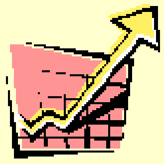
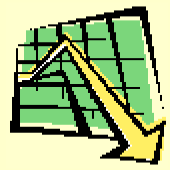


Trendlines 101



> *You can talk all you want about what a stock should be doing or why it isn't doing what it should be doing. You can talk about inflation, interest rates, earnings, and investor expectations. Ultimately, however, it comes down to the picture. Is the stock going up or down? Knowing the reasons behind a stock's movement is interesting, but not critical. If your stock goes up on a given day, they won't take your money away from you if you don't know why it went up. And if you can explain why it went down, they won't give you back your lost money. All that really matters is a picture, a simple line on a chart. The trick to visual investing is learning to tell the difference between what is going up and what is going down. --John Murphy*

Looking at a chart on which no trendlines of any sort have been drawn is sort of like the burglary movies where the guy is trying to steal the big diamond that's sitting on a big pedestal in the middle of the room. He knows that there is an alarm which is triggered by the interruption of one or more of a series of laser beams which criss-cross the room. Unfortunately, he doesn't know where those laser beams are because they're invisible to the naked eye. So what does he do? He blows smoke into the room so that the beams become visible. Knowing where they are enables him to miss them and avoid setting off the alarm. Similarly, there are a variety of trendlines on your chart, even though you may not be able to see them. Blowing smoke on your chart will be of no help, however, so you'll have to be satisfied with a less-dramatic straightedge and pencil.

A chart is a visual representation of stock transactions, or the buying and selling behavior of traders. The price points which represent those transactions can be plotted as a line (like on a heart monitor) or as a series of vertical bars (which show the high, low, closing, and usually the opening prices). The purpose of trendlines is to help the trader find order in all these price points and tell him whether price is going up or down (he could also ask a five-year-old to look at the chart and tell him whether price is going up or down, since small children have an uncanny ability to do this, but five-year-olds aren't always available). Trendlines will also help him find the best entry and exit points by supplying additional information about support and resistance.

In order to get the most profit and the least loss out of trendlines, you must first rid yourself of the widely-held notion/conviction that trendlines provide support and resistance. Understand that people will point at you and laugh if you attempt to discuss this with anyone, but you will have a tool that they do not. And quite possibly the last laugh.

"Support" refers to that point or level at which one can expect a falling price to stop, stall, bounce. "Resistance" refers to that point or level at which one can expect a rising price to stop, stall, or retreat. These are hypothetical rather than absolute because their existence and reliatiblity depend entirely on human behavior. And we all know how dependable and predictable human behavior is . . .

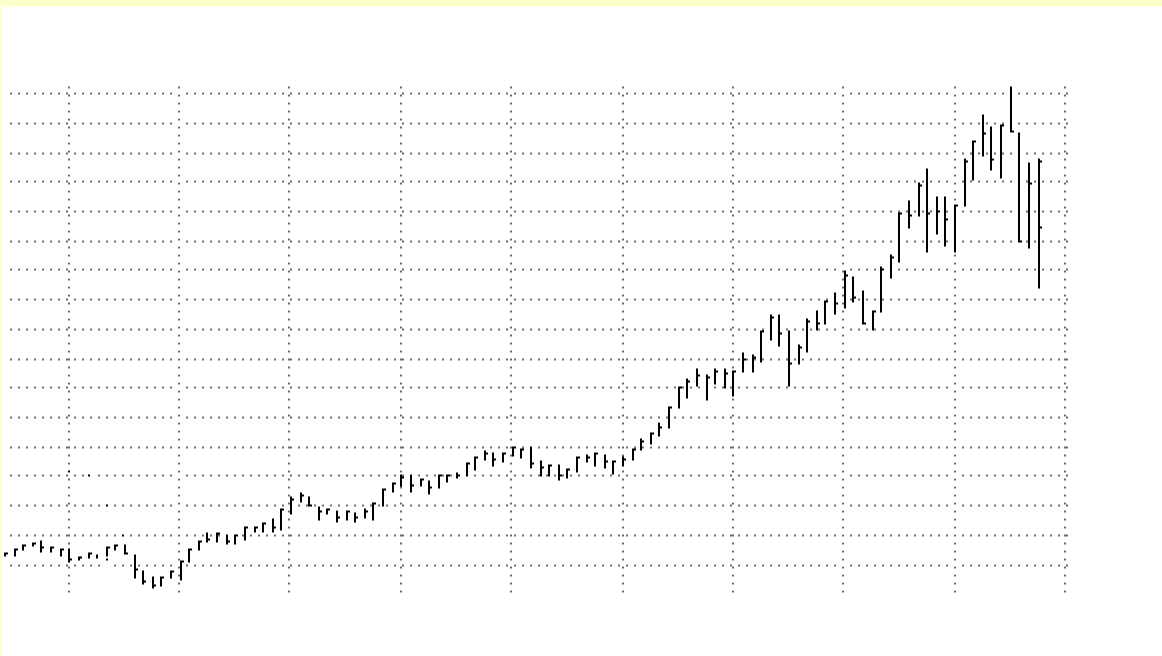
Support and resistance exist -- or can be expected to exist -- because of trades completed at some point or level or zone. They can be weak or strong depending on the number of trades completed at one time and/or the number completed on multiple occasions at about the same price (these occasions can be clustered closely together, or separated by considerable lengths of time). Because they represent trades, they also represent all the fears, hopes, doubts, anxieties, and greed that went into the trades in the first place. If they've stored a great deal of emotional content, and if those emotions are in any way still raw, one can expect to encounter activity at those levels which is out of the ordinary. Sometimes extraordinary. And where one finds action, one also finds opportunity.

Trendlines, on the other hand, do not provide support and resistance (S/R) in and of themselves because they are always moving (ditto with moving averages and other indicators). When they seem to provide S/R, it is only because that particular intersection of price and trendline is coincidental with previous S/R. Anything else is a random occurrence (if this quakes the foundations of your universe, examples will be provided later). On the other hand, trendlines, drawn correctly, do what they're intended to do quite well. Used properly, they are an excellent tool, but one shouldn't expect them to perform a task for which they are not suited, anymore than one would try to drive a nail with a screwdriver.

Now the first instruction usually given at this point is that you must decide on your "timeframe" (from this date to that date), i.e., are you "short term" (days to weeks), "intermediate term" (weeks to months) or "long term" (months to years). Fortunately, an exploration of trendlines and support/resistance (S/R) is not dependent on timeframe. Nor on bar interval, for that matter ("bar interval" being the amount of time encompassed by the bar: five minutes, sixty minutes, a day, a week). Bars are bars, and the rules apply regardless of the specifics of the bar. Therefore, you have one or several less decisions to make before we move on. Isn't that nice?

Drawing a trendline can be an opportunity for real creativity. And the more creative you are, the less helpful your trendlines will be. If your trendlines don't actually indicate the trend of the stock, if they don't point toward potential S/R to the price, if they are not of genuine help to you when you're trying to decide whether to buy (or sell) or not, then you've drawn the wrong trendlines. Or you've drawn the right trendlines in the wrong places. Doing so is not unusual because we have a natural impulse to bring order out of chaos and we'll try anything to force this chart to divulge its secrets. Remember, though, that the breaking of a trendline is one of the defining moments for a change in trend (i.e., *change*, not reversal). If we draw the trendline in the wrong place, we may base our trading decisions on a change in trend that doesn't exist. Not good. Sticking trendlines into a chart won't get us the results we want unless we follow a few simple rules.

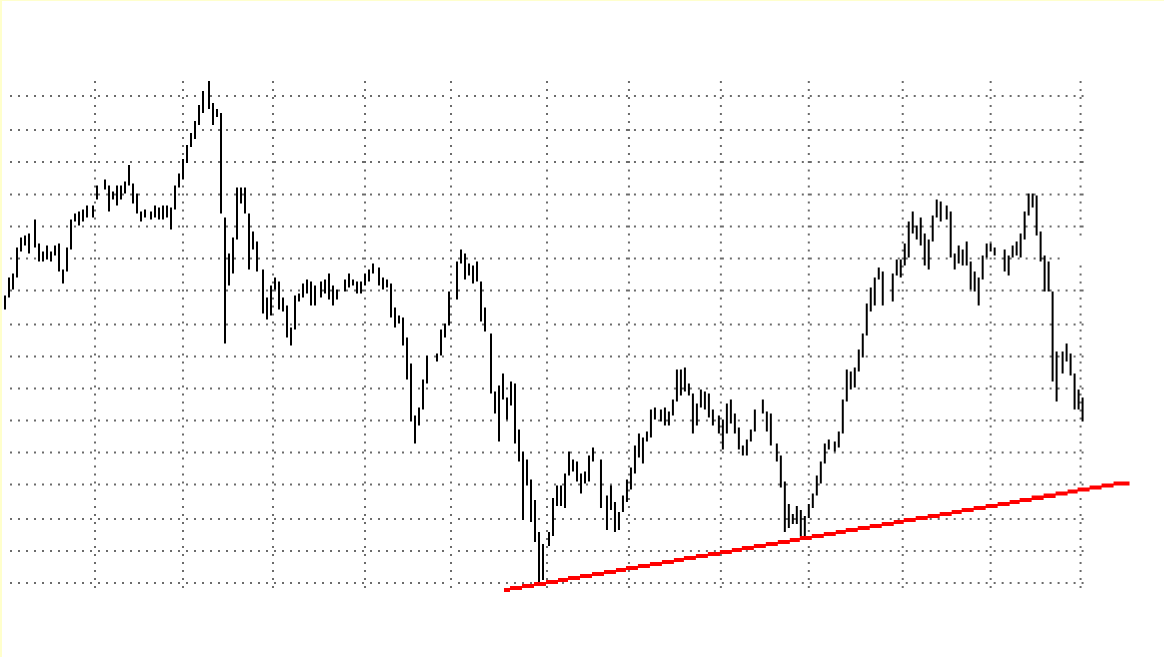
The chart below is the sort of thing that one looks at when he is ready to begin. In this particular example, the "trend" is clearly up, but it is instructive nonetheless because there's a great deal going on here that is often overlooked by the novice chartist. As stated earlier, there are several reasons for drawing trendlines, chief of which is determining the direction of the trend. But one also looks to them for help in finding potential S/R, entry points if he's not already in, and exit points if it looks as though the trend is in trouble and he needs to start locating the exits (he may have wet himself over that last bar).



The chartist may have been told that the gentler the slope, the more "support" the trendline is likely to provide (the reason for this is not so much that a gently-sloped trendline has any particularly magical qualities, but that a gently-sloping price gives more buyers a chance to take positions; the more holders at a given price or zone of prices, the more "support under the market"). As the slope arcs up, fewer and fewer buyers are able to participate at any given price. Therefore, by the time one gets to the slope represented by the ending of this particular segment of the move, only the most manic of the greedy are buying.

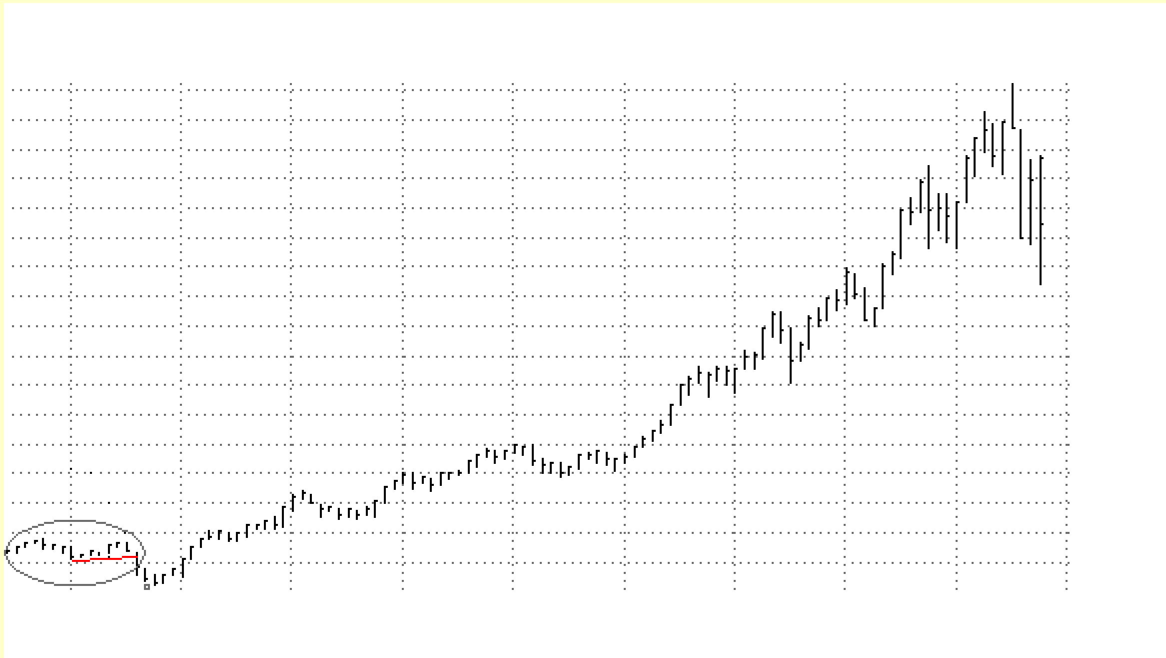
Since the chartist knows, therefore, that he can't expect much support from this end-segment, he'll want to back up and look for a more gently-sloping line that represents more shareholders. Problem is, practically any trendline drawn on this chart anywhere else but that end-segment looks gentle, and if he doesn't scroll his chart back, he may be in for a surprise.

Look, for example, at those two little bumps to the far left of the chart, encompassing the first 14 bars. Doesn't look like much, does it? However, if one were to scroll back to that period, here's what he would be seeing:



Now let's say you're looking at this chart (or one like it) rather than the other chart, which is more likely. Trend isn't so obvious here, is it? And yet you want to get in this, for some reason, or you're already in, and you're being whipped around all over the place. What's the trend? Where's the potential support? Is the desperate line drawn here any good? Will the plummeting price find "support" at this line?

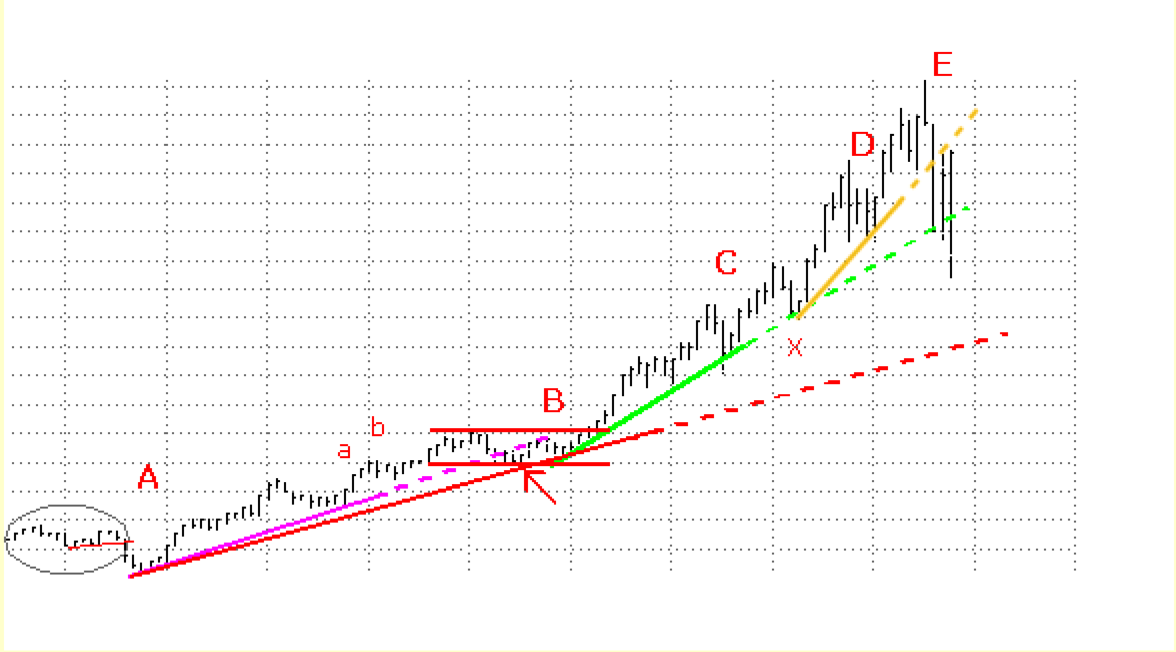
Now look again at the earlier chart with a couple of annotations thrown in:



The gray oval encompasses that area represented by the chart above this chart. That dinky little red line matches the trendline drawn in the earlier chart.

The point here is not to show that all the hand-wringing over the trend was for naught, but to show that what looks like a nicely-sloping trendline drawn against what seems to be not much is just as likely to be masking a great deal of angst and volatility (that little dip at the end of that itty-bitty trendline represents a more than 30% correction leading into a bear market that lasted for better than six months). There is a big difference between drawing a trendline beginning with wherever you are and projecting that trendline into the future, and going back into the past from wherever you are and drawing a trendline that begins at some point back there and is extended into and through the present. Keep that in mind when you get ready to assess the relative strength and weakness of potential support and resistance areas and, hence, the value of your trendlines.

Now down to business. Using this same chart, let's assume that it seems a little toppy to you. It may actually be rolling over. You want to know where to draw your trendline, and that brings us to the first step in drawing trendlines: draw a line from the lowest point to the next lowest point that precedes the highest high *and doesn't pass through any prices along the way* (unless there is some abnormally long bar that clearly is outside the normal range, such as the bar directly below **"C"**). The highest high here is obviously "E". But we know that this isn't going to hold and we want to know what comes next. Tracing the trendlines from E, however, requires a backward-think. So let's take the time now to start at the beginning since we'll get there anyway and starting there will make the process less confusing.



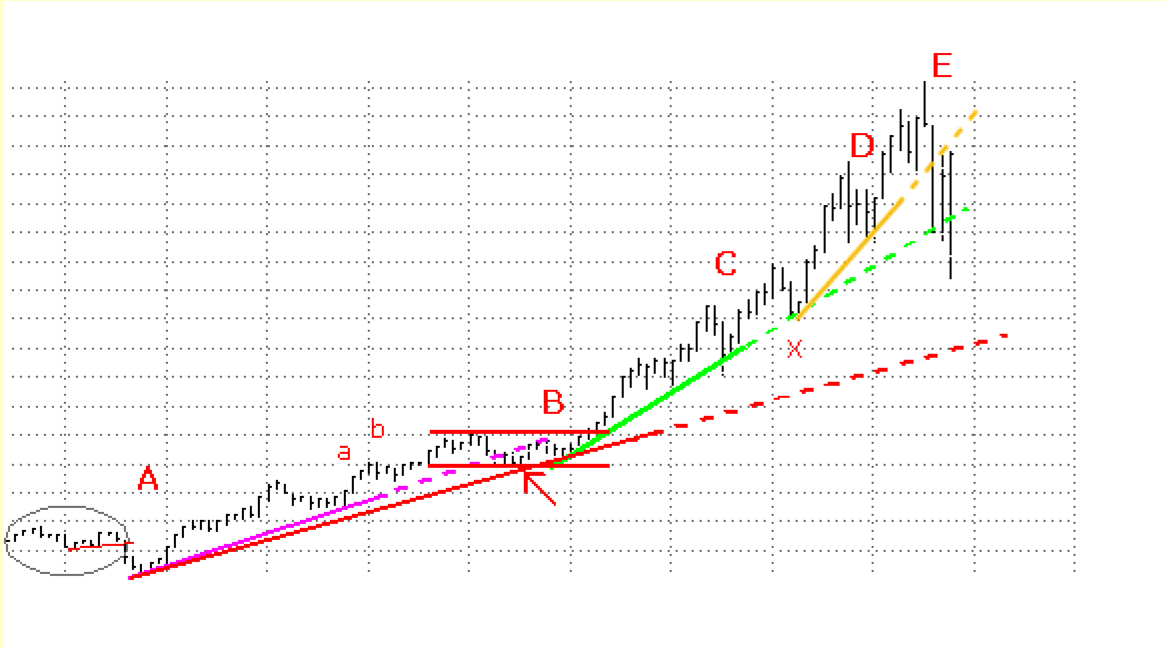
The lowest point in the chart is **"A"**. The highest high is still **"E"**. But the lowest point preceding **"E"** that we can connect to without passing through any prices is **"B"**. We plot our line (red) and extend it into the future (dotted) to show potential support. God willing and the creek don't rise, we'll never see it. But at least now you know how bad it can get and can make some important decisions.

In the meantime, we need something more useful than a trendline that wanders off into the ether, perhaps never to be seen again. So we wait for price to rise on its merry way and pull back, forming a swing low. When it does we can "rotate" our trendline upward from **"B"**. The highest point is still **"E"**, but the lowest point preceding **"E"** that we can connect to without passing through any prices is **"C"**. We plot our line (green) and extend it into the future again (dotted) to show potential support (this, incidentally, is called a Stage 2 trendline).

At **"x"**, the price decides it's not going to visit our trendline again. This is a good thing because it is a sign of strength. But it renders our trendline less useful, even irrelevant. So, once again, we wait for price to pull back and form a swing low. It does so at "D", at which time we rotate our trendline (yellow) again (Stage 3). Now we become concerned, because when price starts arcing this way, it becomes increasingly vulnerable to correction, i.e., having the rug pulled out from under it. We can see that our most recent trendline has been broken, but that came as no great shock. However, we also note that the *previous* trendline (the green) was broken, suggesting big trouble. But we also note that the last bar ***closed*** above the trendline, helping to verify its validity. On the fourth hand, this is hardly the beginning of the move. So what to do?

Now let's do a 180 and look back at our zoom-in posted earlier and again below. The price has tanked and has been struggling for minutes, hours, weeks, months. Here you are essentially in the same position you were in the above chart, trying to detect the bottom, the potential trend, an end to all the uncertainty. You begin by connecting the two points as shown and extending your tentative trendline into the future. As it turns out, the declining price you see at the far right of the graph does in fact drop below your trendline. Way below. So you continue to watch and wait and, in the meantime, keep trying when it seems appropriate to detect a trend.

One of these opportunities arises with the bars clustered under **"A"** in that you are able to draw a line connecting the first of those four bars with the fourth (forgive me for not blowing this up, but it should be reasonably clear).



You extend your line (the pink) to indicate potential support. Price stays above your trendline for almost twenty bars (you could draw a newer, tighter one, but, to get through this, let's just leave it where it is). It's tested at **"a"**, this third point confirming that it's a good trendline (if you were drawing this trendline back then, at the time, **"a"** would also be the lowest low preceding the highest high during the period--**"b"**). Momentum then slows and the price begins basing, or moving sideways, in the process of which it breaks your pretty pink trendline. What now?

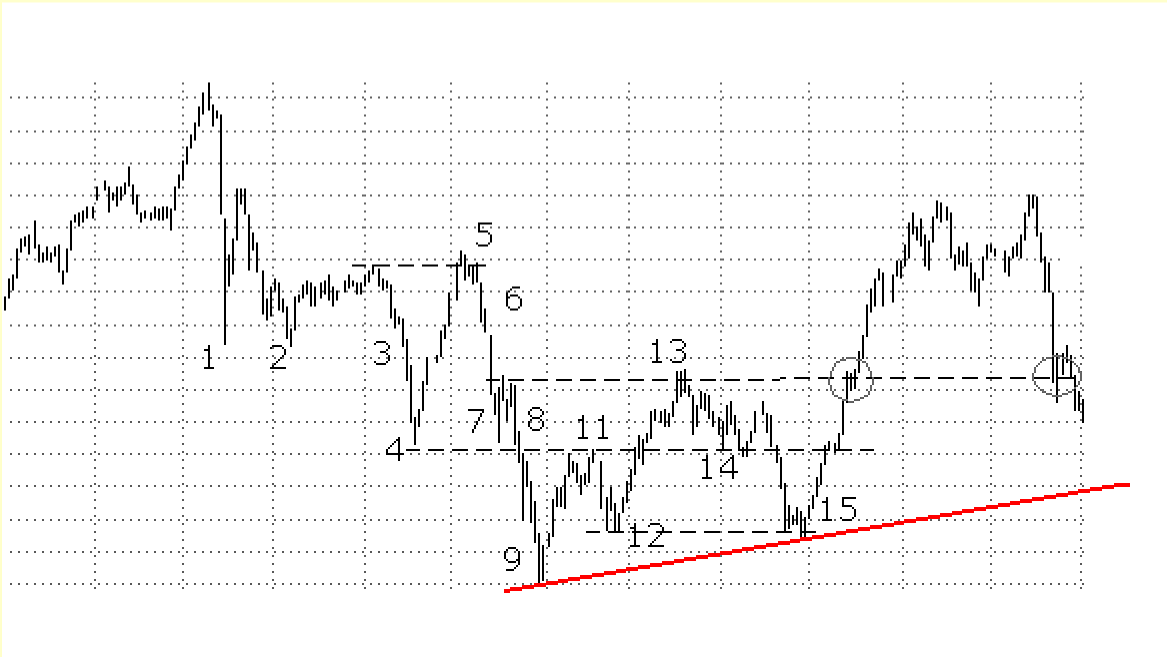
The breaking of a trendline is only an indication of a change in trend, not a reversal, and is no reason to panic. At least two other things must happen in order to nudge you toward the sell button. The first of these is that the price begin to make lower highs and lower lows. In this case, this didn't happen. The low that I've indicated with an arrow was it. Prices drifted thereafter and never fell below that low. On the other hand, the high in the base before price fell through the trendline was never exceeded either. So, instead of falling further, the index just bounced up and down in a trading range that lasted for twenty bars. (Note here that the extended pink trendline seems to be acting as resistance when the index attempts an upmove just below **"B".** The resistance, however, is being provided by the most recent swing highs, not by the trendline. Note also that the trendline was not drawn so that it passed through the prices at the bottom of the range; at the time the trendline was drawn, those prices hadn't occurred yet.)

But even lower highs and lower lows are not enough, at least to signal a trend reversal. As long as price does not drop below the last swing low, you're okay, i.e., you're still going sideways, though you may find yourself watching price more often. If the price does in fact fall below the lowest point of the previous sell-off (where I've drawn the arrow), the likelihood is that you are not only on your way down but have further to go.

And what about the "hard right edge"? Are we in trouble or are we not? Price did cut through not just one but two trendlines. And it did drop below the last swing low at **"D"**. But. Price closed well above both the green trendline and the last swing low, suggesting substantial strength. At the very least, then, one would be justified in deciding to wait and see, at least until that last swing low is busted.

To summarize, therefore, if you're going to use trendlines to help you decide when to exit positions, look for **(1)** a violation of your trendline (assuming it's drawn in the right place), **(2)** a series of lower lows and lower highs (i.e., not a base), and **(3)** a low that exceeds the lowest low of the most recent sell-off (assuming you want to wait that long). If all of this seems similar to standing off to the side and watching your house float down the hill in a mudslide, you may be comforted by exploring how S/R and trendlines work together to help you interpret the price action. Let's, therefore, look at these charts one more time, a bit deeper (fan away those mists).

For our purposes, it isn't necessary to know why price bounced at 1, only that enough people bought there (or had bought there earlier) to "support" the price when it made a return trip at 2. In fact, there may have been buyers who saw this as a chance to add to their holdings, or even to initiate new positions (after all, don't want to miss out).



Unfortunately, price didn't take off as expected, and when it made yet a third trip to that level at 3, holders got rattled and dumped their shares, driving price down to 4. A rally took price back to that old congestion zone at 5, and when price couldn't work its way through, those who hadn't sold the first time used this opportunity to get the hell out now (6). There was a slight bounce at 7. Perhaps those who bought there earlier thought that that had been the bottom, and this was just a test. Surprise, surprise. A third trip to this level at 8 and they added their fuel to the fire.

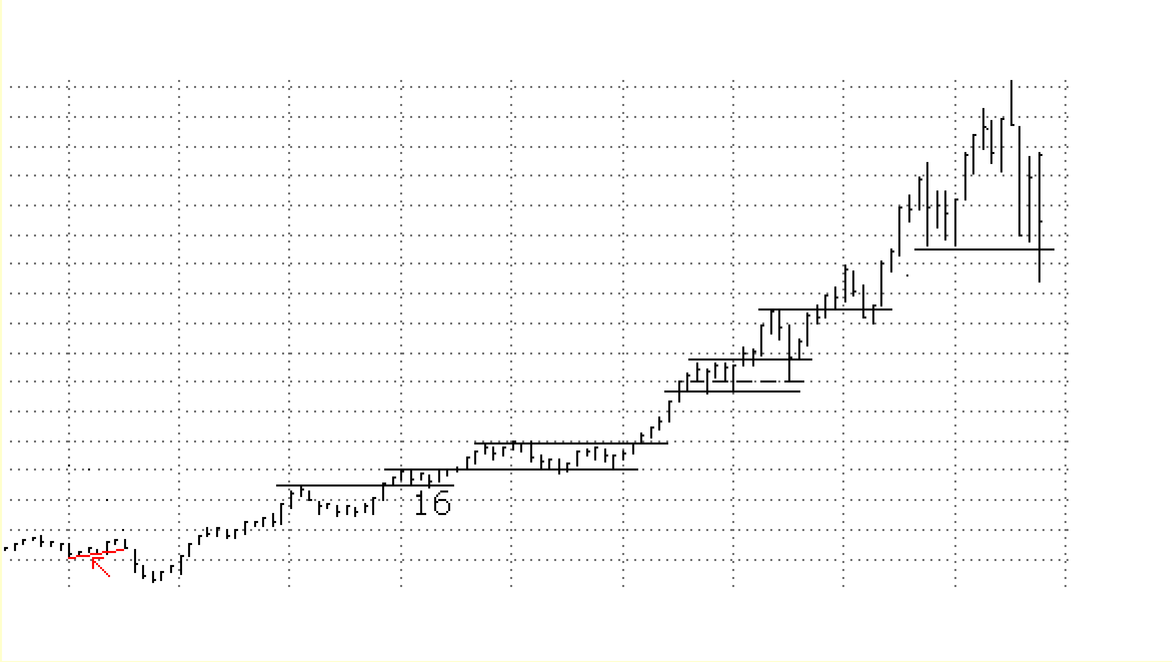
Now price makes a stand at 9, bounces, then reaches 11, where so many people had sold before. Those who hadn't sold thought they'd never get a second chance and sell now, driving price down again. Some, though, see value here, just as others saw value at 9, so they help to halt the decline at 12.

Price then rallies to 11 again, but apparently many of those people have sold by now because it has little difficulty making it all the way to 13. But some old-timers who've held on through all this can't take anymore, and many of those who bought at 9 and 12 see a chance to lock in a nice profit. So price drops to familiar territory (14). And holds. And holds again. The third time, though, holders get nervous, and they unload their shares, helping price fall to what had been the last "reaction low" (or swing low) at 12 (15).

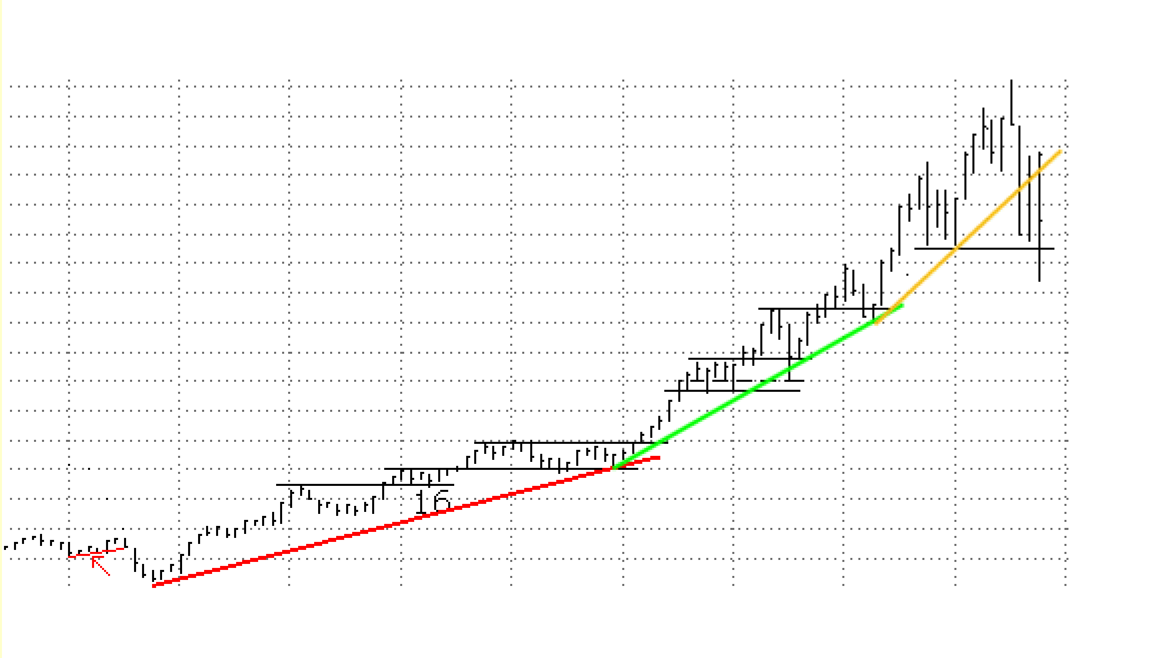
And here is where we draw a tentative trendline, which can't provide support because the low was necessary before the trendline could be drawn. In other words, when the low at 15 was put in, the trendline wasn't there yet. Where it found support instead was at the level tagged at 12.

Does this trendline hold where it runs off the right side of the chart? We've seen that it does not. In fact, price tanks all the way off the bottom of the chart.

Now let's apply these S/R concepts to the next chart. Here I've marked the various levels which coincide with reaction highs and lows and with "congestion" zones, in which price rattles around for what can become an extended period of time (like a year).



Now compare the above chart with the next, with the trendlines already discussed drawn in. Note that every seeming "support" point on the trendline, i.e., those points at which the trendline seems to provide support, really have little or nothing to do with the trendline per se. Price finds support at the previous support areas, which exist because of previous trading activity. In fact, one pullback, at 16, never reaches the trendline at all.



Why does price decide to move when it does? That's a subject that we cannot even begin to cover here. Sometimes it'll sit for only a few bars. Sometimes it'll sit for dozens. And when price breaks a trendline, as it did where I drew the arrow, before **"B"**, is that a momentous occasion? It needn't be. All the break signifies is that change is in the air. In this case, it meant that price was going to take its time, slow its momentum, give people a chance to buy. Then, for whatever reason, more buyers stepped up to the plate and price resumed its advance. But the trendlines follow price, not the other way around, since it is the task of trendlines, after all, to illustrate trends.

When price begins to approach one of these lines, then, and you're wondering if there's going to be any activity there from which you might profit, look to the left. Are there any reaction points -- highs or lows -- where there seems to have been a lot of interest (just a few bars, or many)? Are there any congestion zones where bulls and bears fought it out for more than a brief period? If so, how old is it? Might all those people have moved on to more interesting things? Or might they be lying in wait, patiently, like raptors? All this will give you a much more solid basis than hope or wishful thinking that a given juncture between price and a trendline will lead to something rather than end up a non-event.

One final note. Don't hug the price too closely with your trendlines, whether in an effort to squeeze out every last nickel, or to avoid losing money on a trade you suspect you never should have taken in the first place. If you are in any way or for any reason insecure, it's very easy to begin working with shorter and shorter trendlines. But you'll find that you are virtually guaranteeing that your trendlines are going to be violated much faster than you're used to or know how to deal with. When your stomach begins to give you that queasy feeling that you've gone out of your way to avoid through years of studying volumes of self-help investing books, back off to a place where you're more comfortable and can make more rational decisions. Work with larger bar intervals (10m instead of 5m, weekly rather than daily). Zoom out. Look at The Big Picture, a longer timeframe (instead of 10 or 20 bars, look at 50, 100, 200). Revisit your trading strategy and investment philosophy and goals. But do nothing until you've figured out where all this doubt and anxiety are coming from. Unless you have specific, objective, rational reasons for cutting a trade short (like you're losing money with every beat of your thumping heart), leave it in peace. Which, come to think of it, serves as good advice for a great many things.

This isn't all there is to it, of course. There are supply and demand lines, which share much in common with trendlines (conceptually, at least). There are the fancifully-named trend "channels", which can be surprisingly helpful, particularly as a warning of potential trend change. More mysteries to unravel regarding support and resistance. And the true meaning of "overbought" and "oversold" (which has nothing to do with indicators). But this has gone on long enough, and your plate's full. The rest can wait for Trendlines 102.