



Audio Script: Get Technical, Get with the Trend Part Two

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The use of technical analysis is an important tool for many investors to gauge the outlook of a security. While there are an almost infinite number of ways that technical analysis can be leveraged, two of the most popular methods are drawings and technical indicators. We will explore in today's session, how price action and indicators can be utilized to gain a directional outlook using technical analysis. This is the 2nd part of a two-part series, dedicated to understanding various tools of technical analysis for identifying trends and potential price targets.

I would like to make you aware that technical analysis is performed by an individual and derives from many theories. This presentation is intended for informational purposes only. Investing involves risk, therefore – please take a moment to read through and be aware of all of the information contained in these disclosures. You can contact us if you have questions on this information or anything else we cover today.

Today we will build upon the foundational concepts that you learned during the Get with the Trend – Part One Series. We will kick off with an introduction to trendlines and broken trendlines to determine a primary trend and trend reversals. We will then assess how moving averages can provide automatic trendlines and used to identify support and resistance levels. Understand how multiple moving averages can be combined to generate bullish and bearish views, and introduce trading momentum with RSI.

All of the topics today are intended to help us identify bullish and bearish signals to decipher which direction, if any, a security may be headed. We will be assessing charts. All screenshots in this presentation are sourced from Merrill Edge MarketPro - which is available to Merrill Edge Self-Directed clients. You can access the platform by hovering over trade and selecting Merrill Edge MarketPro from the drop down. We are focusing on charts and the use of drawing tools. Let's dive in.

In our Get with the Trend Series Part Two, we are going to continue what we learned in Part One and cover three methods to identify primary and trend reversals. First, we will start with trendlines, which are a powerful guide to the overall direction of a security. We will explore the rules to identify a primary trend as well as a trend reversal using broken trendlines. It is important to understand that trendlines are subjective and may provide different conclusions to each user. The second analysis technique that we will learn is moving averages, which act as an automatic and dynamic trendline. We will explore how moving averages can be utilized to determine potential support and resistance areas and combined with each other to generate buy and sell signals. While the calculations of moving averages are not subjective, the interpretations of moving averages may be different for each user. And lastly, we will explore how RSI, a popular momentum indicator that can be utilized in multiple ways to identify a potential trend reversal. Technical indicators have become increasingly popular and widely accepted as a tool to determine the outlook of a security. While the calculation of each indicator is objective, users may still have different interpretations of the same technical indicator.

To learn more about Chart patterns, which are important to understanding trendlines, please review our session on Get with the Trend – Part One, located below. Let's start with a review of primary trends using trendlines.

We will start today's session with a quick revisit to a topic that we covered in our Get with the Trend series Part 1, uptrends. We touched upon that a series of higher highs and higher lows reflect an increase in demand relative to supply. Today we will expand on this concept by drawing on the chart to connect those higher lows to form a bullish trendline. This trendline can be utilized as future support levels for the primary uptrend. Duration and multiple points add to the significance of the trendline and changes to that trend. Additionally, a parallel line can be drawn to form a trend channel resistance line. While trendlines come in many forms, generally they should not be too steep or flat, a 30 to 50 degree slope is ideal.

Next, let's look at the opposite of a bullish trendline, a downtrend. We touched upon that a series of lower highs and lower lows reflect supply that outpaces investor demand. When we draw on the chart to connect those lower highs, we can form a bearish trendline. The bearish trendline can be utilized as future resistance levels for the primary downtrend. Additionally, a parallel line can be drawn to form a trend channel support line. With both bullish and bearish trendline channels, they can be used to project the speed of the primary trend, until the trend is broken.

Now, with an understanding of trendlines to determine the continuation of a primary trend, eventually all trends must come to an end. Trendlines serve as an important tool in determining a trend reversal when they are broken. A break of a trendline could happen either below a supporting bullish trendline or above a resistance bearish trendline. However, since trendlines can be somewhat subjective to draw, rules can help determine if broken trendline is valid. While there are no hard and fast rules, the more of the following conditions that apply, the more likely a trend reversal is occurring.

The break above or below the trendline of at least 1%. It occurs on greater than average volume, when technical events are accompanied with above average volume, it generally leads to a higher conviction of the event. Consecutive closing bars above or below the broken trendline. There is a retest of the broken trendline and failure at the retest. Lastly, the size of the break is measured to be larger than the 5 period average true range. Let's look at an example of a broken trendline to understand these conditions.

We will use an example of a broken bullish trendline to signal a trend reversal. To first identify a stock is in an uptrend, we connect a series of higher lows to form a bullish trendline. In this example a stock makes a relative low around \$90, then \$110, \$123 and finally at \$153. Connecting these 4 relative lows allows us to draw a bullish trendline, providing a support line for the primary trend. A parallel line can also be drawn to the bullish trendline to create a channel resistance line. This example contains at least 4 points connecting the trendline which lasts for approximately 6 months, a moderate amount of time for a stock to be in an uptrend.

The break of the bullish trendline then occurs in early Feb 2021 of roughly \$5, which is greater than 1% below the trendline and the average true range. It also occurs on significantly higher than average volume. Lastly, there are multiple consecutive closing bars below the bullish trendline. This creates more than enough sufficient evidence of a valid broken trendline. To project the target price of a broken trendline, the height of the channel of \$25 can be utilized. Additionally, a multiple of the \$25 can also be used with Fibonacci extensions which Jessica covered during our Get with the Trend – Part 1 session. The trendline break which occurs around the \$153 area, would target \$128 using a \$25 channel height, which the stock reaches in about 1 month. However, not all trends are quite this orderly or easily identifiable, so we'll explore how investors can have automatic trendlines drawn using moving averages.

Moving averages are one of the most popular trend following and support and resistance indicators in technical analysis. A moving average is simply the average price over a certain lookback period. Common periods used by technical analysts are 20, 50, 100, 150 and 200 period moving averages. Moving averages can serve as a dynamic and automatic trendline to determine the trend of a security. While there many ways to use a moving average the 3 commonly accepted methods are: One, when the price of a security is trading above the moving average, it is considered to be in a bullish trend, and below the moving average, a bearish trend; Two, If the slope of the moving average is positive, it is considered to be in a bullish trend, and a negative slope is considered a bearish trend, and three, when a shorter period moving average crosses above a longer period moving average it is considered bullish, and a cross below is considered bearish. While there are other calculations for moving averages, such as exponential, smooth and weighted, simply moving averages are by far the most popular. In my experience, keeping it simple is generally considered best practice with simple moving averages. Let's review an example of some simple moving averages in action.

We will use an example of a stock with 5 different simple moving averages drawn on the security. While this security remains in an uptrend for the length of the chart, it does so at different rates with pullbacks of various magnitudes. We will see how various moving averages will act as support and resistance throughout the uptrend. In our previous trendline example, we had to connect relative highs and lows to draw a bullish trendline support. Moving averages will now act as our automatic trendlines using the popular 20, 50, 100, 150 and 200D SMA.

Notice that during the May 2020 to Mid Feb 2021 period, the stock runs from \$55 to \$160. At first, the 20 Day (purple) moving average acts as a trendline support, bouncing higher each time the stock pullback to the 20D SMA. Into Sept-Nov, the purple moving average turns flat and even slopes downward, as the stock tests the Red 50 Day moving average which now also acts as support when the stock pulls back to it. When the stock gains upward momentum in Jan and Feb of 2021, it only pulls back to the 20 Day (purple) moving average again and that acts as support in a faster uptrend. Once the 20D SMA starts to turn downward and stock breaks below the 50D SMA on high volume in Late Feb 2021, the short term direction has shifted and the 20 and 50 D MA starts to act as resistance. The stock declines until it reaches the 150 Day and 200 Day (green & blue lines) acts as long term support, while the 20, 50 and 100 D SMA act as short term resistance. As you can see, moving averages are very powerful in identifying the primary trend and act as automatic support and resistance levels. However, some investors may find the interpretations of moving averages to be overwhelming, so let's explore how moving averages can be utilized to provide specific buy and sell signals.

Moving averages can be very useful to filter out the daily fluctuations and allow investors to focus on the primary trend. However, that filtering mechanism also delays signals when the trend has shifted directions. That's where the mighty MACD steps in. it provides potential changes in trend earlier than moving average crossovers. MACD stands for Moving Average Convergence Divergence, and let's start with an understanding as to how MACD is derived. MACD is the Spread or difference of 2 moving averages versus the moving average of that spread. Specifically, it's the spread between the 12 Period and 26 period EMA, called the MACD Line. Then a Signal line is calculated which is a 9 period moving average of the MACD line. And lastly a histogram is calculated as the difference between the

MACD and Signal line. MACD can be interpreted as bullish when the histogram is positive and bearish when the histogram is negative. Additionally, divergence is a powerful tool with momentum indicators such as MACD to identify trend reversals. Let's take a look at an example of MACD in action.

As a rule of thumb in technical analysis, it is important to read the price action of the chart first. Always attempt to gain a directional view from price, and only use indicators like MACD as a confirmation of your outlook from price action. In our example, the first example of a price action trend change is when the stock breaks above its bearish trendline in March of 2019. This is confirmed by a bullish cross of MACD with the histogram turning positive, providing a bullish confirmation for this trendline break. The stock rallies from its breakout level of \$230 to \$310 when it forms a double top and MACD generates a bearish cross and turns negative, confirming the end of a trend. It is also important to understand that bearish signals within a primary bullish trend is typically used as a neutral outlook or pause in a rally rather than an outright bearish view. Lastly, in Aug of 2020, after breaking above a triple top, MACD generates another bullish cross confirming the breakout for another rally higher. With the last bearish cross in Dec of 2020, signaling the end of the bullish trend. While the MACD histogram is easy to interpretate, an alternative and powerful use of momentum indicators such as MACD is identifying the end of larger primary trends using divergence.

In the previous example, I showed that a bearish cross in MACD is typically only used to identify a pause in a bullish trend. However, MACD divergence can be utilized to identify the potential end to a larger primary trend. Divergence is a bit trickier to identify as it requires reading the price action and MACD at the same time, so let's look at an example.

Divergence is measured when the price action continues in one direction, while the MACD line diverges from that direction. An example of this is when a stock makes a higher high in price, but MACD starts to exhibit lower highs. In our example, the stock triggers many Bearish Crosses on MACD during the larger primary uptrend. However, a triple peaked divergence such as this example at the end of the trend, where the stock continues to make higher highs on price, but MACD make lower highs is one of the only methods that a momentum indicator can be utilized to signal the potential end of a larger primary trend.

And last but not least let's now move onto the most popular technical indicator, the mighty RSI. RSI stands for the Relative Strength Index, not to be confused with Relative Strength, a term used to measure the performance of 2 assets relative to each other. RSI is the most popular technical indicator by analysts to measure and trade momentum.

RSI readings are between 0 and 100, but generally range between 30 and 70. Where readings are below 30 the security is considered oversold and that markets may have declined too much, a potential buying opportunity. And readings above 70 are considered overbought and that markets may have risen too much, a potential selling opportunity. However, when markets are rangebound, RSI rarely gets to these extreme levels and adjustments are sometimes necessary to those levels.

While, most investors use RSI as an indicator to determine overbought and oversold conditions, RSI can also be used to confirm a trend direction and signal an end of a larger primary trend through divergence as well. Let's look at an example of RSI and how it can be used in various ways.

Similar to MACD, when we utilize RSI as an indicator, its best practice to always read the price chart first, and utilize RSI only as a confirmation of our views. In this example, when the stock's trend is not too steep, RSI will range between 30 and 70, signaling potential buying and selling opportunities. However, during strong periods of downtrends, such as Feb to April of 2020, we need to adjust the overbought thresholds lower from 70 to 60, to generate sell signals in a strong downtrend. On the other hand, during Nov 2020 to March 2021, a strong uptrend, we need to adjust oversold thresholds higher from 30 to 40 to identify oversold buying conditions during a strong uptrend. A few moving averages on a chart could be incorporated here to determine the speed of an uptrend.

However, divergence is a powerful but commonly overlooked use of momentum indicators. They are powerful tools in measuring the speed at which an asset is declining or rising. We can think of RSI as a measure of the accelerator pedal in a car. As a car is driving up the hill, RSI measures if the car is accelerating or decelerating, divergences signal a decelerating trend that may be coming to an end.

Divergence can be both positive or negative. On this chart, as the stock makes three lower lows while RSI makes higher lows from June to Oct of 2019. This is considered positive divergence and signals a potential end to a longer-term bearish trend. On the other hand, as the stock rallies from Jan to March of 2021, making higher highs while RSI fails to make higher highs. This is considered negative divergence and signals a potential end to a longer-term bullish trend.

While there are hundreds of momentum oscillators similar to RSI that have been created, remember that they are all measuring momentum, just using different mathematical calculations. The methods for reading RSI can almost universally be applied to all momentum indicators for overbought, oversold and divergence.

Let's review what we covered during today's session. You should have a solid understanding of how to draw and interpret trendlines for identifying a primary trend and also the reversal of that trend with a broken trendline. How to apply automatic trendlines in the form of a moving average to determine direction and speed of a trend. Combining Moving averages to generate buy and sell signals and trend changes with MACD, and lastly using RSI to measure and trade momentum.

This concludes our Get with the Trend technical series, please join us for our other sessions on popular technical indicators to learn more. We invite you to continue the series and watch our next on-demand webinar on technical analysis. If you have any questions or concerns please feel free to give Merrill a call at 877.653.4732

Also, we would love to hear from you. We welcome any feedback or question in regard to today's presentation as well as suggestions for future webcasts. Fill out the "ask a question box" at the bottom of this page.

On behalf of the Merrill team and on behalf of the OptionsPlay team – thank you!