



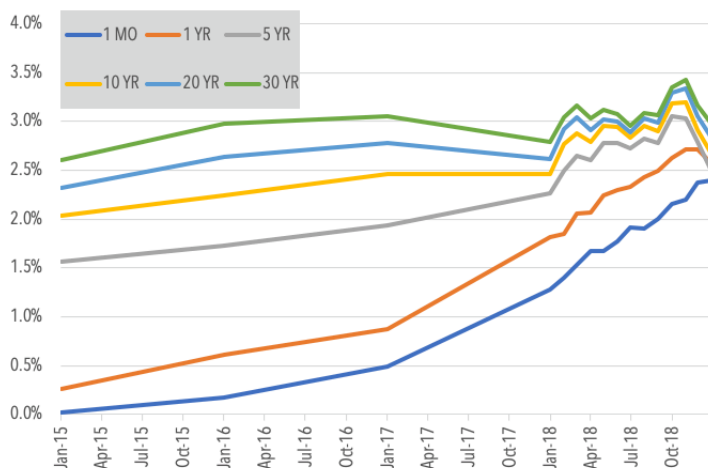
Cherry Picks

tastytrade's Quantitative Newsletter for Traders

January 9, 2019

Options involve risk and are not suitable for all investors. Please read [Characteristics and Risks of Standardized Options](#) before deciding to invest.

	Jan 2015	Jan 2016	Jan 2017	Jan 2018	Feb 2018	Mar 2018	Apr 2018	May 2018	Jun 2018	Jul 2018	Aug 2018	Sep 2018	Oct 2018	Nov 2018	Dec 2018	Jan 2019
1 MO	0.0%	0.2%	0.5%	1.3%	1.4%	1.5%	1.7%	1.7%	1.8%	1.9%	1.9%	2.0%	2.2%	2.2%	2.4%	2.4%
1 YR	0.3%	0.6%	0.9%	1.8%	1.9%	2.1%	2.1%	2.2%	2.3%	2.3%	2.4%	2.5%	2.6%	2.7%	2.7%	2.6%
5 YR	1.6%	1.7%	1.9%	2.3%	2.5%	2.7%	2.6%	2.8%	2.8%	2.7%	2.8%	2.8%	3.1%	3.0%	2.8%	2.5%
10 YR	2.0%	2.2%	2.5%	2.5%	2.8%	2.9%	2.8%	3.0%	2.9%	2.8%	3.0%	2.9%	3.2%	3.2%	2.9%	2.7%
20 YR	2.3%	2.6%	2.8%	2.6%	2.9%	3.0%	2.9%	3.0%	3.0%	2.9%	3.0%	3.0%	3.3%	3.3%	3.1%	2.8%
30 YR	2.6%	3.0%	3.1%	2.8%	3.0%	3.2%	3.0%	3.1%	3.1%	3.0%	3.1%	3.1%	3.4%	3.4%	3.2%	3.0%



Rates

In the table above, we included the yields on 1 month, 1, 5, 10, 20 and 20 year bonds and show how they have changed over the past few years and months. Notice the flattening that has occurred; as the Fed has increased the Fed Funds Rate, the short-term rates have increased while the long-term rates have stayed relatively stable.

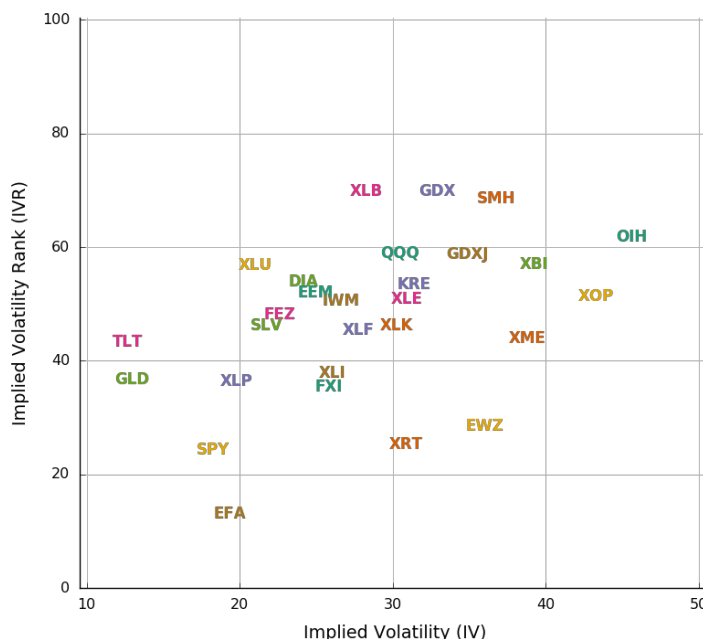
The advantage to all of this? You can now get a decent return in 1 to 3 month CDs – and while longer-maturity bonds receive higher percentages, you are locking in money for a considerably longer period – just not worth going out more than a year.

High IV / IV Rank Popular ETFs

Oil Services (**OIH**) has high IV Rank and high option premium; similar story behind Oil and Natural Gas Production (**XOP**). Semiconductors (**SMH**) is also seeing high volatility – one of its larger components Nvidia (**NVDA**) has seen its price decrease by 50% over the past few months.

Materials (**XLB**) and Utilities (**XLU**) both have seen higher implied volatility rank.

Michael Rechenin, PhD
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Upcoming Earnings



Upcoming Earnings

Symbol	Description	Expected Report Date	Time of Day	Weekly Options	In Dow?	In S&P 500?	In tastytrade Watchlist?	Div. Yield (%)
LEN	Lennar Corp	Wed Jan-09	Before Open	-	-	Yes	-	0.28
BBBY	Bed Bath & Beyond	Wed Jan-09	After Close	Yes	-	Yes	-	2.86
DAL	Delta Air Lines Inc	Thu Jan-10	n/a	Yes	-	Yes	-	2.4
C	Citigroup Inc	Mon Jan-14	Before Open	Yes	-	Yes	Yes	1.73
WFC	Wells Fargo & Company	Tue Jan-15	Before Open	Yes	-	Yes	-	2.8
UNH	Unitedhealth Group	Tue Jan-15	Before Open	Yes	Yes	Yes	-	1.43
JPM	JP Morgan Chase & Co	Tue Jan-15	Before Open	Yes	Yes	Yes	-	2.2
BAC	Bank of America Corp	Wed Jan-16	Before Open	Yes	-	Yes	-	1.73
BLK	Blackrock	Wed Jan-16	Before Open	Yes	-	Yes	-	2.11
GS	Goldman Sachs Group	Wed Jan-16	Before Open	Yes	Yes	Yes	Yes	1.24
USB	U.S. Bancorp	Wed Jan-16	Before Open	Yes	-	Yes	-	2.22
CSX	CSX Corp	Wed Jan-16	After Close	Yes	-	Yes	Yes	1.53
KMI	Kinder Morgan	Wed Jan-16	n/a	Yes	-	Yes	-	2.78
MS	Morgan Stanley	Thu Jan-17	Before Open	Yes	-	Yes	-	1.97
NFLX	Netflix Inc	Thu Jan-17	After Close	Yes	-	Yes	Yes	0
AXP	American Express Company	Thu Jan-17	After Close	Yes	Yes	Yes	-	1.46
IBM	International Business Machines	Thu Jan-17	n/a	Yes	Yes	Yes	Yes	3.9



Current Market Outlook



30-Day Expected Range Plots – The colored cone represents a 30-day expected theoretical price range that is calculated from the options' implied volatilities. In theory, we expect that prices will stay, with a 68% probability, within the boundary of the cone.

SPDR S&P 500
IV: 21
IV Rank: 24 (Low)
Estimated Liquidity: Great

SPY



iShares 20+ Year Treasury Bond ETF
IV: 12
IV Rank: 42 (Moderately Low)
Estimated Liquidity: Great
Correlation with S&P 500: -0.52

TLT



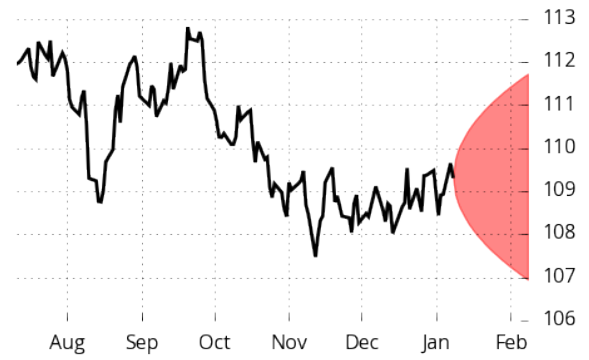
iShares Russell 2000 ETF
IV: 25
IV Rank: 50 (Moderately Low)
Estimated Liquidity: Great
Correlation with S&P 500: 0.91

IWM



Invesco CurrencyShares Euro Currency Trust
IV: 7
IV Rank: 28 (Moderately Low)
Estimated Liquidity: Good
Correlation with S&P 500: 0.01

FXE



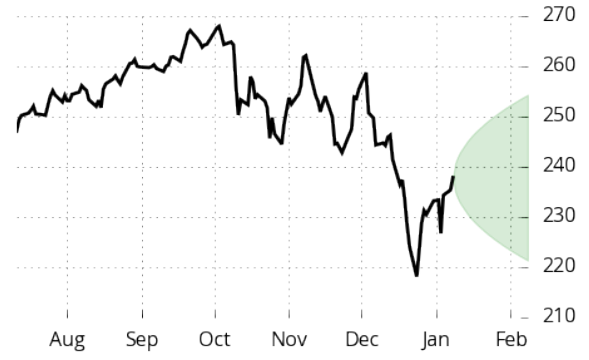
Invesco QQQ Trust, Series 1
IV: 29
IV Rank: 58 (Moderately High)
Estimated Liquidity: Great
Correlation with S&P 500: 0.95

QQQ



SPDR Dow Jones Industrial Average ETF
IV: 23
IV Rank: 53 (Moderately High)
Estimated Liquidity: Good
Correlation with S&P 500: 0.98

DIA





Current ETF Watchlist



30-Day Expected Range Plots – The colored cone represents a 30-day expected theoretical price range that is calculated from the options' implied volatilities. In theory, we expect that prices will stay, with a 68% probability, within the boundary of the cone.

VanEck Vectors Oil Services ETF
IV: 44
IV Rank: 61 (Moderately High)
Estimated Liquidity: Great
Correlation with S&P 500: 0.66

OIH



VanEck Vectors Semiconductor ETF
IV: 35
IV Rank: 67 (Moderately High)
Estimated Liquidity: Great
Correlation with S&P 500: 0.86

SMH



SPDR Select Sector Fund Utilities
IV: 20
IV Rank: 56 (Moderately High)
Estimated Liquidity: Great
Correlation with S&P 500: 0.28

XLU



SPDR Select Sector Fund Technology
IV: 29
IV Rank: 45 (Moderately Low)
Estimated Liquidity: Great
Correlation with S&P 500: 0.95

XLK



Materials Select Sector SPDR
IV: 27
IV Rank: 69 (Moderately High)
Estimated Liquidity: Good
Correlation with S&P 500: 0.89

XLB



iShares MSCI Emerging Index Fund
IV: 24
IV Rank: 51 (Moderately High)
Estimated Liquidity: Great
Correlation with S&P 500: 0.78

EEM





Current Stock Watchlist



30-Day Expected Range Plots – The colored cone represents a 30-day expected theoretical price range that is calculated from the options' implied volatilities. In theory, we expect that prices will stay, with a 68% probability, within the boundary of the cone.

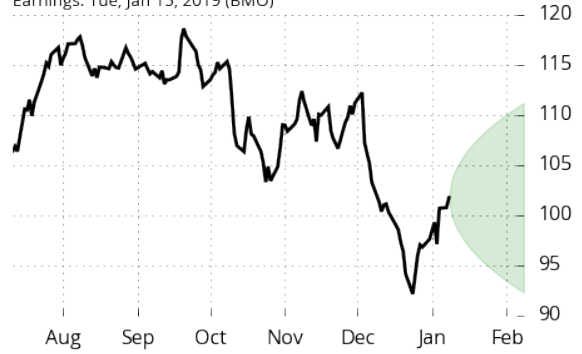
Bed Bath & Beyond
IV: 99
IV Rank: 51 (Moderately High)
Estimated Liquidity: Great
Correlation with S&P 500: 0.33
Earnings: Wed, Jan 09, 2019 (AMC)

BBBY



JP Morgan Chase & Co.
IV: 31
IV Rank: 53 (Moderately High)
Estimated Liquidity: Great
Correlation with S&P 500: 0.81
Earnings: Tue, Jan 15, 2019 (BMO)

JPM



Delta Air Lines
IV: 39
IV Rank: 61 (Moderately High)
Estimated Liquidity: Great
Correlation with S&P 500: 0.57
Earnings: Thu, Jan 10, 2019

DAL



Bank of America
IV: 35
IV Rank: 54 (Moderately High)
Estimated Liquidity: Great
Correlation with S&P 500: 0.79
Earnings: Wed, Jan 16, 2019 (BMO)

BAC



Citigroup
IV: 39
IV Rank: 54 (Moderately High)
Estimated Liquidity: Great
Correlation with S&P 500: 0.82
Earnings: Mon, Jan 14, 2019 (BMO)

C



Goldman Sachs Group
IV: 37
IV Rank: 53 (Moderately High)
Estimated Liquidity: Good
Correlation with S&P 500: 0.79
Earnings: Wed, Jan 16, 2019 (BMO)

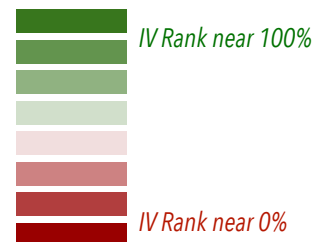
GS



Reading this Report

Expected Range Cone. The colored cone represents a 30-day expected theoretical price range that is calculated from the options' implied volatilities. If the implied volatility is relatively high, then the market is expecting a larger price change in the underlying stock or ETF. From this we can derive the market's 1 standard deviation theoretical expectation of where prices might be in the future. In other words, the market is expecting, with a 68% theoretical probability, that prices will fall within the boundary of the cone at the end of 30 days.

Cone Color. The color of the cone is significant. The darker the color, the more "extreme" the implied volatility (IV) which is represented by implied volatility rank (IV Rank). This information can help you decide on a trading strategy.



Glossary

IV. Implied Volatility is the estimated volatility of a security's price derived from its option price; the higher the IV, the more expensive the option and therefore the larger the expected price move. IV is an annualized number of volatility, e.g. a IV of 27 means the option's market is pricing in an annualized price range, either plus or minus, of 27%.

IV Rank. IV by itself doesn't tell us if the volatility is high or low - but IV Rank does. An IV Rank of 70 means that the IV is 70% between its low and high IV over the past year. The higher the IV Rank, the higher the security's IV is compared to its past year. We provide six levels to make evaluating easier:

- **Extremely High:** IV Rank between 90 and 100
- **High:** IV Rank between 75 and 90
- **Moderately High:** IV Rank between 50 and 75
- **Moderately Low:** IV Rank between 25 and 50
- **Low:** IV Rank between 10 and 25
- **Extremely Low:** IV Rank between 0 and 10

Option Liquidity. At tastytrade we have our own theoretical measure of option liquidity, Poor, Moderate, Good, or Great. It examines the options' bid/ask spread, open interest, and the number of strikes with non-zero bids.

Correlation with S&P 500. Correlation is a statistical measure of how strong a relationship two securities have with one another. A correlation of -1 means the stocks are perfectly negatively correlated (they move in opposite directions), while a correlation of +1 means the stocks are perfectly positively correlated (they move in the same direction). A correlation of 0 means there exist little relationship.

Earnings. The earnings date of the security. In practice we tend to see stocks have a larger amount of implied volatility (IV) nearer to earnings as the market is pricing in the fear of the upcoming earnings announcement. In parenthesis, is BTO or AMC; "Before the Open" or "After Market Closes", respectively. Upcoming earnings dates do sometimes change.

Disclosures

Options involve risk and are not suitable for all investors. Please read Characteristics and Risks of Standardized Options before deciding to invest in options: <https://www.theocc.com/components/docs/riskstoc.pdf>

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