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## Trading in a range-bound market Potential QQQ support and resistance levels

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GREAT NECK, N.Y. (CBS.MW) -- Many technical analysts and others have commented on how stocks have spent an unusually long time confined to a relatively narrow range.

The QQQ trading strategy discussed here uses this observation, and a simple 21-day moving average, to suggest potential support and resistance levels for short-term trades.

[QQQ Nasdaq-100 Trust Snapshot](#)

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### Price channel

Since November 2003 the \$34.00 to \$34.50 range has been a support level for the QQQ ([QQQ: news, chart, profile](#)), which tracks the Nasdaq 100 Index ([NDX: news, chart, profile](#)). On occasions when the QQQ falls to \$34.50, long positions should be taken.

Since February 2004 the \$37.00 to \$37.50 area has been a resistance level for QQQ. Long positions should be closed above \$37.00.

The chart below shows how the QQQ has remained within the \$34.00 to \$37.50 price channel since October.



### Moving average bands

QQQ has not hit the channel borders very frequently, so it's desirable to have an additional trading strategy in place if you missed the most recent entry but still want to participate. Trading bands provide a potential solution.

The chart above shows the 21-day simple moving average and bands drawn 4 percent above and below the average. In a trading range environment, the upper trading band represents an overbought area. As a result, long positions should be closed when prices touch the upper band on an intra-day basis and then retreat to close below the upper band.

Conversely, when QQQ falls below the lower trading band on an intra-day basis and then recovers to close above the lower band, long positions should be opened.

Based last Wednesday's action of the QQQ, long positions should be in place.

## Defensive stops

The QQQ will not remain range-bound forever. A simple volatility measure provides an objective indicator of when a potential support or resistance level has been violated.

We calculate the daily absolute change in the QQQ (percent). For example, if the QQQ closed yesterday at \$35.00, then a 35-cent move up or down would count as a 1 percent move. The indicator plotted in the lower half of the chart above is a 21-trading-day average of the daily absolute moves (percent). The most recent reading shows the QQQ to have moved by an average of 1 percent per day during the past 21 trading days (approximately one month).

Here is how we use this volatility indicator to determine if a support level has been violated:

Step 1: Calculate the average absolute percentage move for the past 21 days. For the QQQ, it has been 1 percent.

Step 2: Calculate the prices that are below the support level by one day's and two days' average moves. For example, if the support level is \$34.00 and the average move has been 1 percent, then one day's move below support is \$33.66 and two days' average moves below support is \$33.32.

Step 3: Violation of support has occurred if the QQQ closes below support by twice the average daily move, or if it closes for two days in a row a day's average move below support.

Please note, with a 1 percent average daily move and a support level of \$34.00, the sell stop would be triggered if the QQQ closes below \$33.66 for two days in a row, or below \$33.32 on any one day. In this case, the trading range has been ended, so you should close out long positions and re-evaluate the market climate before taking a new position.

## Conclusion

Based on the action of the QQQ as of last Wednesday, long positions should be in place.

Even though the price channel and trading band calculations are precise, the actual decision on when to take or close positions retains an element of subjectivity. Although I have suggested a particular criterion for placing stop-loss orders, your own risk tolerance may dictate using tighter stops.

### *Disclaimers*

*1. The strategies here have not been back tested, but are recommended solely on the basis of our reasoned judgment. No performance results can be guaranteed.*

*2. Investing in QQQ under any strategy entails a high degree of risk, and should be undertaken only by suitable investors. Appel Asset Management is not advising the use of QQQ for any individual portfolio, which is a decision that can be made only on a case-by-case basis.*

*3. Appel Asset Management and its personnel may already have taken or may in the future take positions in QQQ*

*for our clients or for our own accounts. Dr. Marvin Appel has positions in QQQ.*

*For a more comprehensive review on the use of trading bands, read "Using Moving Average Trading Bands to Call Tomorrow's Turns by Yesterday's Market Action."[\(SystemsandForecasts.com\)](#)*

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