



Lesson 12

Technical Analysis

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Course Description

Learn what technical analysis entails and the various ways to analyze the markets using this type of analysis

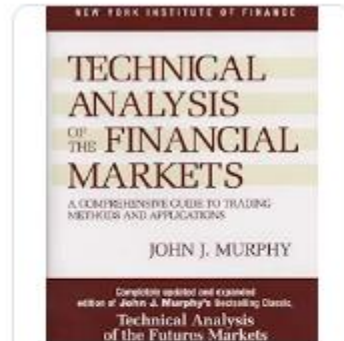
Lessons and Learning Objectives

- Define technical analysis
- Explore the history of technical analysis
- Examine the accuracy of technical analysis
- Compare technical analysis to fundamental analysis
- Outline different types of technical studies
- Study tools and systems which provide technical analysis

What is Technical Analysis

Short Description: Using the past to predict the future

Long Description: A way to analyze securities price patterns, movements, and trends to extrapolate the ranges of potential future prices

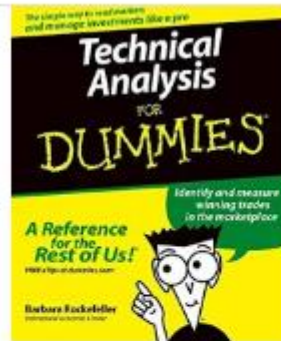


Technical Analysis of the Financial Markets: A Comprehensive...

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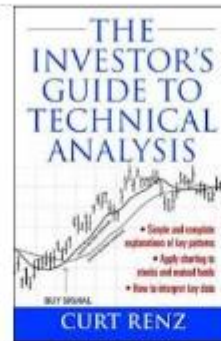
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Technical Analysis for Dummies by Barbara Rockefeller - Used...

\$6.59 used

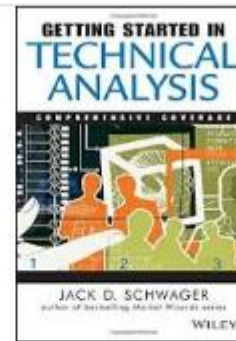
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The Investor's Guide to Technical Analysis by Curt Renz - Used...

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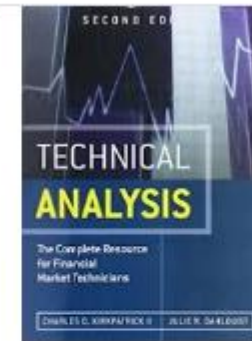


Getting Started in Technical Analysis by Jack D. Schwager - ...

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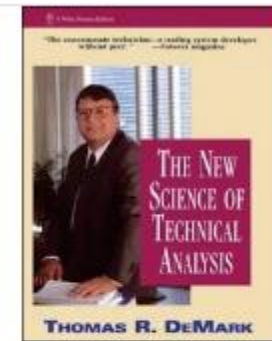


Technical Analysis: The Complete Resource for Financi...

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The New Science of Technical Analysis

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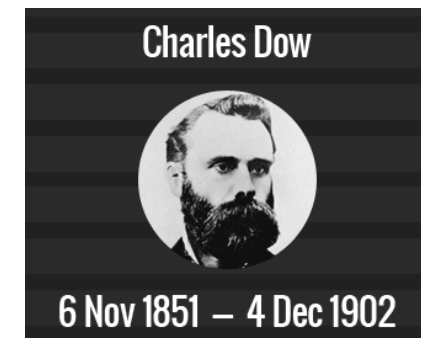
SecondSale

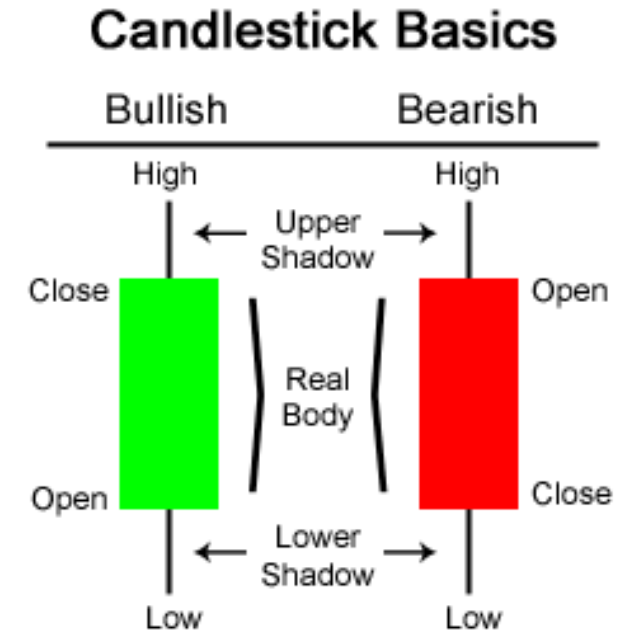
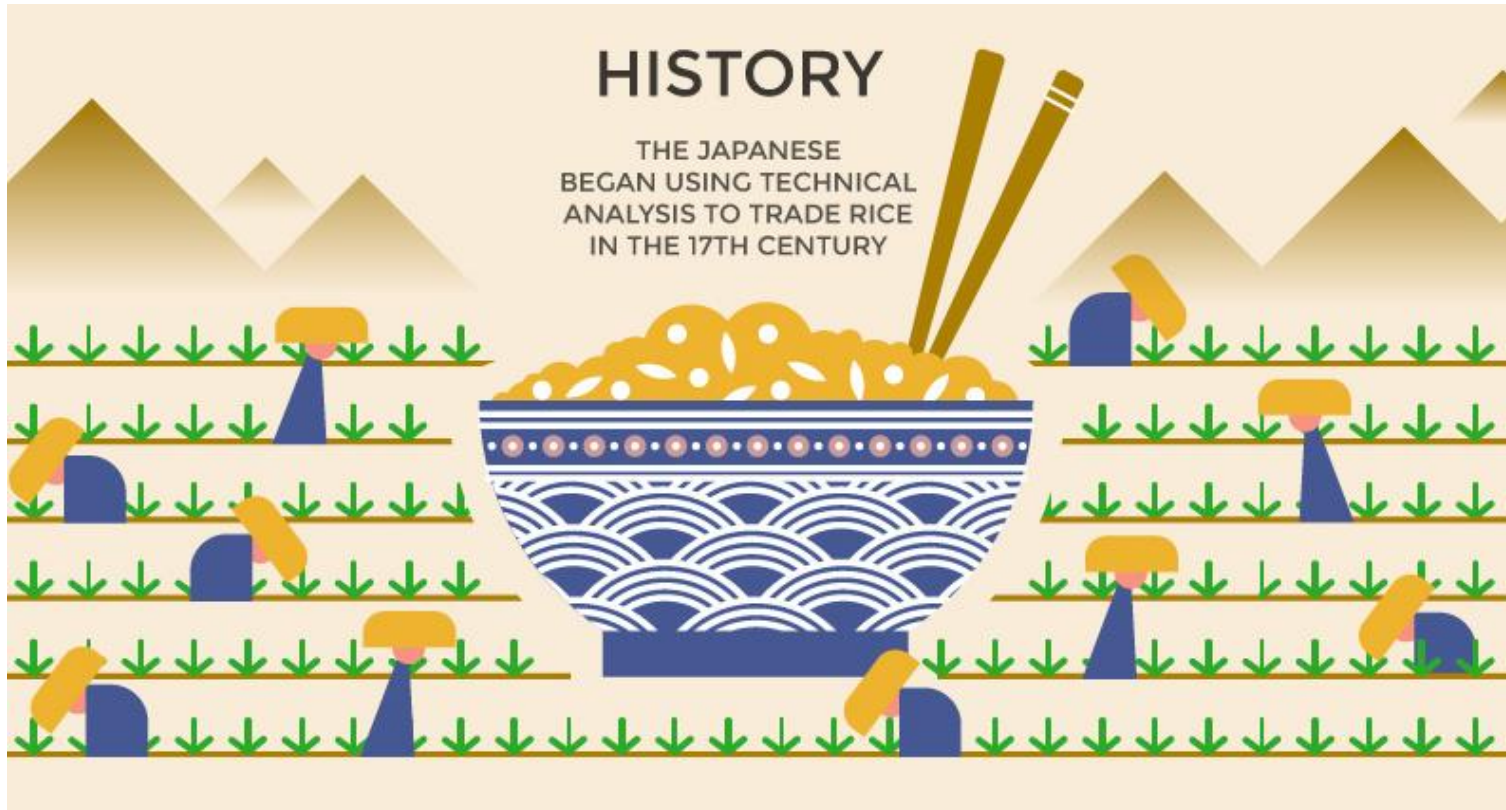
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History of Technical Analysis

The principles of technical analysis are derived from hundreds of years of financial market data. Some aspects of technical analysis began to appear in Amsterdam-based merchant Joseph de la Vega's accounts of the Dutch financial markets in the 17th century. In Asia, technical analysis is said to be a method developed by Homma Munehisa during the early 18th century which evolved into the use of candlestick techniques, and is today a technical analysis charting tool. In the 1920s and 1930s, Richard W. Schabacker published several books which continued the work of Charles Dow and William Peter Hamilton in their books *Stock Market Theory and Practice* and *Technical Market Analysis*. In 1948, Robert D. Edwards and John Magee published *Technical Analysis of Stock Trends* which is widely considered to be one of the seminal works of the discipline. It is exclusively concerned with trend analysis and chart patterns and remains in use to the present. Early technical analysis was almost exclusively the analysis of charts because the processing power of computers was not available for the modern degree of statistical analysis. Charles Dow reportedly originated a form of point and figure chart analysis. With the emergence of behavioral finance as a separate discipline in economics, Paul V. Azzopardi combined technical analysis with behavioral finance and coined the term "Behavioral Technical Analysis".

Dow theory is based on the collected writings of Dow Jones co-founder and editor Charles Dow, and inspired the use and development of modern technical analysis at the end of the 19th century. Other pioneers of analysis techniques include Ralph Nelson Elliott, William Delbert Gann and Richard Wyckoff who developed their respective techniques in the early 20th century. More technical tools and theories have been developed and enhanced in recent decades, with an increasing emphasis on computer-assisted techniques using specially designed computer software.







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About

The CMT Association is a global credentialing body with nearly 50 years of service to the financial industry. The Chartered Market Technician® (CMT) designation marks the highest education within the discipline and is the preeminent designation for practitioners of technical analysis worldwide. Our market philosophy is grounded in behavioral economics and extends beyond classical pattern recognition techniques to include quantitative approaches to market research and rules-based trading system design and testing.

Technical analysis provides the tools to successfully navigate the gap between intrinsic value and market price across all asset classes through a disciplined, systematic approach to market behavior and the law of supply and demand.

Earning the CMT demonstrates mastery of a core body of knowledge of investment risk in portfolio management. Our continued commitment to the global members of the CMT Association and prospective new members creates a multitude of continuing education opportunities through daily, monthly, and annual publications, online webcasts, seminars, and live events which further enhance our unique capacity to advance the discipline of technical analysis among industry professionals.



Can Technical Analysis Predict the Future

www.tradingwithrayner.com › [does-technical-analysis-...](#) ▼

Does Technical Analysis Work? (It's not what you think)

Dec 29, 2018 - "Is **Technical Analysis** all I need to become a profitable trader?" Now: You might say Yes because everything you need to know is on a price chart ...

seekingalpha.com › [article](#) › [4128813-why-technical-a...](#) ▼

Why Technical Analysis Is Useless | Seeking Alpha

Nov 30, 2017 - On an intraday basis, **technical analysis** is actually quite **useful**. But I doubt few of you engage in this hopeless persuasion. Leave it for the kids.

www.nasdaq.com › [articles](#) › [which-more-important-tec...](#) ▼

Which Is More Important, Technical Or Fundamental Analysis ...

Apr 5, 2017 - In general, fundamental analysis is more **useful** for long term trades and investments, whereas **technical analysis** is more **useful** from a short ...

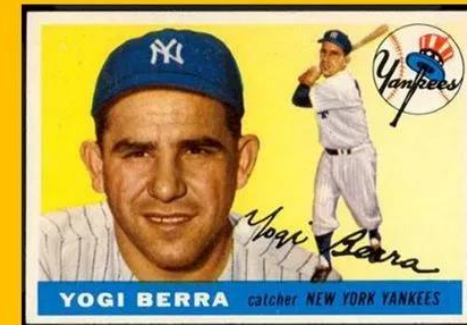
finance.yahoo.com › [news](#) › [why-technical-analysis-wo...](#) ▼

Why Technical Analysis Works - Yahoo Finance

Apr 27, 2019 - **Technical analysis** is one of the most widely used trading tools on Wall Street, but it is also one of the most controversial. Technical traders ...



"It's tough to make predictions, especially about the future."



Fundamental Analysis vs. Technical Analysis

Fundamental Analysis:

Fundamental analysis is a method of evaluating securities by attempting to measure the intrinsic value of a stock.

Fundamental analysts study everything from the overall economy and industry conditions to the financial condition and management of companies. Earnings, expenses, assets, and liabilities are all important characteristics to fundamental analysts.

Technical Analysis:

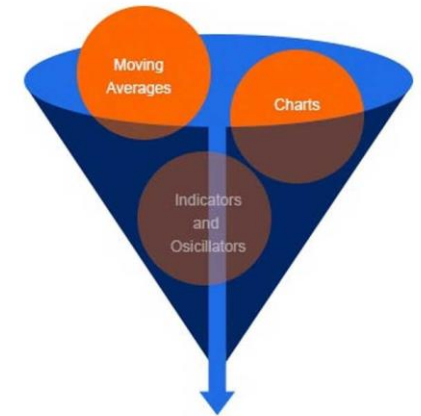
Technical analysis differs from fundamental analysis in that the stock's price and volume are the only inputs. The core assumption is that all known fundamentals are factored into the price, thus there is no need to pay close attention to them. Technical analysts do not attempt to measure a security's intrinsic value, but, instead, use stock charts to identify patterns and trends that suggest what a stock will do in the future.

Fundamental Analysis



VS

Technical Analysis



Trend Indicators:

These technical indicators measure the direction and strength of a trend by comparing prices to an established baseline.

Momentum Indicators:

These technical indicators may identify the speed of price movement by comparing the current closing price to previous closes.

Volatility Indicators:

These technical indicators measure the rate of price movement, regardless of direction.

Volume Indicators:

These technical indicators measure the strength of a trend based on volume of shares traded.

1

TREND INDICATORS

Measure the direction and strength of a trend, using some form of price averaging to establish a baseline. As price moves above the average, it can be thought of as a bullish trend. When prices fall below the average, it signals a bearish trend.



	LEADING	LAGGING
<p>MOVING AVERAGES</p> <p><i>Are used to identify current trends and trend reversals, as well as to set up support and resistance levels.</i></p>		✓
<p>MOVING AVERAGE CONVERGENCE DIVERGENCE (MACD)</p> <p><i>Used to reveal changes in the strength, direction, momentum and duration of a trend in a stock's price.</i></p>		✓
<p>PARABOLIC STOP AND REVERSE (PARABOLIC SAR)</p> <p><i>Used to find potential reversals in the market price direction.</i></p>	✓	


2

MOMENTUM INDICATORS



Help identify the speed of price movement by comparing prices over time. It can also be used to analyze volume. It is calculated by comparing the current closing price to previous closing prices. Typically, this appears as a line below a price chart that oscillates as momentum changes. When there is a divergence between price and a momentum indicator, it can signal a change in future prices.

	LEADING	LAGGING
STOCHASTIC OSCILLATOR <i>Used to predict price turning points by comparing the closing price to its price range.</i>	✓	
COMMODITY CHANNEL INDEX (CCI) <i>An oscillator to help identify price reversals, price extremes and trend strength.</i>	✓	
RELATIVE STRENGTH INDEX (RSI) <i>It measures the stock's recent trading strength, velocity of a change in the trend and magnitude of the move.</i>	✓	




3

VOLATILITY INDICATORS

Measure the rate of price movement, regardless of direction. This is generally based on a change in the highest and lowest historical prices. They provide useful information about the range of buying and selling that take place in a given market and help traders determine points where the market may change direction.

	LEADING	LAGGING
<p>BOLLINGER BANDS Used to measure the "highness" or "lowness" of the price, relative to previous trades.</p>		✓
<p>AVERAGE TRUE RANGE The indicator does not provide an indication of price trend, simply the degree of price volatility.</p>		✓
<p>STANDARD DEVIATION Used to measure expected risk and determine the significance of certain price movements.</p>		✓



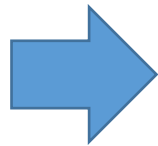
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VOLUME INDICATORS

Measure the strength of a trend or confirm a trading direction based on some form of averaging or smoothing of raw volume. The strongest trends often occur while volume increases; in fact, it is the increase in trading volume that can lead to large movements in price.

	LEADING	LAGGING
<p>CHAIKIN OSCILLATOR Monitors the flow of money in and out of the market - comparing money flow to price action helps to identify tops and bottoms in short and intermediate cycles.</p>	✓	
<p>ON-BALANCE VOLUME (OBV) On Balance Volume attempts to measure the level of accumulation or distribution by comparing volume to price movements.</p>	✓	
<p>VOLUME RATE OF CHANGE Highlights increases in volume, which normally occur at most significant market tops, bottoms and breakouts.</p>		✓

So Many Types of Studies

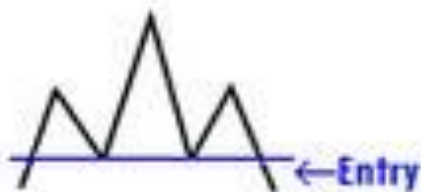


1) Create Study
2) SDK & Docs ▾
Technical Study Browser

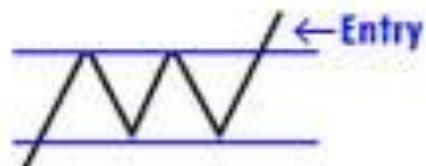
Find a Study by title or keyword 3) Clear

Tags	All standard studies (103)	Run	Acc/Dist Oscillator
<ul style="list-style-type: none"> ▾ All standard studies (103) Popular (14) New (17) Bloomberg (13) Momentum/Oscillators (34) Moving Avgs/Bands (34) Patterns (12) Statistical (23) Support Resistance (15) Trend Analysis (17) ▶ 3rd Party Studies (181) ▶ User Defined 	<ul style="list-style-type: none"> Acc/Dist Oscillator Accumulation Advance/Decline Line Aroon Oscillator Asymmetrical Vol Bands ATPR Trendline ATPR U-Shaped ATPR V-Shaped HiLo ATPR V-Shaped Trend Break Auto Regression Bands Average Line Average True Range Binary Patterns Bollinger Bands Calendar Average Candle Patterns Candle Sessions Chaikin Money Flow Chaikin Oscillator Chameleon Oscillator Chameleon Trend Color Volume Bars 	<ul style="list-style-type: none"> GPO ADO GPO ACCUM GPO ADL GPO AROON GPO ASVB GPO ATTL GPO ATUS GPO ATVHL GPO ATVS GPO AUTOR GPO AVGL GPO ATR GPO BPRTN BOLL GPO CALMA GPO CNDL GPO CSESS GPO CKMF GPO CHKO GPO CHAMO GPO TCHAM GPO COLRV 	<div style="background-color: #2c3e50; color: white; padding: 5px; margin-bottom: 5px;"> ▲ Acc/Dist Oscillator </div>  <p style="color: #f1c40f; font-size: 0.9em;"> The Accumulation/Distribution Oscillator (ADO) is a study that measures the buying or selling pressures on an instrument, based solely on the relationships of the open, high, low and close values. </p> <p style="text-align: right; color: #f1c40f;">6) More »</p> <p style="color: #f1c40f; font-size: 0.9em;"> Also listed in Momentum/Oscillat... </p> <div style="text-align: right; color: #f1c40f; font-size: 0.8em;"> Edit Defaults </div> <div style="background-color: #2c3e50; color: white; padding: 5px; margin-top: 5px;"> Historical 4) GPO ADO Intraday 5) IGPO ADO </div>

Basis Chart Patterns



Head & Shoulder



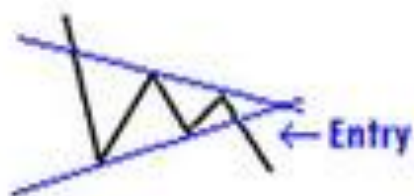
Rectangle



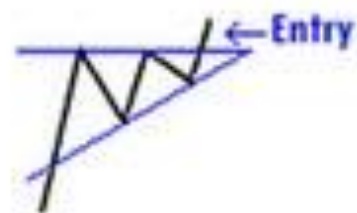
Pennant



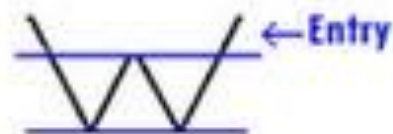
Flag



Symmetrical Triangle



Ascending Triangle



Double Bottom



Double Top

Trend: Moving Average



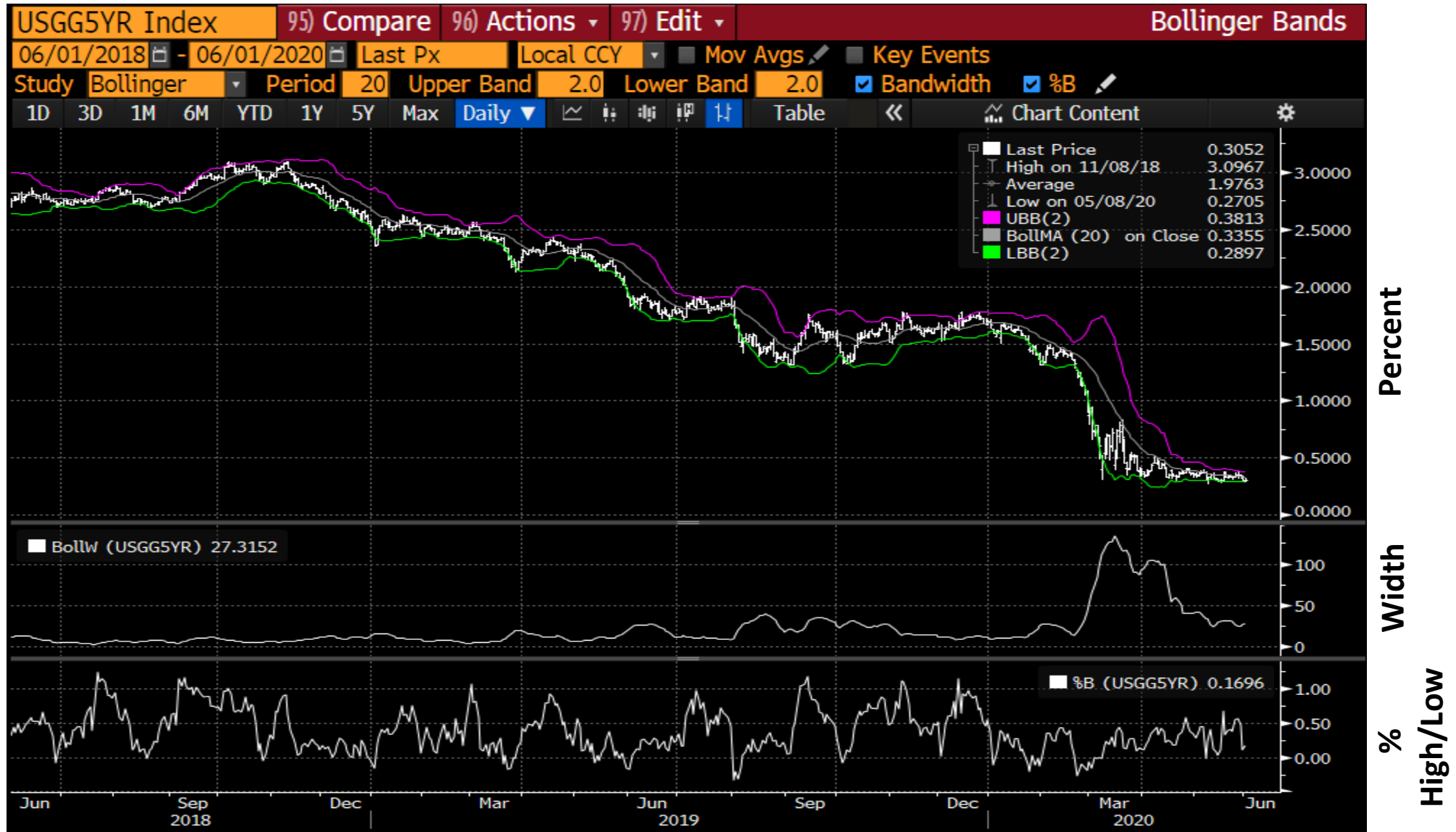
Trend: MACD (Moving Average Convergence/Divergence)



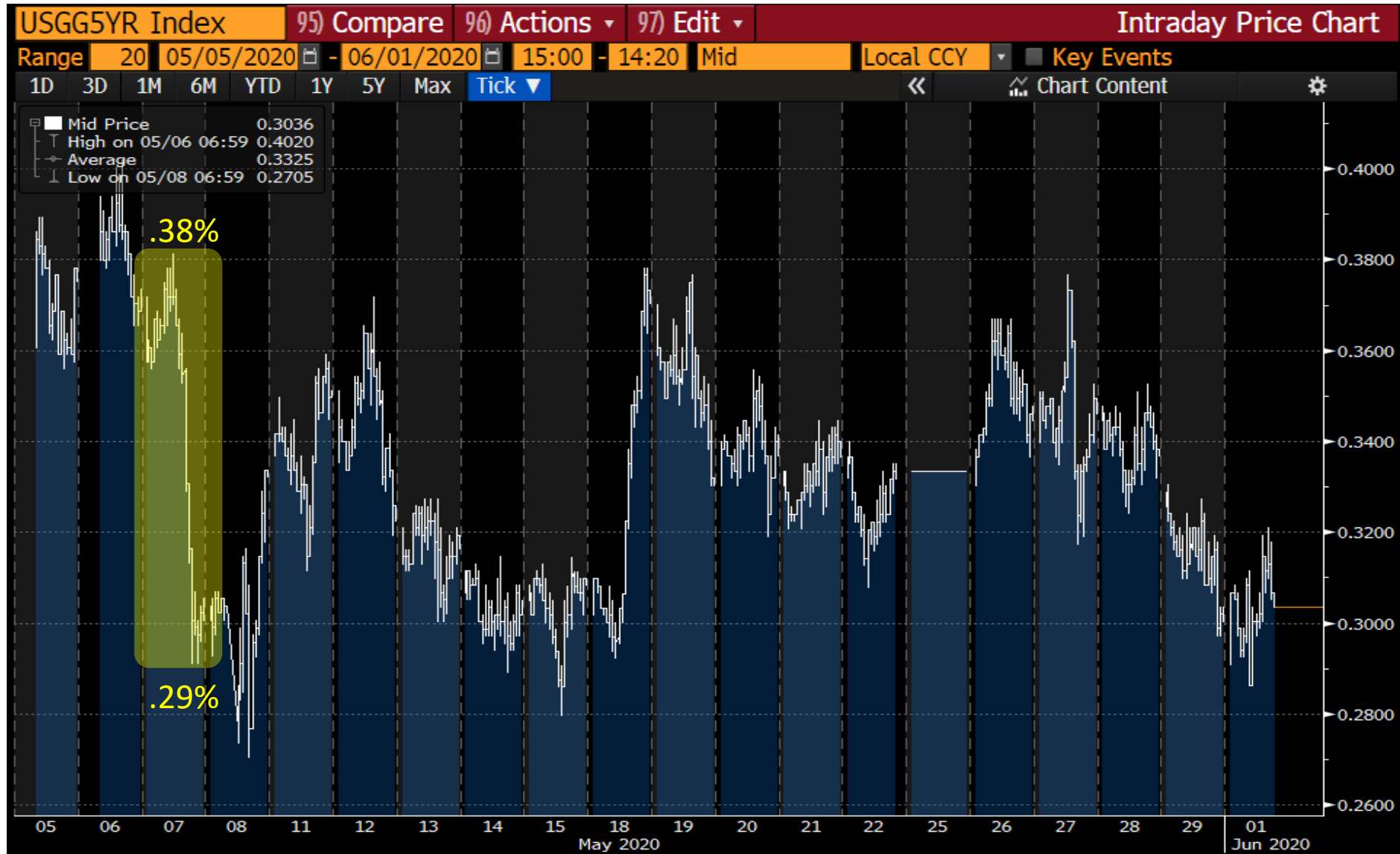
Momentum: RSI (Relative Strength Index)



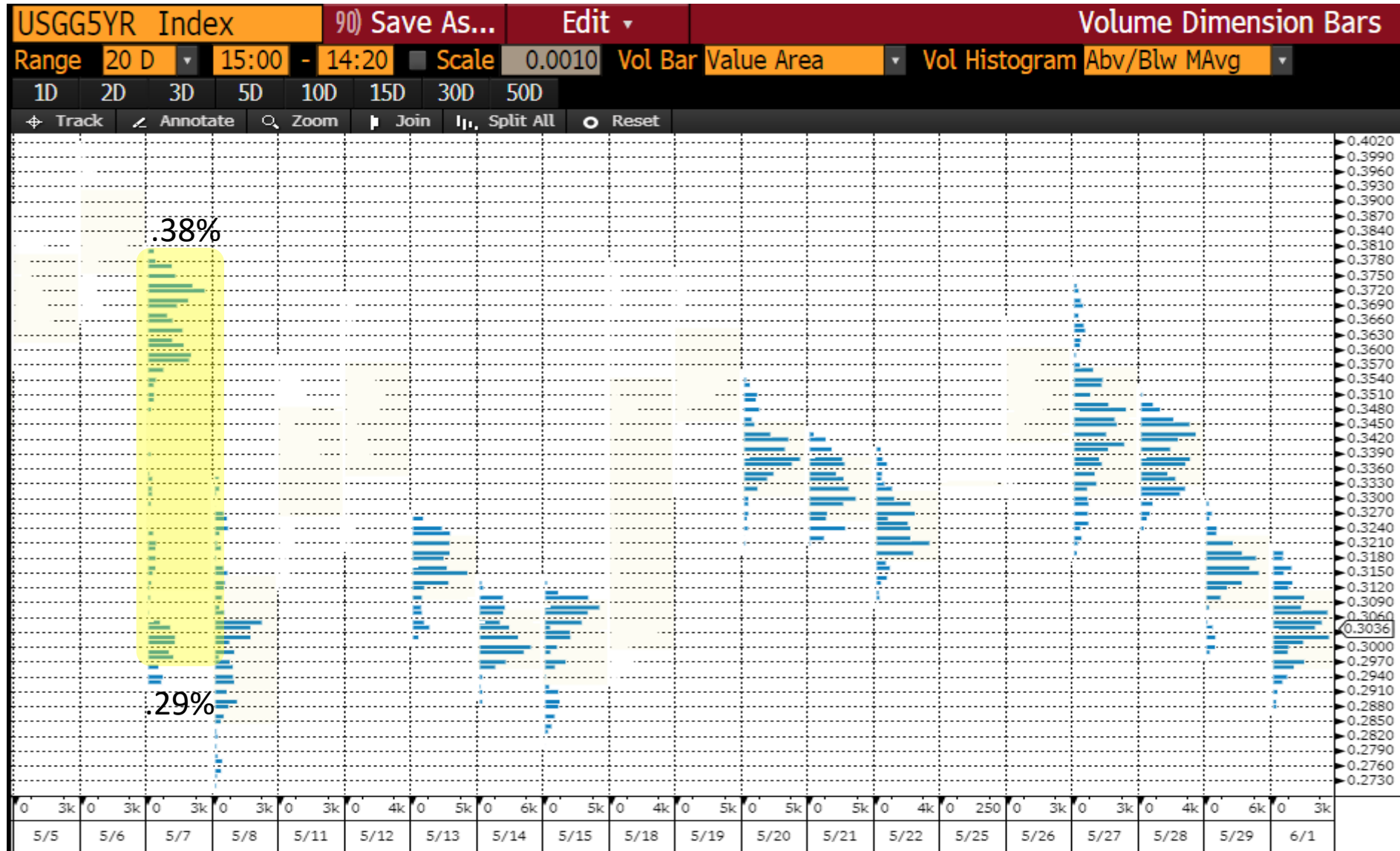
Volatility: Bollinger Bands



Volatility: Intraday Price/Yield



Volatility: Intraday Price/Yield



Fibonacci Retracements



Fibonacci

Italian mathematician

Fibonacci, also known as Leonardo Bonacci, Leonardo of Pisa, or Leonardo Bigollo Pisano, was an Italian mathematician from the Republic of Pisa, considered to be "the most talented Western mathematician of the Middle Ages". [Wikipedia](#)

Fibonacci retracement levels are horizontal lines that indicate where support and resistance are likely to occur. They are based on Fibonacci numbers. Each level is associated with a percentage. The percentage is how much of a prior move the price has retraced.



Seasonality



Source: Bloomberg

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Index	DJIA S&P500	P/E	18.25	EPS (ttm)	2.49	Insider Own	0.20%	Shs Outstand	4.27B	Perf Week	2.04%
Market Cap	194.16B	Forward P/E	33.02	EPS next Y	1.38	Insider Trans	0.20%	Shs Float	4.23B	Perf Month	-4.19%
Income	10.64B	PEG	1.67	EPS next Q	-0.60	Inst Own	54.30%	Short Float	1.41%	Perf Quarter	-11.61%
Sales	249.07B	P/S	0.78	EPS this Y	-33.80%	Inst Trans	-	Short Ratio	1.54	Perf Half Y	-33.85%
Book/sh	42.64	P/B	1.07	EPS next Y	457.10%	ROA	3.20%	Target Price	47.27	Perf Year	-36.82%
Cash/sh	2.67	P/C	17.01	EPS next 5Y	10.95%	ROE	6.00%	52W Range	30.11 - 77.93	Perf YTD	-34.84%
Dividend	3.48	P/FCF	-	EPS past 5Y	-16.00%	ROI	2.30%	52W High	-41.14%	Beta	1.34
Dividend %	7.65%	Quick Ratio	0.50	Sales past 5Y	-8.30%	Gross Margin	28.80%	52W Low	52.34%	ATR	1.90
Employees	74900	Current Ratio	0.80	Sales Q/Q	-10.60%	Oper. Margin	3.20%	RSI (14)	57.11	Volatility	2.97% 3.90%
Optionable	Yes	Debt/Eq	0.33	EPS Q/Q	-126.00%	Profit Margin	4.60%	Rel Volume	0.45	Prev Close	45.47
Shortable	Yes	LT Debt/Eq	0.17	Earnings	May 01 BMO	Payout	130.60%	Avg Volume	38.73M	Price	45.87
Recom	3.10	SMA20	3.10%	SMA50	9.18%	SMA200	-23.20%	Volume	8,322,284	Change	0.88%

Charting Systems/Tools: StockCharts



Chart Attributes

Period: Range: Bar: Gap: Extra Bars:

Type: Size: Color Scheme: Up Color: Down Color: Legends:

Volume: Full Quote Price Labels Log Scale Solid Candles Color Volume Smoothed Lines Y-Axis Labels Zoom Thumbnail

Overlays

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Indicators

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MACD	<input type="text" value="12,26,9"/>	<input type="text" value="Below"/>
- None -	<input type="text"/>	<input type="text" value="Below"/>



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Exxon Mobil Corp (XOM:NYSE)

↓ + WATCHLIST

Real Time Quote | Last NASDAQ LS, VOL From CTA | USD

Last | 12:45:32 PM EDT

Volume

52 week range

45.875 +0.41 (+0.89%)

9,029,146

30.11 - 77.93

1D

5D

1M

3M

6M

YTD

1Y

5Y

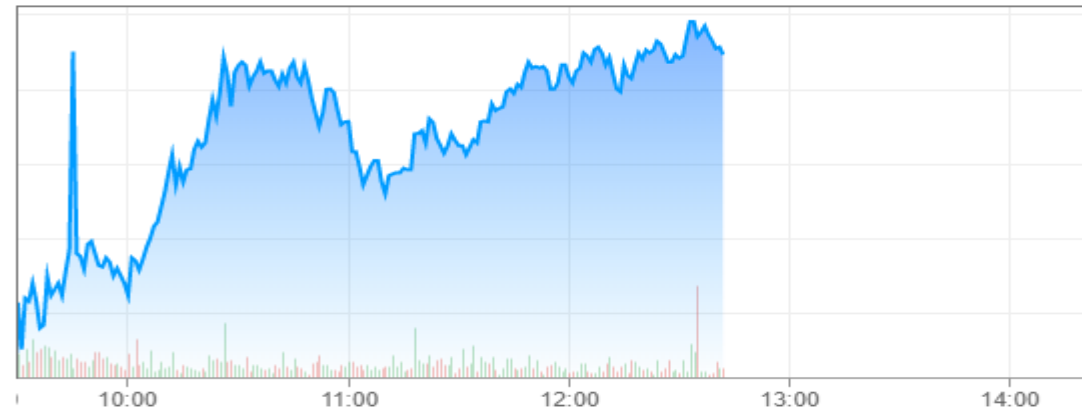
ALL

+ Comparison

1m

Display

Studies



CURRENT STUDIES

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- ATR Bands
- ATR Trailing Stops
- Accumulation/Distribution
- Accumulative Swing Index
- Alligator
- Aroon
- Aroon Oscillator
- Average True Range
- Awesome Oscillator
- Balance of Power

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KEY STATS

Open	45.32	52 Week High	77.93
Day High	46.01	52 Wk Hi Date	2019-07-01

Conclusion

Technical analysis is one tool in the tool box to analyze price movements. Some swear by its accuracy and benefits and some say its similar to reading tea leaves.

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