What's more, at times, trades who have no real reason for being in position in the first place will jump ship at the first sign of trouble, thus creating additional circumstances of extreme volatility.

The same logic applies to fundamentals, in that enough people have to believe in a future outcome for the actual trading action to mimic the "outcome perceived" by those same people. However, when fundamentals shift, many traders are often not even aware that the occurrence has taken place and thus, find themselves not only on the wrong side of the trade, but stopped out at exact high and low prints as well.



The Teeter-Totter of Common Sense

On the other hand though, when we begin to understand that descriptive statistics not only allow us to intuitively “feel” the true fundamental sentiment behind the market, while also overstepping the simple “hope” that can often come with charting, we begin to see that both technical and fundamental perception of the larger market is actually completely transparent visually on our charts.



If you remember our discussion in Part I, we covered the Gaussian Curve as a measurement of the disbursement of data within our charts... Now, I would like you to consider the Gaussian curve from a different perspective. Please think of the Gaussian Curve (A shorter-term Normal Distribution with the mean being our moving average - in an otherwise larger random distribution), as the measurement of volatility within the timeframe we are studying.

In essence, the Gaussian Curve is really a teeter-totter, where we are able to visually see where the data on our chart is leaning...

What we want to imagine is this: The moving average is the mean of our Gaussian Curve and the 1st, 2nd and 3rd standard deviations are the possible volatility outliers for the time-period we are examining. Within the above Gaussian Curve, we know that there is a 99.7% probability that all of our data will sit within three standard deviations of the mean...

Now, we need to actually imagine the Gaussian Curve actually sitting on the chart, so as to see where and how, the data is unfolding, in relation to the mean. In general, when the data is on the left of the mean, we can infer a bull trend; conversely, when the data is on the right side of the mean, we can infer a bear trend.

As a picture tells a thousand words, on the following page, you will see the actual visual representation of the Gaussian Curve on an actual chart.

Please note that we are initially starting with a 50-Simple Moving Average (SMA) to measure the Gaussian Curve in the larger data set. Why the 50-SMA? Simple because measuring 50-periods generally allows us to capture enough data that we are able to infer larger trends on virtually every charting time-frame.

What's more, because the 50-SMA is highly coveted by many traders, we are actually putting the "self-fulfilling" prophecy side of technicals in our corner, attempting to not only accurately measure volatility, but also understand the greater mentality of retail traders at any given moment.

Looking at the actual chart (below), traders will notice that when we simply overlay three representative curves (denoting the 1st, 2nd and 3rd standard deviations) with the mean being the 50-SMA, we begin to see how the Gaussian Curve looks when measuring actual trading data.



Now though, let us think of the Gaussian Curve in another format... Let us imagine the curve as an actual "teeter-totter" like scale, which will move from left to right as the data that sits on it moves from side to side.

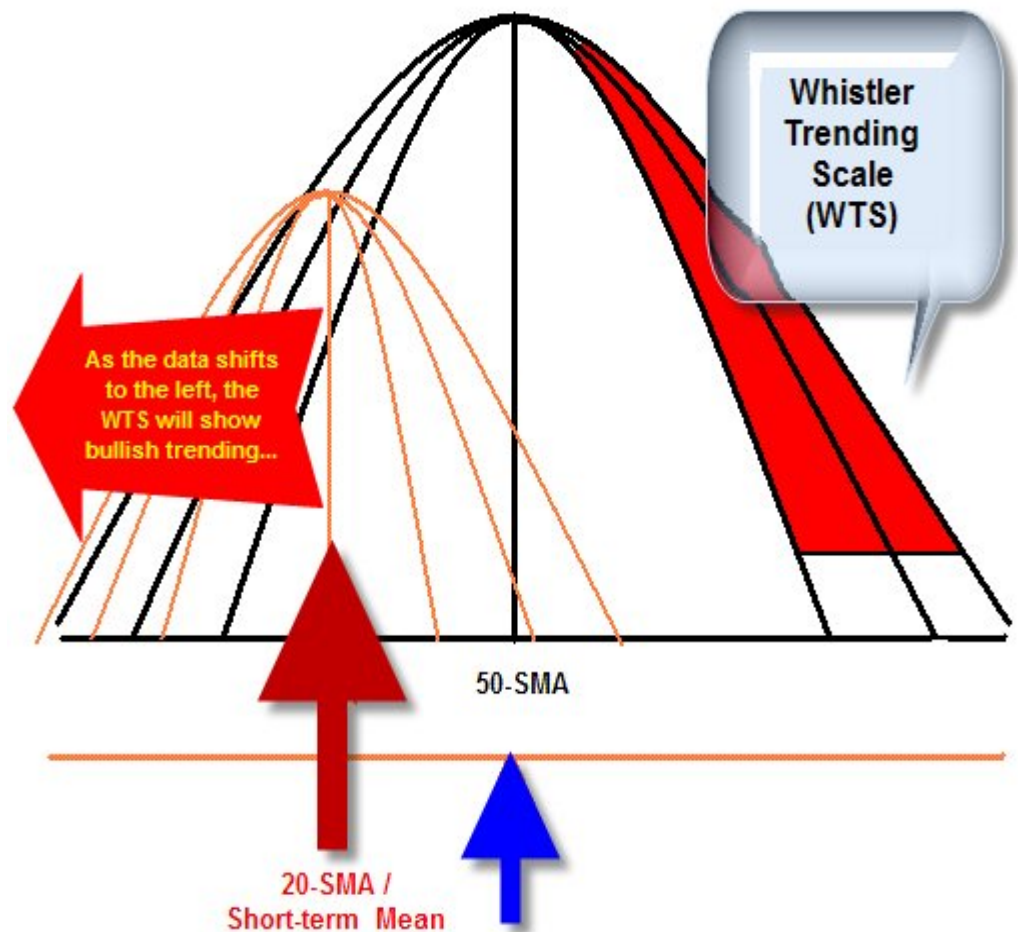
The question is, how will we measure the data shifting from left to right to cause the 50-SMA Teeter-Totter. The solution is simple, we will simply use a shorter-term Gaussian Curve within the longer-term curve. As the shorter-term curve moves from right to left on the larger teeter-totter, the result will be for the larger teeter-totter to move up and down, thus denoting trending... With no other good reason, except that of shameless marketing, I'm going to call this concept/indicator the **Whistler Trending Scale (WTS)**.

Below, you will see a visual representation of the WTS...

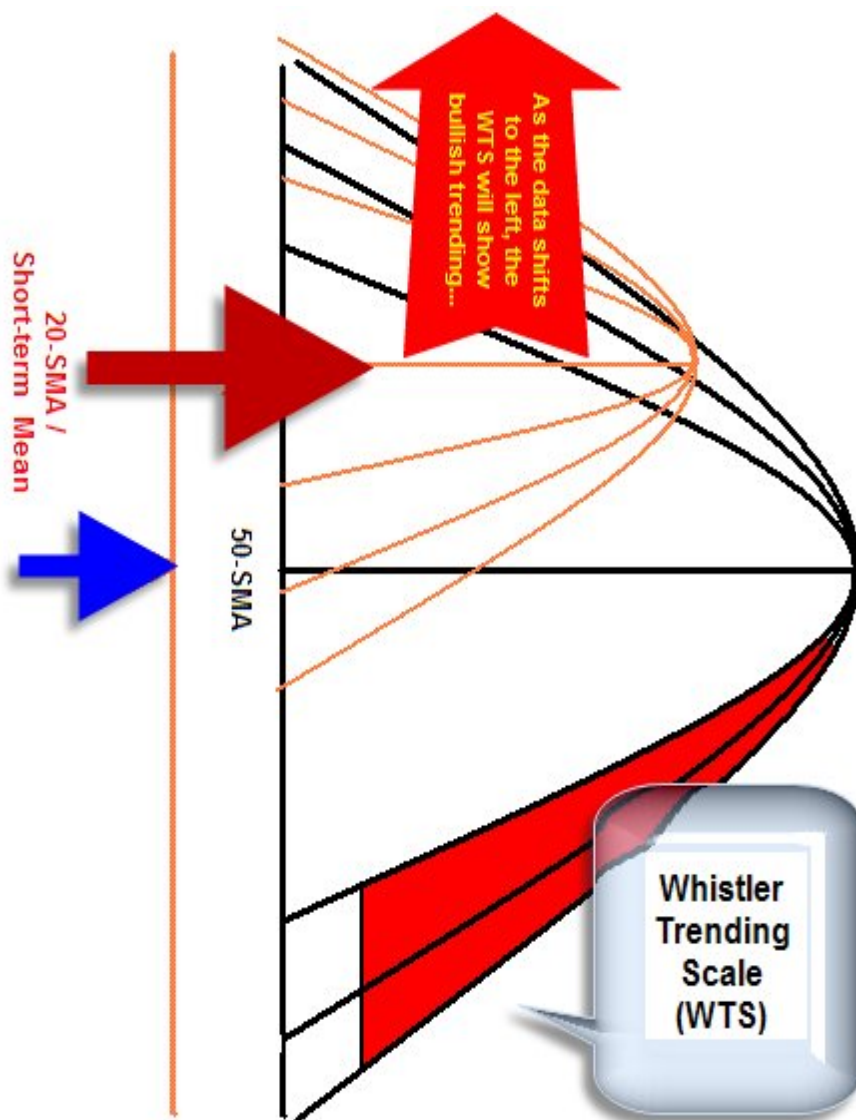
The key point to note in the WTS, is simply that when the shorter-term data (measured by a 20-SMA), moves to the left of the 50-SMA (longer-term mean), the scale should tip down to the left, thus denoting a bull trend.

Historically, this is known as a "moving average crossover", where the shorter-term moving average is above the longer term moving average.

Moving Avg
Convergence
Divergence (MACD)
enthusiasts' know this concept as a relationship between the 12 and 26-period moving averages.



However, I would like for you to NOT think about the moving average relationship I am talking about as simply crossovers and crossunders. We are using Gaussian Curves to measure trend weighting via the moving averages. Moreover, we are using descriptive statistics to not only identify the actual weighting itself, but will also be able to use our short and long-term standard deviations to identify trend entries and reversals. (Note, the area shaded in red is for nothing more than to simply point out the second and third standard deviation outliers in the larger paradigm I am attempting to deliver.)



If you are having trouble with the larger concept still, please take a look at the next image... What I've done is simply taken the WTS and rotated it 90 degrees to the right, so as to show how the WTS would look on your actual trading charts...

As the image to the left shows, when the shorter-term distribution shifts above (left) of the longer-term mean, the incident denotes bullishness...

The question now is how do we actually take this information and apply it to real-time charts and how can we use it to make money both within equity, futures and Forex markets...

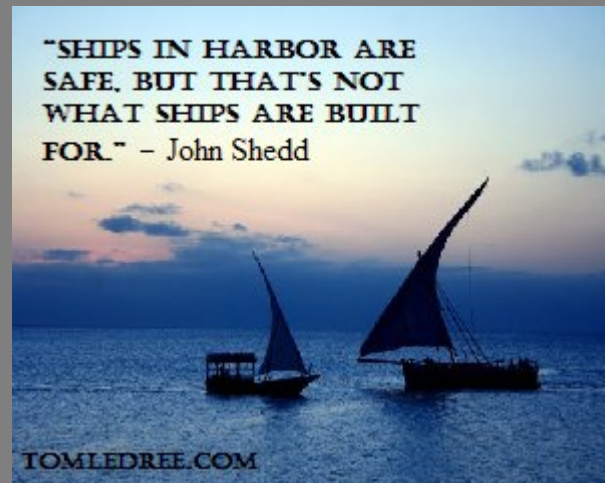
The initial solution is simple actually, as you are about to see.

The WTS is literally a scale of common sense, which shows us that when we add weight to one side of a teeter-totter, the occurrence creates motion whereby the scale shifts.

Now, we will look at the actual events in motion within the market, using nothing more than Bollinger Bands to help identify the shifting taking place on the WTS.

You will soon see that we can identify trending, but also, reversals, as the shorter-term data slides back and fourth along the longer-term scale. What's more, we will also add another set of incredibly simply moving averages to help isolate trending and reversals, an event that will help traders hold positions, even when pullbacks occur. Finally, we will see that using descriptive statistics, via standard deviations, we can time our entries within trending, so as to "trade with the trend", while taking positions when probability is truly in our favor to boost the potential outcome.

Whistler Trending Scale (WTS) Action for Real Traders



It is important to note that there is much more to this methodology, which I will not entirely unveil here... The actual math, additional indicators and code for actual indicators will be included in my upcoming book on Forex, due out in late October/November. Within the book, traders will also learn how to identify the same conceptual framework within Volume Weighted Average Price (VWAP), so as to move with institutions.

As we cut directly to the chase, the first image to the right shows the EUR/USD on a 4-hour chart... In black, we have a 50-SMA, with 1-standard deviation Bollinger Bands. Also included is a 20-SMA with 3-standard Bollinger Bands. We are using the longer-term 1st standard deviations to simply derive the smallest portion of probability (in terms of descriptive statistics) to denote trend breakouts and breakdowns. If you remember in Part I of this report, there is a 68.4% probability that all of the data will like within 1-standard deviation of the mean.



What the aforementioned means to us is this: When a Forex pair breaks above, or below the longer-term 1st standard deviation, we can infer three things:

1. A fundamental event or mindset shift has prompted traders to take action, and thus the occurrence has created a move away from the mean. We may better know this as trending.
2. If the move is real, the short-term moving average and the distribution will soon follow as the shorter-term distribution "confirms" the trending, while also causing the teeter-totter to shift and thus, create additional trending.
3. If short-term volatility as denoted by the 20-SMA 3rd standard deviation spikes above long-term volatility as denoted by the 50-SMA 1st standard deviation, the breakout is "confirmed." As a note, your author prefers to see short-term volatility (3rd standard deviation) spike above the 3rd standard deviation of the 50-SMA to truly confirm the move. The below chart only shows the 50-SMA 1st standard deviation, as it is the real "body" of the range, though please experiment with your charts adding 50-SMA 2 and 3 STD's as well.



There is even more to the story here though... As you will see on the left hand side in green, when the EUR/USD touched the 3rd standard deviation of the 20-SMA, the pair quickly fell back to the 50-SMA mean, before resuming the ascending trend. Statistically, we know that there is a 99.7% probability that all of the data will sit within 3-standard deviation of the mean. Thus, on a short-term basis, if we have bought a pair in a bull trend and the pair strikes the shorter-term 3rd standard deviation, it is probably a good place to take profits. Then, we can attempt to re-buy the pair on the longer-term mean...

Also, on the right hand side of the chart, you will also see that short-term volatility has collapsed underneath long-term volatility. Here's what you need to know:

1. When short-term volatility is outside of long-term volatility, we may want to readily assume that trending will persist.
2. When short-term volatility collapses below long-term volatility, consolidation will ensue. What this means to traders is that when short-term volatility is outside of long-term volatility, we will likely want to use "breakout", or trending strategies. Conversely, when short-term volatility collapses below long-term volatility, we will likely want to start using short-term term channel trading strategies, while continually eyeing a possible longer-term "trade with the trend" entry. If we were able to buy the EUR/USD on the 50-SMA mean and on the lower 3rd third standard deviation of the 20-SMA, we have in essence put significant probability in our favor to ride a larger wave higher. What's more, if the pair violates the 50-SMA with candlestick confirmation, we can infer that the WTS is shifting from bullish trending to bearish... Now though, I'm going to toss in one more set of moving averages to help see when the WTS is truly shifting...



Now take a look at the new chart to the left... I've added some more items...

We have inserted a 50-SMA 3rd standard deviation (red), while also adding two 3-period SMA's, one measuring highs (blue) and one measuring lows (pink.)

Trading Volatility

Working from left to right on the above chart, we see that trending was confirmed when short-term volatility spiked outside of long-term volatility, as denoted with the 20-SMA 3rd standard deviation spiking outside of the 50-SMA third standard deviation in red.

Then, the trend completes itself when the 20-SMA 3rd standard deviation collapses back below the 50-SMA 3rd standard deviation. At this point, traders would have wanted to use channeling techniques to capitalize on the sideways trading action that ensued.

Finally, trending resumed when the EUR/USD violated support of the relative range, confirmed with short-term volatility spiking outside of long-term volatility. What's more, you will notice two new moving averages, one in pink and one in blue.



These two moving averages are measuring only 3-periods. The pink moving average is set to lows, while blue moving average is set to highs. We are using these short-term moving averages to visually identify when the highs and lows of the immediate range fail support and resistance. By doing so, we are able to further isolate head-fake moves from true trending.

You will notice that while the EUR/USD was channeling, both the 3-SMA highs and lows never **BOTH** moved above, or below the 1st standard deviation of the 50-SMA. Adding the short-term moving averages allows us to see - ahead of time - when trending may resume, thus protecting us from taking a risky channel reversal position when trending will truly resume.

COMMON SENSE IS KING!

Again, the actual instance of trending was not confirmed until short-term volatility spiked outside of long-term volatility. What's more, as the chart shows, the WTS moved violently to the right, thus inferring trending to come as short-term (20-period) distribution moved to the right side of the long-term (50-period) scale. As the chart shows, recognizing momentum yields big moves, as noted in the almost 300-PIP drop in the EUR/USD.

It's important to note that in the framework of the information here, some common sense is required. As you may have noticed, in the decline to the left, short-term volatility did not constantly stay outside of long-term volatility... However, the EUR.USD never violated descending resistance of the relative range, until the trend completed itself. Using the 3-SMA (lows); however, would have take one out of the trade before descending resistance was violated, thus perhaps saving a few PIPs of profit. What's more, in one instance when the trend began the EUR/USD struck the 3rd standard deviation of the 20-period distribution. Savvy traders may have inferred it was time to take profits; thus setting themselves to re-enter with the trend on descending resistance and at the mean of the 20-SMA.



What's more, as noted previously, the 3-SMA lows never moved above the 1st standard deviation of the 50-period distribution; thus the bear trend outlook should have remained in place.

There are many other indicators within this paradigm, though I will reserve the rest of the information for my upcoming book.

Regardless, it is important to note that when trending ensues, we should always attempt to understand on a

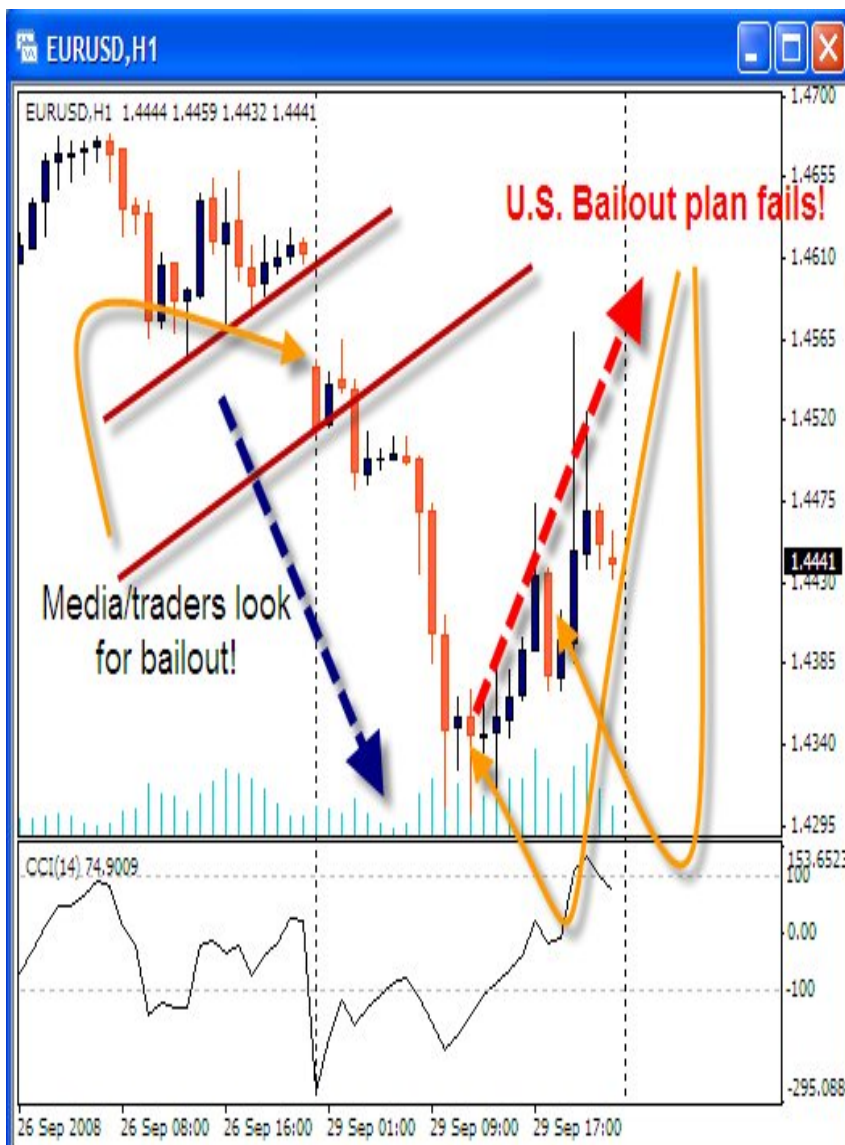
fundamental basis, why the move is occurring in the first place.

With a little common sense understanding of descriptive statistics, distributions and probability, all of the information here should help traders identify trending, channeling and reversals.



Again though, common sense is king, and as a rule of thumb, "when in doubt, get out."

There's one more item I would like to point out within this report... It's a bit of a tricky one, so please don't be too upset at me, after I show you this next chart... If you go back up and look at the section that discusses the Whistler Trending Scale, you will notice that the charts stop just before Forex markets opened on Sunday, September 28, 2008.



Here's the thing, the charts were wrong... even the descriptive statistics were wrong too... In fact, just about every single technical indicator in the entire world was wrong as well.

It was a DIRTY trick I just pulled I know. But there's a very solid point behind it. Foremost, while the EUR/USD had pulled back on the 4-hour chart, which may have presumably looked like a great buy entry, there are two things to note.

1. Traders should have NOT taken a position ahead of the 50-SMA. Traders looking to buy the EUR/USD should have waited until the EUR/USD actually hit the moving average.
2. The chart on Sunday, September 28 was on the eve of the U.S. Bailout plan being rejected, thus leading to a 777-point drop in the Dow.

When the EUR/USD gapped down on the open, traders were inferring that there would be no WAY the U.S. Government would be so stupid as to let the plan pass. Thus, many larger funds/institutions were likely buying dollars in anticipation of the event.

However, when news broke that the bailout plan was rejected, the euro kicked off a fierce rally.

What does all of this mean? As a trader - me, you, any of us. We're just plain credulous if we think there will ever be a technical indicator whatsoever that will always predict market movements. Markets move on fundamental and on news.

At the end of the day, all of the information provided in this report is mean to help you find guidance - via descriptive statistics - in your trading. **However, never, ever forget that common sense is king and fundamentals rule all.**

Lastly, please remember the best traders in the world are not those who know how to enter, but rather, when to exit... Thus, without rock solid money management skills derived from solid stop-loss analysis and intense discipline, all of the statistical, technical and/or fundamental information in the world will not matter one iota with sloppy trading.

At the end of the day... "**Exit is everything.**"



Mark Whistler is a professional trader, author and analyst. Whistler is a contributing Senior Market Strategist to TradingMarkets.com and heads the currency trading Service: [Forex Force](http://ForexForce.com) on WallStreetRockStar.com. From time to time Mark can be seen on CNBC and is a [regular contributor to FXStreet](http://FXStreet.com), discussing currency trading and global markets.

His books include: [Trade With Passion and Purpose](http://TradeWithPassionandPurpose.com) (John Wiley & Sons, Inc. 2007), [Trading Pairs](http://TradingPairs.com) (Wiley, 2004), Profit from China (Investment U/Wiley, 2006) and Profit from Uranium (Investment U/Wiley, 2006.) Mark's newest book, [The Swing Trader's Bible](http://TheSwingTraderBible.com) (John Wiley & Sons, Inc. 2009) - co-authored with CNBC/Fox News regular guest Matt McCall – just released in the second week of the New Year.

Mark Whistler is also the founder of FXVolatility.com and InstitutionalIndexResearch.com, and is a regular columnist for TraderDaily.com and Investopedia.com. In addition, Whistler is one of three founding principles of [Teknomix Partners LLC](http://TeknomixPartners.com), a corporate services company focused on aiding small to mid-sized companies planning/execution of strategic deals and capital raising. Teknomix Partners also facilitates tactical planning for both domestic and international acquisitions. Moreover, Whistler is a contributing blogger with BabyPIPs.com and TradersChoiceFX.com. In his spare time, Mr. Whistler operates [Eats for the Streets](http://EatsfortheStreets.com), a growing organization - dedicated to helping homeless across America.



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LIQUIDITY. SIMULATED TRADING PROGRAMS IN GENERAL ARE ALSO SUBJECT TO THE FACT THAT THEY ARE DESIGNED WITH THE BENEFIT OF HINDSIGHT. NO REPRESENTATION IS BEING MADE THAT ANY ACCOUNT WILL OR IS LIKELY TO ACHIEVE PROFITS OR LOSSES SIMILAR TO THOSE SHOWN