Price Channels [ChartSchool]

Table of Contents

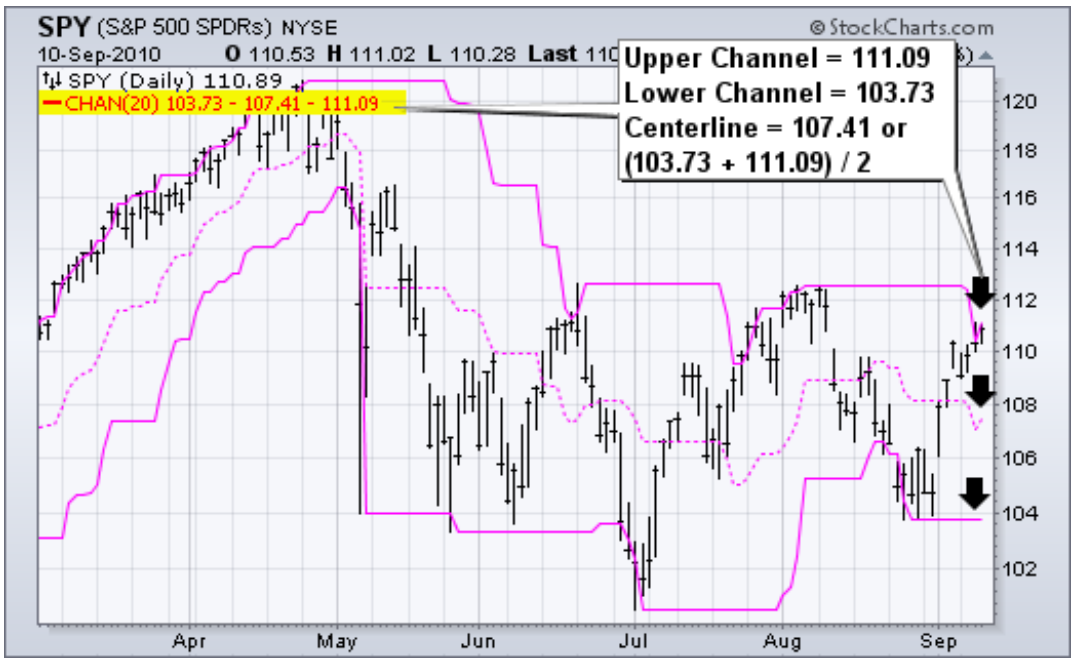
Price Channels

Introduction

Price Channels are lines set above and below the price of a security. The upper channel is set at the x-period high and the lower channel is set at the x-period low. For a 20-day Price Channel, the upper channel would equal the 20-day high and the lower channel would equal the 20-day low. The dotted centerline is the midpoint between the two channel lines. Price Channels can be used to identify upward thrusts that signal the start of an uptrend or downward plunges that signal the start of a downtrend. Price Channels can also be used to identify overbought or oversold levels within a bigger downtrend or uptrend.

Calculation

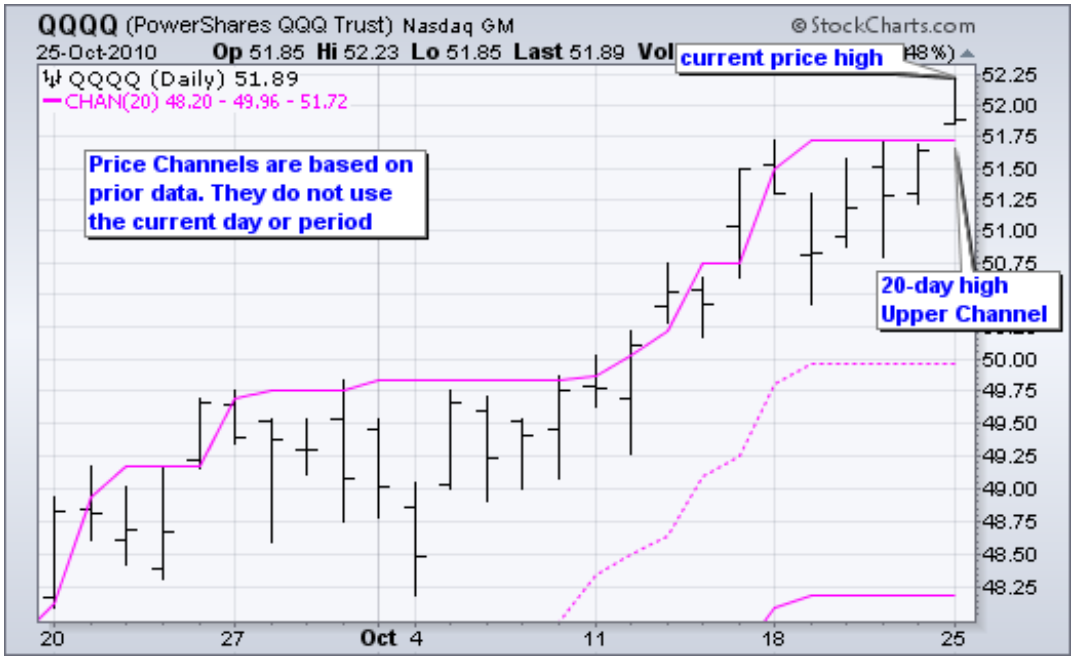
```
Upper Channel Line: 20-day high
Lower Channel Line: 20-day low
Centerline: (20-day high + 20-day low)/2
```



The formula above is based on a daily chart and a 20-period Price Channel, which is the default setting in SharpCharts. Price Channels can be used on intraday, daily, weekly or monthly charts. The look-back period (20) can be shorter or longer. Shorter look-back

periods, such as 10 days, produce tighter channel lines. Longer look-back periods produce wider channels.

The Price Channel formula does not include the most recent period. Price Channels are based on prices prior to the current period. A 20-day Price Channel for October 21 would be based on the 20-day high and 20-day low ending the day before, October 20. A channel break would not be possible if the most recent period was used. On the chart below, notice how prices broke above the upper price channel because the high was based on the next-to-the-last bar, not the current bar.



Interpretation

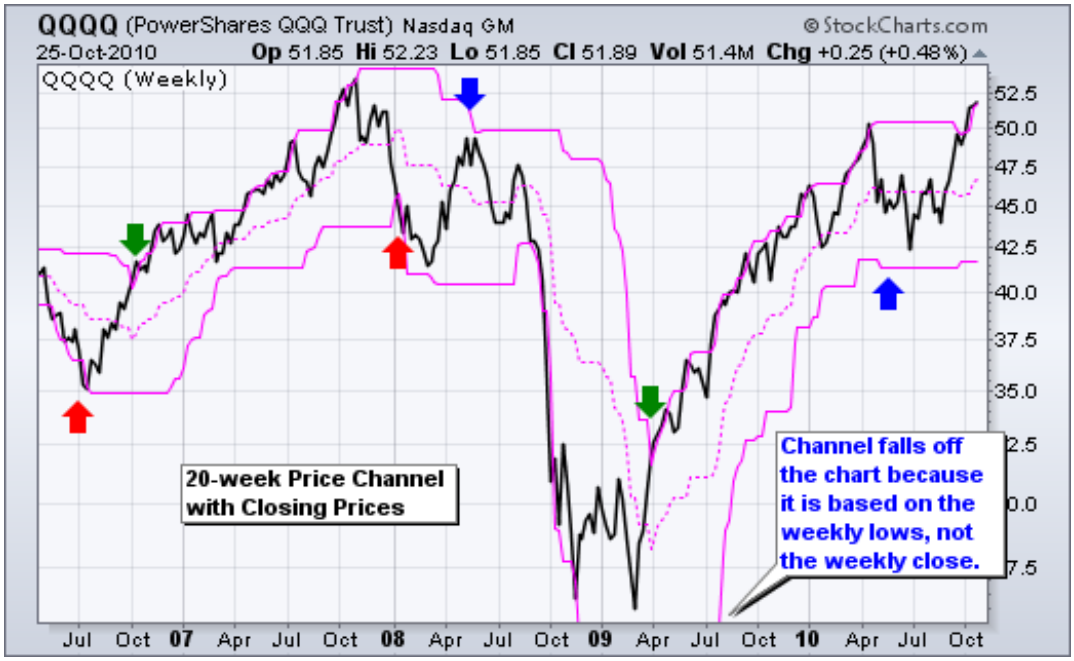
Price Channels can be used to identify trend reversals or overbought/oversold levels that denote pullbacks within a bigger trend. A surge above the upper channel line shows extraordinary strength that can signal the start of an uptrend. Conversely, a plunge below the lower channel line shows serious weakness that can signal the start of a downtrend. Once an uptrend has started, chartists can move to a shorter timeframe to identify pullbacks with oversold readings. A move below the lower channel line indicates oversold conditions that can foreshadow an end to the pullback. Similarly, short-term bounces within a bigger uptrend can be identified with Price Channels. A move above the upper channel line signals overbought conditions that can foreshadow an end to the bounce.

Trend Identification

Price Channels can be used to identify strong moves that may result in lasting trend reversals. Basically, a move above the 20-day Price Channel signals a new 20-day high. A move above the 20-week Price Channel signals a new 20-week high. Obviously, a 20-week high is more consequential than a 20-day high. The choice of timeframe depends on your trading timeframe and rationale for using Price Channels. For example, chartists can use weekly charts with 20-week Price Channels to determine the big trend and overall trading bias.

The chart above shows weekly prices for the Nasdaq 100 ETF (QQQQ) over a 4 1/2 year period. The green arrows mark weekly highs above the upper channel line that signaled the start of an uptrend. The red arrows mark weekly lows below the lower channel that signaled the start of a downtrend. These channel breaks caught a few good trends, but there were two whipsaws or bad signals. Indicator signals are not perfect and there will be whipsaws. It is just part of the game.

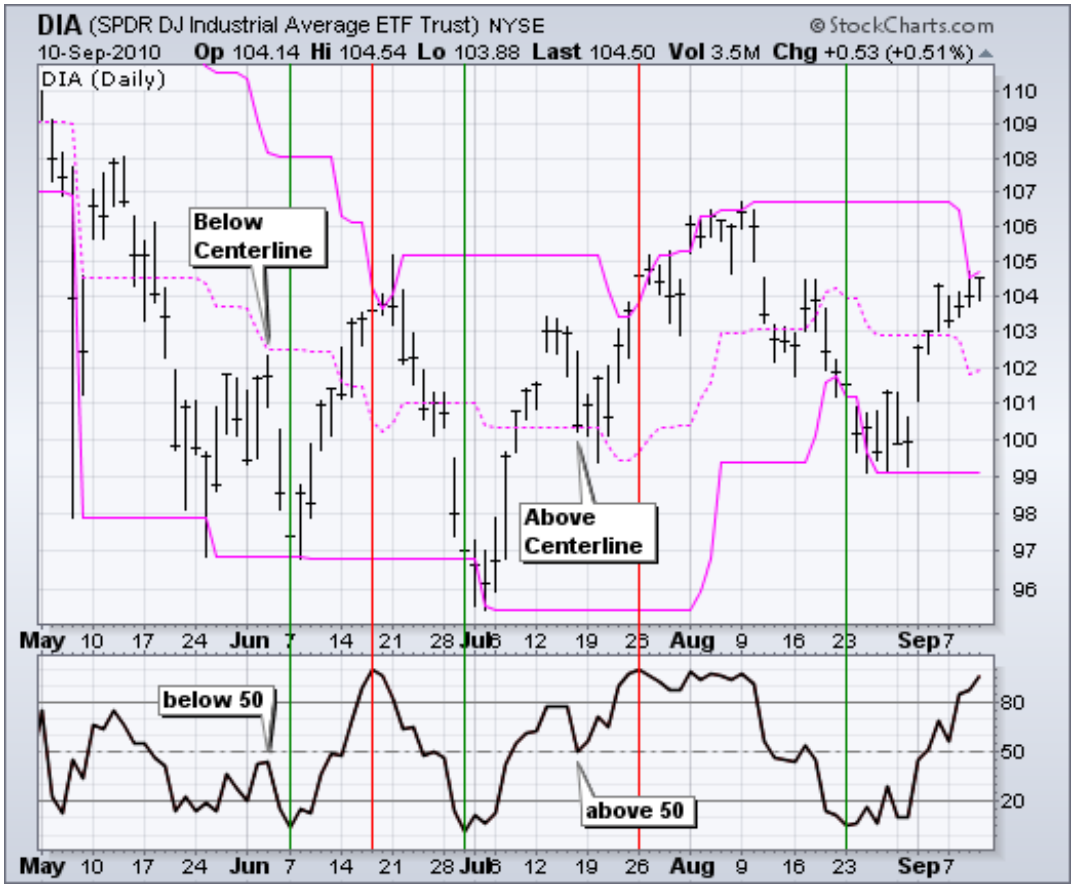
Signals can be filtered further by using a close-only line plot. The second chart shows the same 4 1/2 year period with 20-week Price Channels and QQQQ as a close-only line plot. This eliminates the intra-week highs and lows. Notice that QQQQ did not close above the upper channel line in May 2008 or below the lower channel line in May 2010 (blue arrows). Using a close-only price chart reduces volatility and signals.



Similar to Stochastics

Price Channels are similar to the Stochastic Oscillator when one considers what the Stochastic Oscillator measures. This momentum oscillator measures the level of the close relative to the high-low range over a given period of time, say 20 days. The Stochastic Oscillator is relatively high when the close is near the high end of its 20-day range and low when the Stochastic Oscillator is near the low end of this range. Put in numbers, the Stochastic Oscillator is relatively high above 80 and relatively low below 20.

Let's compare the 20-day Fast Stochastic Oscillator with 20-day Price Channels. The Stochastic Oscillator will usually be above 80 when prices exceed the upper Price Channel. Similarly, the 20-day Fast Stochastic Oscillator will usually be below 20 when prices move below the lower Price Channel. There is a slight timing difference because Price Channel data ends with the prior period. Stochastic Oscillator data, on the other hand, ends with the current period. This means the Stochastic Oscillator includes the most recent price action, but Price Channels do not. Nevertheless, the two measure pretty much the same thing.



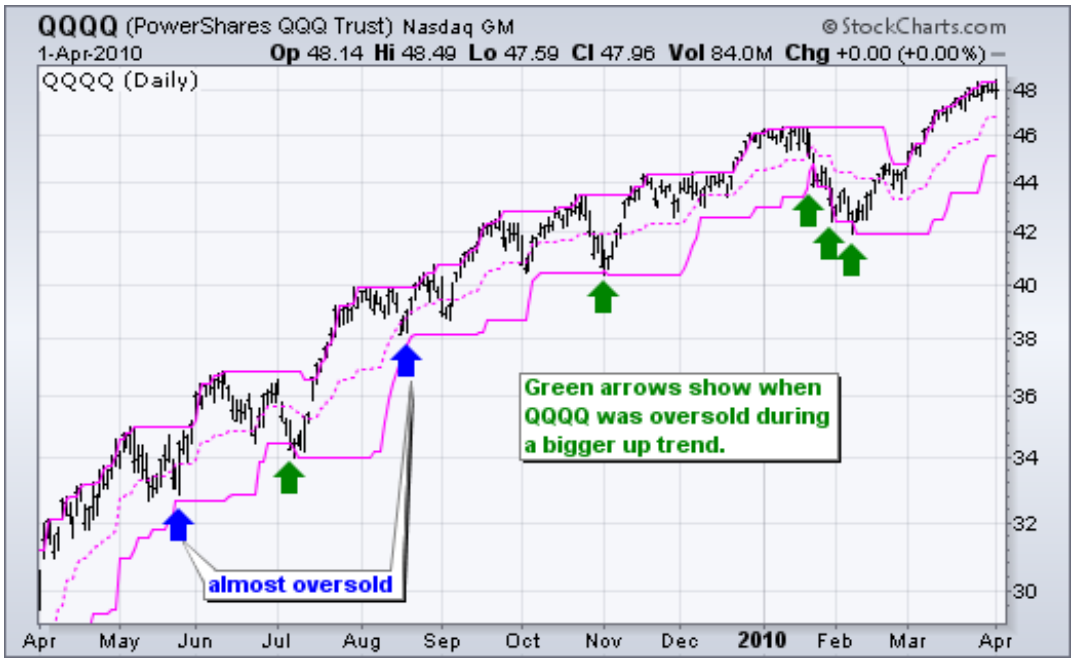
The Dow Industrials SPDR (DIA) chart shows 20-day Price Channels (pink) with the 20-day Fast Stochastic Oscillator. Prices are near the upper channel line when the Stochastic Oscillator is overbought (red lines). Prices are near the lower channel line when the Stochastic Oscillator is oversold (green lines). Prices are usually below the centerline of the Price Channel when the Stochastic Oscillator is below 50, which is its centerline (early June). Prices are usually above the centerline when the Stochastic Oscillator is above 50.

Overbought/Oversold

Measuring overbought and oversold conditions can be tricky with Price Channels. Securities can become overbought and remain overbought in a strong uptrend. Similarly, securities can become oversold and remain oversold in a strong downtrend. In a strong

uptrend, prices can move above the upper channel line and continue above the upper channel line. In fact, the upper channel trend line will rise as price continues above the upper channel. This may seem technically overbought, but it is a sign of strength to remain overbought. Similarly, the Stochastic Oscillator can move above 80, which is technically overbought, and remain overbought for an extended period.

Successful use of overbought and oversold levels depends on successful trend identification. Once a bigger uptrend has been identified, traders can look for oversold levels in the smaller trend. Short-term oversold levels occur after a pullback within a bigger uptrend. As noted above, the weekly charts turned bullish when QQQQ surged above the upper channel line. Once the weekly chart is bullish, traders can turn to the daily chart to look for oversold signals. The weekly chart represents the bigger trend. The daily chart represents the smaller trend.



The chart above shows daily prices for QQQQ. The bigger trend (weekly chart) is up so we would be looking for pullbacks on the daily chart. The green arrows show when QQQQ dipped below the 20-day Price Channel. There were two good signals in early July and early November. There were three touches in January-February. The first two signals were “early”, while the February signal was a direct hit.

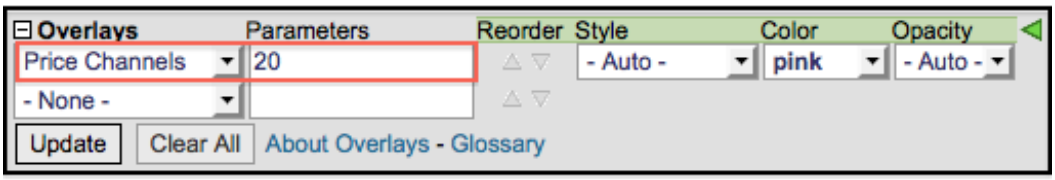
Inverse logic can be applied in downtrends. A weekly downtrend starts with a plunge below the lower channel line. Once this downtrend is established, chartists can turn to the daily chart to look for overbought signals. Overbought signals occur after a bounce within a bigger downtrend. Downtrends tend to be faster than uptrends. This means overbought readings may not occur during a strong or fast downtrend. Chartists may then need to tweak the Price Channel settings or use the centerline for signals. Prices are more likely to touch the centerline than the upper channel line.

Conclusions

Price Channels tells us when a security reaches an xx-period high or an xx-period low. 20-day Price Channels mark the 20-day high-low range, 10-week Price Channels mark the 10-week high-low range. The centerline marks the midpoint. Securities that continuously exceed the upper channel line show strength. After all, it takes strong buying pressure to forge higher highs. Conversely, securities that continuously break the lower channel line show weakness. Strong selling pressure is evident with lower lows. Using Price Channels, chartists can determine the dominant force, buying pressure or selling pressure. As with all indicators, it is important to use other analysis techniques to confirm or refute the Price Channels. Chartists can use chart patterns, indicators or basic chart analysis to complement Price Channels.

Using with SharpCharts

Price Channels can be found in SharpCharts as a price overlay and should be shown on top of a price plot. Upon selecting the indicator from the dropdown box, the default setting will appear in the parameters window (20). Users can change the parameters to suit their charting needs. A shorter look-back period will narrow the channels. A longer look-back period will widen the channels. Click here for a live example.



Suggested Scans

Oversold Bounce in Larger Uptrend

This scan starts with stocks that average $20 per share and 100,000 daily volume per day. An uptrend is present because the stock is trading above its 200-day SMA. The stock becomes oversold with a move below the Lower Price Channel and then turns up with a cross back above the Lower Price Channel.

```
[type = stock] AND [country = US]
AND [Daily SMA(20,Daily Volume) > 100000]
AND [Daily SMA(60,Daily Close) > 20]

AND [Daily Close > Daily SMA(200,Daily Close)]
AND [Daily Close crosses Daily Lower Price Chan(20)]
AND [Daily Close > Yesterday's Daily Close]
```

Overbought Decline in Larger Downtrend

This scan starts with stocks that average $20 per share and 100,000 daily volume per day. A downtrend is present because the stock is trading below its 200-day SMA. The stock becomes overbought with a move above the Upper Price Channel and then turns down with a cross back below the Upper Price Channel.

```
[type = stock] AND [country = US]
AND [Daily SMA(20,Daily Volume) > 100000]
AND [Daily SMA(60,Daily Close) > 20]

AND [Daily Close < Daily SMA(200,Daily Close)]
AND [Daily Upper Price Chan(20) crosses Daily Close]
AND [Daily Close < Yesterday's Daily Close]
```

For more details on the syntax to use for Price Channel scans, please see our Scanning Indicator Reference in the Support Center.

Further Study

Even though Price Channels are not used specifically in Trend Trading for a Living, it shows traders how to trade in the direction of the underlying trend. This hands-on book will also show readers how to configure a bullish and bearish watch list from which to set your entry and exit prices

Michael Covel's book introduces the fundamental concepts and techniques for a variety of trend following systems, including a system made famous by the Turtles. Covel shows why market prices contain all available information. Readers will learn how to interpret price movements and profit from trend following.