

TRAIN2INVEST

Technical Analysis

Module 1 : Support and Resistance

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SYNOPSIS:

In this module, we see how a daily share prices are RECORDED on a PRICE BAR and that price bar is added to the other price bars to create a CHART. From the CHART, we look for TRENDS. From those trends, we determine the SUPPORT LEVELS & THE RESISTANCE LEVELS.



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The screenshot shows the TRAIN2INVEST website header with the logo and tagline "The Power to Prosper". The navigation menu includes: Home, About us, The Program, Testimonials, Blog, Contact Us, and My account. A large red banner contains the text "Click Here To Download Ebook" and a white button labeled "Download".

Introduction:

The Toronto Stock Market (TSX)

The TSX stands for the Toronto Stock Exchange, which is Canada's largest stock exchange and one of the largest in North America. It lists senior equities, derivatives, and fixed income securities. The exchange was founded in 1852 and is headquartered in Toronto, Ontario, Canada. The exchange operates Monday to Friday, except for statutory holidays. The market opens with regular trading activity taking place between 9:30 a.m. ET and 4:00 p.m. ET. (Eastern Time).

As of April 20th, 2023, there are 1,678 companies listed.

Toronto Stock Exchange's trading hours are between **9:30 a.m. and 4:00 p.m. ET**, Monday to Friday, except for the stock market holidays listed below.

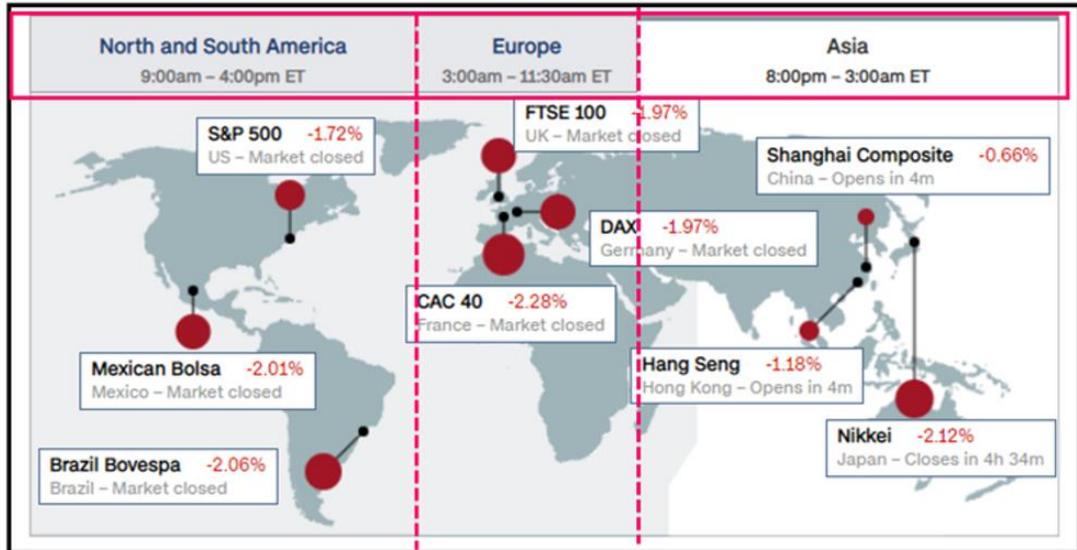
TSX Holidays	2022	2023	2024
New Year's Day	January 3rd	January 2nd	January 1st
Family Day	February 21st	February 20th	February 19th
Good Friday	April 15th	April 7th	March 29th
Victoria Day	May 23rd	May 22nd	May 20th
Canada Day	July 1st	July 3rd	July 1st
Civic Holiday	August 1st	August 7th	August 5th
Labour Day	September 5th	September 4th	September 2nd
Thanksgiving Day	October 10th	October 9th	October 14th
Christmas	December 26th	December 25th	December 25th
Boxing Day	December 27th	December 26th	December 26th

Note: Trading times are shown in Eastern Time. Please check the trading times in your Province e.g., Manitoba the time will be from 8:30 AM to 3.00 PM

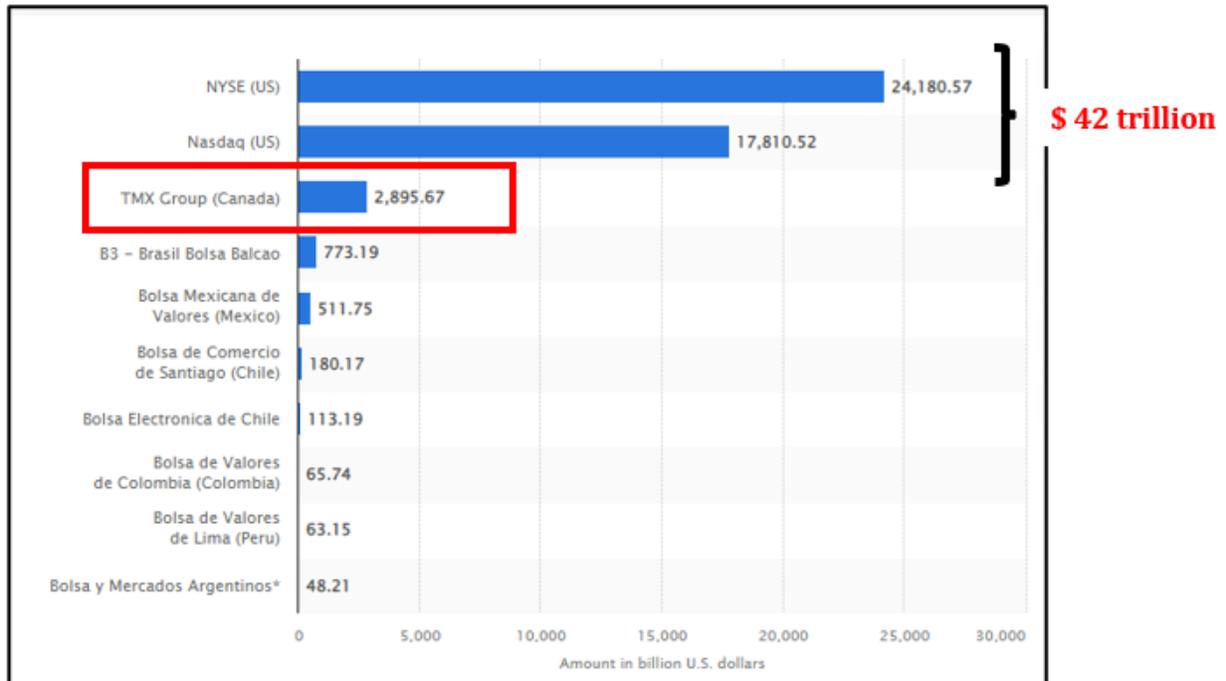
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Global Trading Times

Note that Asia and Europe can impact opening direction of North American markets and vice versa.



Leading stock exchanges in the Americas as of February 2023, by domestic market capitalization (in billion U.S. dollars):



How large are the American companies?

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What Are FAANG Stocks?

In finance, the acronym "FAANG" refers to the stocks of four prominent American technology companies: Meta (META) (formerly Facebook), Amazon (AMZN), Netflix (NFLX), and Alphabet/Google (GOOG). FANG stocks are famous for the impressive growth they have shown in recent years, with each member more than doubling over the past five years.

In 2017, the company Apple (AAPL) was also added by some analysts, resulting in the new acronym "FAANG."

F	Facebook
A	Amazon
A	Apple
N	Netflix
G	Google (Alphabet)

As of April 19th, 2023, the market capitalization of the FAANG stocks was approximately **USD \$ 8.5 trillion.**

CANADA

As of 2023, Canada's GDP is about **USD \$ 2.5 trillion!**

These companies MARKET CAPITALIZATION is LARGER than the GDP of Canada – in fact only the USA; China; Japan & Germany are larger than the FAANG companies (as a group)! Therefore, the Canadian investor MUST pay attention to what goes on in the USA!

What moves the Stock Market?

CROWD reaction to NEWS!

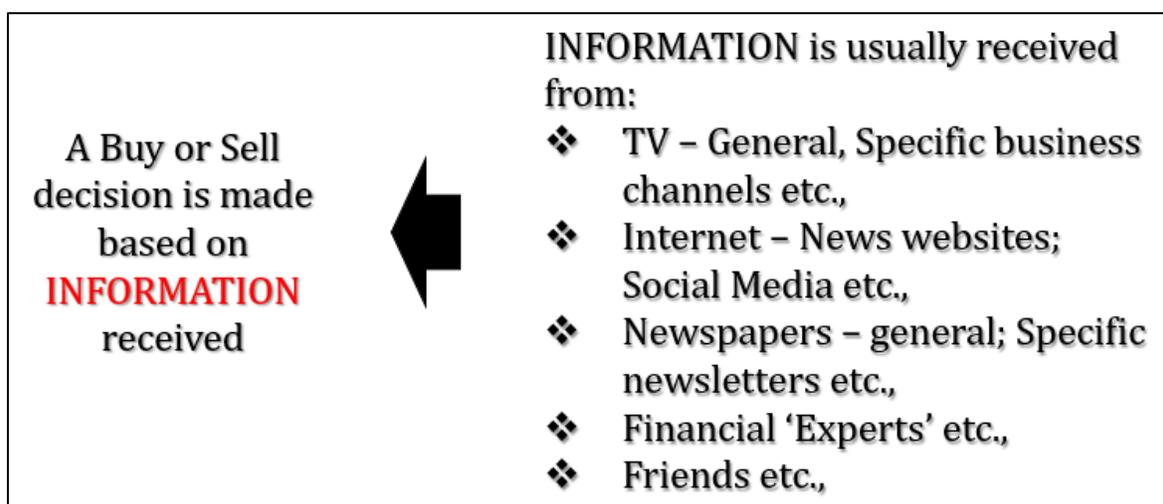
The stock market can be influenced by many factors such as economic indicators, political events, natural disasters, and company news. **Economic indicators** such as inflation, interest rates, and GDP growth can affect the stock market. **Political events** such as elections, wars, and government policies can also have an impact on the stock market. **Natural disasters** such as hurricanes, earthquakes, and floods can also affect the stock market. **Company news** such as earnings reports, mergers and acquisitions, and product launches can also influence the stock market.

The market is made up of INDIVIDUALS who make BUY/SELL decisions which moves the market.

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How do Buyers and Sellers make those decisions?

Based on information that they receive – their buy/sell decisions are based on their PERCEPTION of what they believe that the news brings! This is regardless of whether the news is TRUE or a RUMOUR – they will decide (initially) whether it is GOOD or BAD news based purely on their perception of what that news is!



Therefore, the market REFLECTS the crowd’s reaction as to whether it is **GOOD OR BAD** news!



NOTE: Sometimes Good News and Bad News **CANCEL** each other out, leaving a flat trend!

Where do I get breaking news?

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Train2Invest website – www.train2invest.com (Blog)

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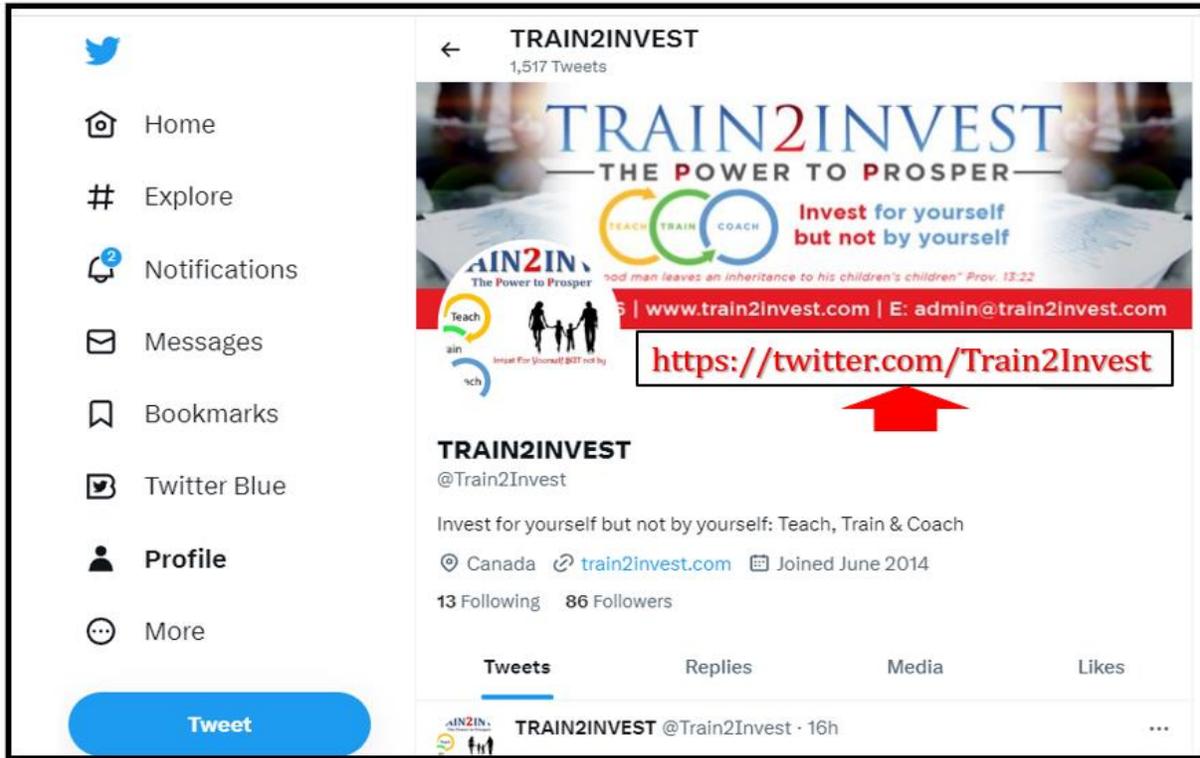
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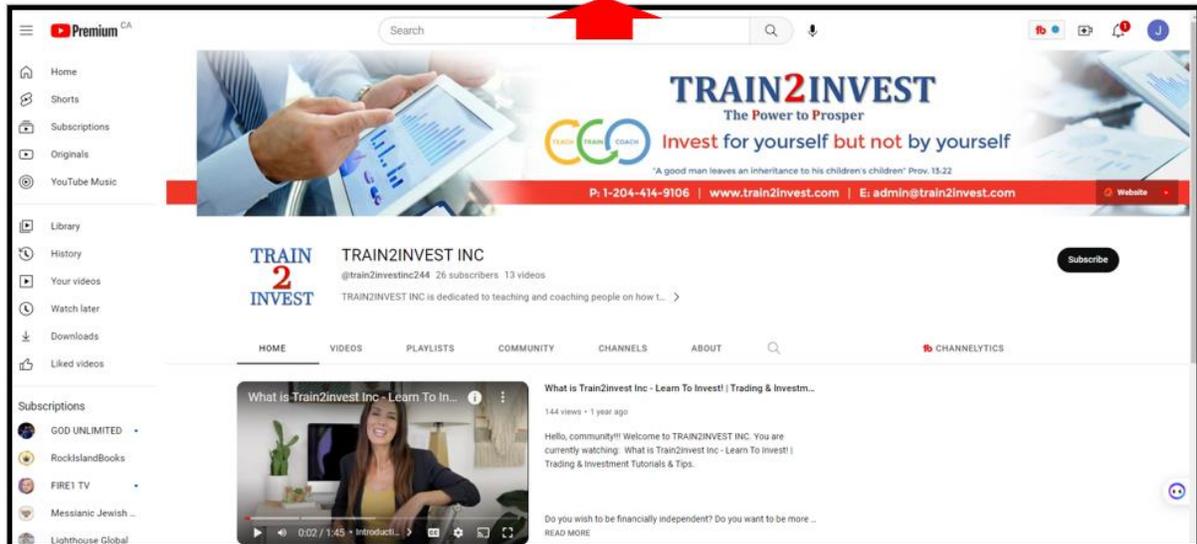
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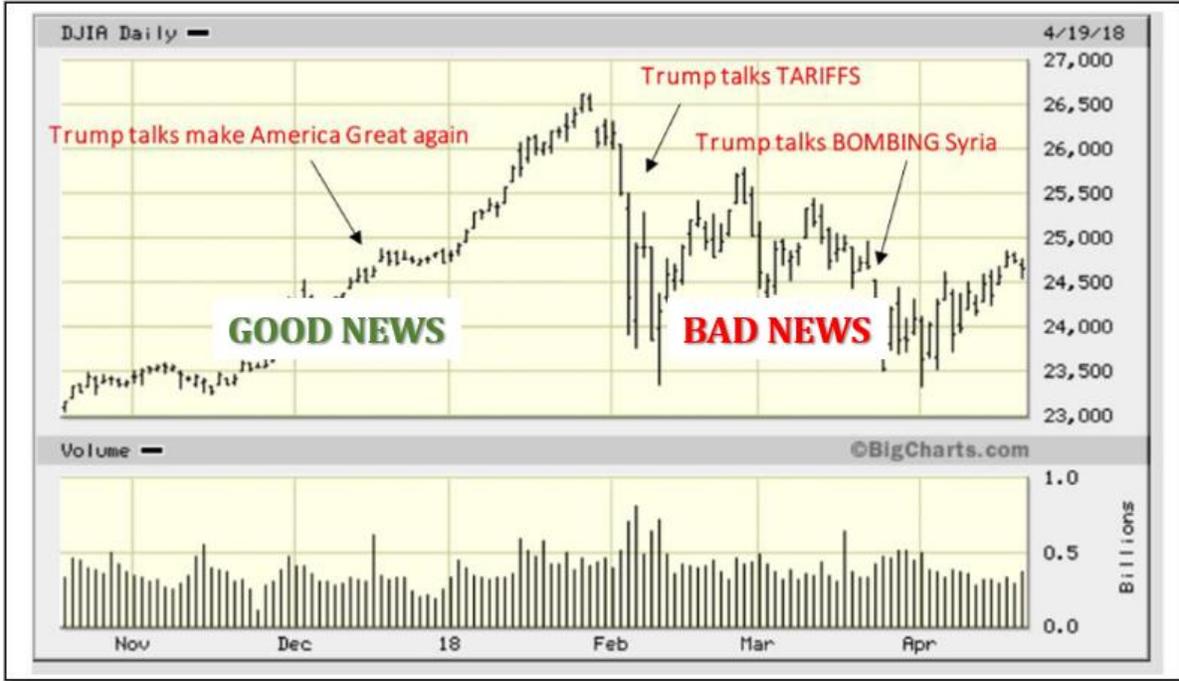
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EXAMPLE:

Trump Elections: Crowd Reaction to News



STOCK MARKET REACTION TO NEWS				
TRUMP TALKS	Taking Heads Reaction	MARKET Reaction	Actual Impact	MARKET Reaction
Blasts North Korea - Little rocket man	Wow! Korean War wil begin because of Trump	↓	Kim Jun Un wants to talk	↑
NO Russian Collusion	Special Counsel Mueller to bring charges	↓	No Action from Special Counsel	↑
China Tariffs	Wow! Trade war about to begin	↓	China reduces import tariffs	↑
Bombing Syria	Russia/Iran will enter war	↓	Russia/Iran silent	↑
Stormy Daniels	NO ONE CARES			

Stock Market Collapses

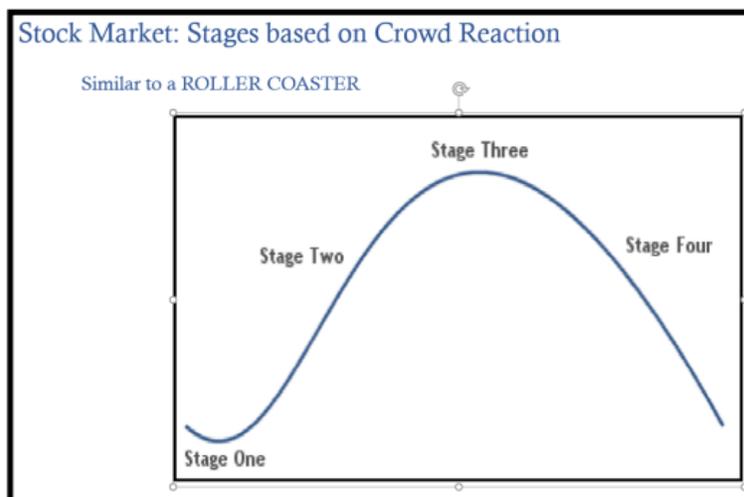


Stage Analysis on a Stock Market

To trade stocks successfully, you must first understand the four stock market stages that individual stocks and the overall market go through. These cycles tell you if you should be long, short or in cash. Once you are able to identify what stage it is in, you can then trade accordingly to those characteristics.

Here are the four stages that stocks go through. (This happens in all time frames whether it is a monthly chart, weekly chart, daily chart, or an intraday chart.)

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Stage One

Stage 1 is the stage right after a prolonged downtrend. This stock has been going down but now it is starting to trade sideways forming a base. The sellers who once had the upper hand are now beginning to lose their power because of the buyers starting to get more aggressive. The stock just drifts sideways without a clear trend.

Stage Two

Finally, stocks break out into Stage 2 and begin the uptrend. This is where the majority of the money is made in the stock market. But here is the funny thing: No one believes the rally! That's right, everyone still DISLIKES the stock – for whatever reason: usually because they may have been 'burnt' by it before. But SMART train2invest traders know better. They are accumulating shares and getting ready to dump it off to those getting in late. This sets up stage 3.

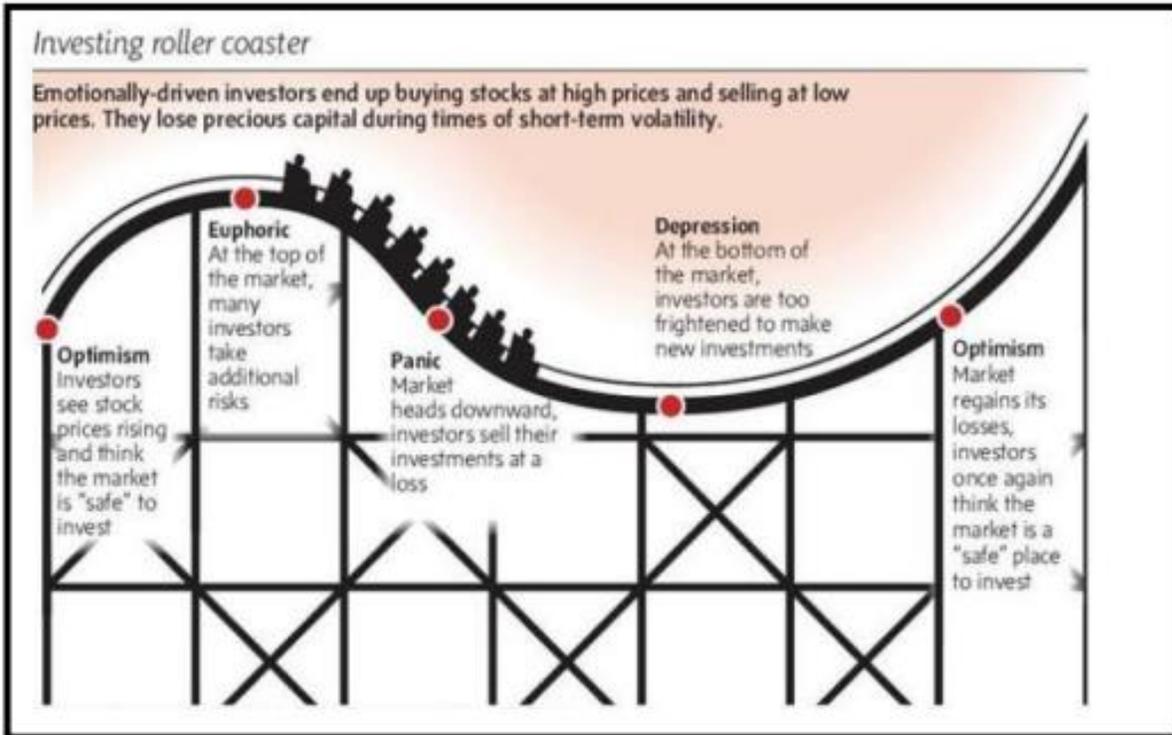
Stage Three

Finally, after the glorious advance of stage 2, the stock begins to trade sideways again and starts to "churn". Novice traders are just now getting in! This stage is very similar to stage 1. Buyers and sellers move into equilibrium again and the stock just drifts along. It is now ready to begin the next stage.

Stage Four

This is the dreaded downtrend for those that are long this stock. But, you know what the funny thing is? Nobody believes the downtrend! The fundamentals are probably still very good and everyone still LOVES this stock. They think the downtrend is just a "correction". Wrong! They hold and hold and hold, hoping it will reverse back up again. They probably bought at the end of Stage 2 or during Stage 3.

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Example: TSX Performance - 2010 to 2013



Example: TSX Performance – 2021 to 2023



What is Technical Analysis?

Technical analysis is a trading discipline employed to evaluate investments and identify trading opportunities by analyzing statistical trends gathered from trading activity, such as price movement and volume. Technical analysis is a trading tool employed to evaluate securities (shares) and attempt to forecast their future movement by analyzing statistics gathered from trading activity, such as price movement and volume. Technical analysts focus on charts of price movement and various analytical tools to evaluate a security's strength or weakness and forecast future price changes.

It is the analysis of PAST PRICE CHANGES in the hope of forecasting FUTURE PRICE CHANGES.



Methodology

Step 1: Build a Portfolio based on Fundamentals (e.g. Focus 5)

Global Economy	Domestic Economy	Targeted Sectors
Economic Growth in the USA / Asia Crude Oil-Supply & Demand Other: Geo-political challenges	Economic growth within Canada Impact of interest rates on Canada Price of oil – impact on Canada NAFTA : resolving challenges	Sectors that are competitive globally Canadian Govt support for specific industries Ability to maintain advantage

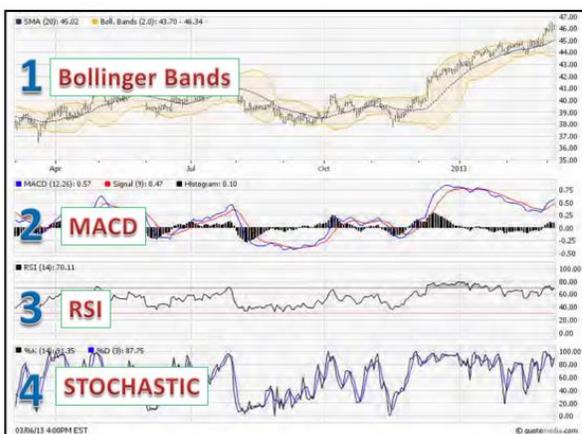
Specific Portfolio (Focus 5):

1. Suncor Energy (SU)
2. Imperial Oil (IMO)
3. Enbridge Inc (ENB)
4. Royal Bank (RY)
5. TD Bank (TD)



Step 2: Create a 'TRADING' Plan

Technical Indicators (Module 2)



Using TECHNICAL analysis, determine:

- A. Buy Price
- B. Sell Price
- C. Stop Loss Price

What affects Stock Prices?

Stock trading is driven by *psychology* just as much as it is by business fundamentals. Fear and greed are the two of the strongest human emotions that affect the market.



Synopsis: Factors affecting stock prices

Stock prices are determined by various factors that influence the supply and demand of shares in the market. Some of these factors are related to the fundamental performance and profitability of the company, such as earnings per share, cash flow, dividends, growth rate, etc. Other factors are related to the technical aspects of the market, such as price trends, momentum, volume, chart patterns, etc. Additionally, some factors are related to the external environment, such as economic conditions, inflation, interest rates, political events, news, etc.

These factors can have positive or negative effects on stock prices depending on how they are **perceived** by investors and traders. For example, a strong economic growth can boost corporate earnings and increase investor confidence, leading to higher stock prices. However, a high inflation rate can erode the purchasing power of money and increase the cost of borrowing, leading to lower stock prices. Similarly, a positive news report can create

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a favorable sentiment and attract more buyers, while a negative news report can create a panic and trigger more sellers.

Therefore, stock prices are constantly changing as new information and expectations are incorporated into the market. Investors and traders need to be aware of these factors and their impacts on stock prices in order to make informed decisions and optimize their returns.

Stock prices change every day as a result of market forces. By this we mean that share prices change because of supply and demand. If more people want to buy a stock (demand) than sell it (supply), then the price moves up. Conversely, if more people wanted to sell a stock than buy it, there would be greater supply than demand, and the price would fall. We should remember that the purpose in price analysis is not to accurately predict the future, but to improve our ability to forecast correctly more often than not.

Understanding supply and demand is easy. What is difficult to comprehend is what makes people like a particular stock and dislike another stock. This comes down to figuring out what news is positive for a company and what news is negative. There are many answers to this problem and just about any investor you ask has his own ideas and strategies!

Completed Trades: Seen on 'TICKER' tapes

A ticker tape is a device that prints out stock prices and other market information on a continuous strip of paper. The name comes from the sound of the machine as it prints. Ticker tapes were widely used in the late 19th and early 20th centuries, before electronic displays and computers became common.

Electronic Displays of Stock Information:



The price crossing the ticker represents BOTH a buy and a sell. i.e. It is a completed TRADE - the consummation of a deal transferring partial ownership of a company at an agreed-upon price between a buyer and a seller (the company itself is NOT one of the parties).

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BUYS & SELLS



Supply & Demand “Bid & Ask”

The screenshot shows the 'Buy & Sell' interface for ENB (ENBRIDGE INC). The 'Bid / Ask' price is highlighted in a red box, showing a bid of \$53.22 and an ask of \$53.25. A red arrow points from the 'Buy' button to this box.

ENB ENBRIDGE INC	
Current Price	\$53.23 +tick
Change	▲ 0.16 (0.30%)
Bid / Ask	\$53.22 / \$53.25
Lots	2 / 20
Open	\$53.34
High / Low	\$53.42 / \$53.08
Volume	4,765,662
As of	21 Apr 2023, 04:14:59 p.m. ET

Bid & Ask (Example: TD Bank)

Stocks & ETFs						
↕ Name		↕ Last Price	↕ Change	↕ Bid [Lots]	↕ Ask [Lots]	↕ Volume
▶ ENB ENBRIDGE INC	Buy Sell	\$53.23	+\$0.16 +0.30%	\$53.22 [2]	\$53.25 [20]	4.8M
▶ SU SUNCOR ENERGY INC	Buy Sell	\$41.20	-\$0.04 -0.10%	\$41.19 [3]	\$41.25 [5]	5.3M
▶ IMO IMPERIAL OIL LTD	Buy Sell	\$71.94	+\$0.17 +0.24%	\$71.75 [1]	\$72.00 [106]	554.4k
▶ RY ROYAL BANK OF CANADA	Buy Sell	\$135.30	+\$0.55 +0.41%	\$135.27 [2]	\$135.39 [2]	6.4M
▶ TD TORONTO DOMINION BANK	Buy Sell	\$83.55	+\$0.05 +0.06%	\$83.50 [1]	\$83.60 [61]	6.1M

Source: TD Bank

A bid price is the highest price that a buyer (i.e., bidder) is willing to pay for a stock. It is usually referred to simply as the "bid." In bid and ask, the bid price stands in contrast to the ask price or "offer", and the difference between the two is called the bid/ask spread. In the context of stock trading on a stock exchange, the bid price is the highest price a buyer of a stock is willing to pay for a share of that given stock. The bid price displayed in most quote services is the highest bid price in the market.

A bid and an ask refer to the two-way price quotation that indicates the best potential price at which a security can be sold and bought at a given point in time. A buyer submits a bid, which is the highest price they are willing to pay for a security, while a seller submits an ask, which is the lowest price they are willing to accept. The bid and ask prices together make up the bid-ask spread, which is the difference between the highest price a buyer is willing to pay and the lowest price a seller is willing to accept. This spread reflects the liquidity, supply, and demand for a particular security, and can be influenced by various factors, including spreads on the underlying securities and market volatility.

The bid and ask prices can change frequently throughout the trading day, depending on market conditions and the supply and demand for a particular security.

Bid & Ask "LOTS".

In trading, a "lot" refers to a standardized unit size of a financial instrument that is being traded. The lot size can vary depending on the financial instrument being traded, and it is determined by the exchange or broker where the trade is executed. For example, in the stock market, a lot size can refer to the number of shares being traded in a single transaction.

The lot size is an important consideration for traders because it can affect the amount of leverage they can use in their trades, as well as the potential profit or loss from a trade. When a trader places an order, they specify the lot size they wish to trade, and the transaction is executed at the current market price.

Settlement Data

When at the End Of Day (EOD), where the 'BIDS and ASKS' have been settled, PRICES are recorded and displayed (as seen on a ticker tape; broker account etc., This data (EOD) is presented with basic information e.g., the OPEN; the HIGH; the LOW and the CLOSE – addition information may also be given e.g., Volume; Chg. (\$) ; Chg. (%) etc.,

Bid/Ask: Settlement Data

A Seller agrees to **SELL** his stocks at a **CERTAIN PRICE**
AND
A Buyer agrees to **BUY** that stock at the **OFFERED PRICE**

PRICE HISTORY (End Of Day or EOD)

DATE	Open	High	Low	Last	Change	%Chg	Volume
04/20/2023	\$ 64.50	\$ 64.60	\$ 62.72	\$ 63.58	-1.95	-2.98%	56976
04/19/2023	\$ 65.76	\$ 65.77	\$ 65.06	\$ 65.53	-0.61	-0.92%	47083
04/18/2023	\$ 65.74	\$ 66.23	\$ 65.40	\$ 66.14	0.79	1.21%	64217
04/17/2023	\$ 64.97	\$ 65.55	\$ 64.69	\$ 65.35	0.2	0.31%	111915
04/14/2023	\$ 64.00	\$ 65.30	\$ 63.64	\$ 65.15	1.44	2.26%	115459
04/13/2023	\$ 63.37	\$ 64.07	\$ 62.51	\$ 63.71	0.57	0.90%	107277
04/12/2023	\$ 63.53	\$ 63.91	\$ 62.78	\$ 63.14	0.13	0.21%	83810

How to get historical data of completed trades?

Tracking Price History: Example ENB

Enbridge Inc (ENB.TO)
53.05 -0.47 (-0.88%) 15:47 ET [TSX]

HISTORICAL DATA for Thu, Apr 20th, 2023

ENB.TO Daily

Download historical Intraday data (when available) back approx. 10 years, down to 1-minute increments. Daily data is available back to 01/01/2000, with Weekly, Monthly, and Quarterly data back to 01/01/1980. A maximum of 10,000 records can be downloaded with any single request.

Download additional underlying chart data and study values using the Interactive Charts.

Download continuous nearby futures data by changing the time frame to be Nearest. Contracts will roll based on total volume and open interest. For expired futures contracts, enter the 2-character commodity root (ZC, GC, etc.) followed by the 1-character month code, followed by a 2-digit year. Example: ZCZ05 for Corn December 2005.

Get More Download Flexibility On Historical Data With Barchart For Excel

Barchart for Excel is a powerful tool designed to enrich the data you can find on Barchart.com, but with the added power and flexibility of Microsoft Excel. Blend Barchart data with your own proprietary data, perform calculations, visualize data, and perform sophisticated data analysis directly in Excel. **2-Week Free Trial - No Credit Card Required!**

New Highs

Period	Made New High	Percent From Last
5-Day	3 times	-1.47%
1-Month	10 times	-1.74%
3-Month	1 time	-5.81%
6-Month	11 times	-5.94%
YTD	9 times	-5.88%
52-Week	5 times	-11.17%
2-Year	49 times	-11.17%
3-Year	25 times	-10.34%
5-Year	31 times	-10.34%
10-Year	8 times	-19.08%
20-Year	64 times	-19.08%

New Lows

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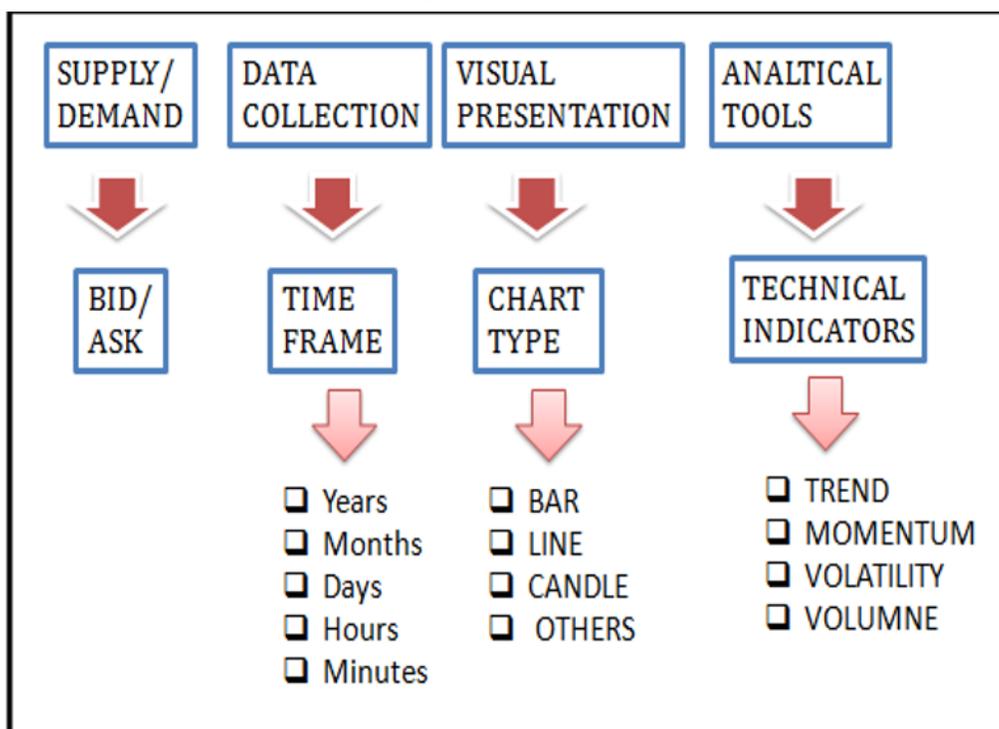
Example: ENB (Excel Spreadsheet)

Completed Trades

DATE	Open	High	Low	Last	Change	%Chg	Volume
04/20/2023	\$ 64.50	\$ 64.60	\$ 62.72	\$ 63.58	-1.95	-2.98%	56976
04/19/2023	\$ 65.76	\$ 65.77	\$ 65.06	\$ 65.53	-0.61	-0.92%	47083
04/18/2023	\$ 65.74	\$ 66.23	\$ 65.40	\$ 66.14	0.79	1.21%	64217
04/17/2023	\$ 64.97	\$ 65.55	\$ 64.69	\$ 65.35	0.2	0.31%	111915
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04/13/2023	\$ 63.37	\$ 64.07	\$ 62.51	\$ 63.71	0.57	0.90%	107277
04/12/2023	\$ 63.53	\$ 63.91	\$ 62.78	\$ 63.14	0.13	0.21%	83810
04/11/2023	\$ 62.56	\$ 63.70	\$ 62.56	\$ 63.01	0.9	1.45%	95904
04/10/2023	\$ 60.82	\$ 62.28	\$ 60.82	\$ 62.11	1.3	2.14%	69468
04/06/2023	\$ 61.48	\$ 61.49	\$ 60.23	\$ 60.81	-0.86	-1.39%	107089
04/05/2023	\$ 62.57	\$ 62.57	\$ 61.48	\$ 61.67	-1.63	-2.58%	80934
04/04/2023	\$ 64.23	\$ 64.23	\$ 62.70	\$ 63.30	-0.91	-1.42%	102214
04/03/2023	\$ 66.28	\$ 67.17	\$ 64.00	\$ 64.21	-0.82	-1.26%	96606
03/31/2023	\$ 63.67	\$ 65.19	\$ 63.67	\$ 65.03	1.89	2.99%	97680
03/30/2023	\$ 63.63	\$ 63.84	\$ 62.67	\$ 63.14	0.74	1.19%	66684
03/29/2023	\$ 61.79	\$ 62.55	\$ 61.62	\$ 62.40	0.98	1.60%	62131
03/28/2023	\$ 61.62	\$ 62.02	\$ 61.33	\$ 61.42	-0.42	-0.68%	65685
03/27/2023	\$ 62.68	\$ 62.68	\$ 61.04	\$ 61.84	-0.07	-0.11%	113804
03/24/2023	\$ 62.00	\$ 62.14	\$ 61.49	\$ 61.91	-0.73	-1.17%	46911
03/23/2023	\$ 61.77	\$ 63.26	\$ 61.77	\$ 62.64	1.05	1.70%	159964
03/22/2023	\$ 61.71	\$ 62.29	\$ 60.96	\$ 61.59	0.38	0.62%	116860
03/21/2023	\$ 60.95	\$ 62.02	\$ 60.95	\$ 61.21	0.94	1.56%	119214
03/20/2023	\$ 61.30	\$ 61.68	\$ 59.67	\$ 60.27	-0.99	-1.62%	130743
03/17/2023	\$ 62.54	\$ 62.87	\$ 60.64	\$ 61.26	-1.64	-2.61%	184505
03/16/2023	\$ 61.08	\$ 63.18	\$ 60.53	\$ 62.90	1.52	2.48%	155761
03/15/2023	\$ 61.00	\$ 62.13	\$ 60.83	\$ 61.38	-1.19	-1.90%	176869
03/14/2023	\$ 62.83	\$ 63.80	\$ 62.20	\$ 62.57	-0.23	-0.37%	167523
03/13/2023	\$ 64.00	\$ 64.43	\$ 62.30	\$ 62.80	-2.36	-3.62%	268790
03/10/2023	\$ 66.00	\$ 66.96	\$ 63.45	\$ 65.16	-1.32	-1.99%	330454
03/09/2023	\$ 74.40	\$ 74.40	\$ 66.13	\$ 66.48	-10.58	-13.73%	790859
03/08/2023	\$ 75.80	\$ 77.57	\$ 74.52	\$ 77.06	0.77	1.01%	128028
03/07/2023	\$ 77.88	\$ 77.48	\$ 76.27	\$ 76.28	0.28	0.58%	77668

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Share Prices & Technical Analysis



Note: Technical Indicators – later Modules

Data Presentation:

Date	Open	High	Low	Close	Volume
10/04/2017	52.45	52.50	52.15	52.15	2,060,495
10/03/2017	52.30	52.59	52.10	52.41	2,019,348
10/02/2017	52.14	52.45	52.01	52.23	1,555,497
09/29/2017	51.72	52.30	51.62	52.12	2,477,162
09/28/2017	51.67	51.93	51.36	51.68	2,009,544
09/27/2017	51.14	51.47	50.73	51.47	2,623,121
09/26/2017	51.06	51.07	50.64	50.94	1,909,833
09/25/2017	50.65	51.14	50.38	51.03	1,969,855
09/22/2017	51.13	51.20	50.50	50.66	2,324,996
09/21/2017	51.00	51.30	50.84	51.14	1,430,863

End of Day (EOD) data is captured and presented in this format:
Date / Open / High / Low / Close / Volume ETC.

This data is available through DISCOUNT BROKER accounts, other various web sites e.g. TMX ; Bar Charts; Globeinvestor etc.

Challenge with the above Data Presentation – Impossible to spot PATTERNS; TRENDS etc.

Solution: Create 'pictures'!

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Share Price Bar – Visual Data Presentation

We use a SHARE PRICE BAR to display the information E.g. An **OHLC** Share Price Bar.



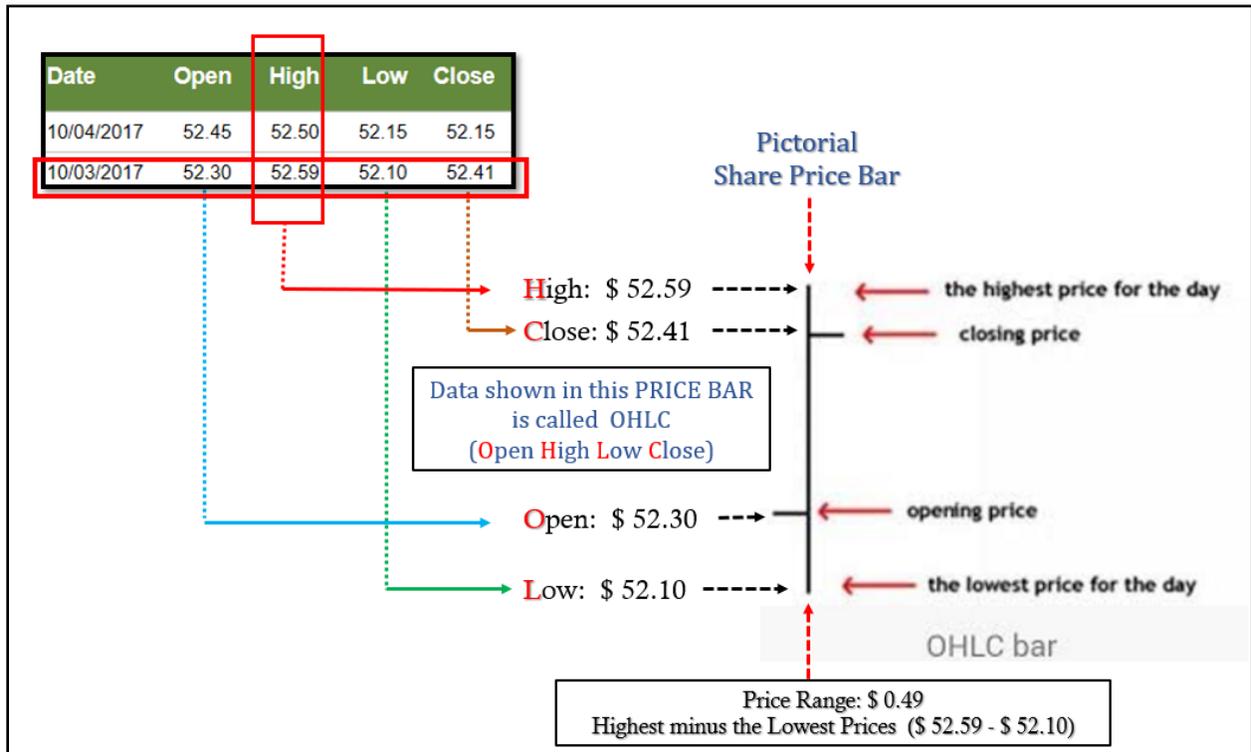
OPEN - The little horizontal line on the LEFT is the Opening Price

HIGH - The TOP of the vertical line defines the HIGH (the highest price recorded) of the day.

LOW - The BOTTOM of the vertical line defines the LOW (the lowest price recorded) of the day

CLOSE - The little horizontal line on the RIGHT is the Closing price.

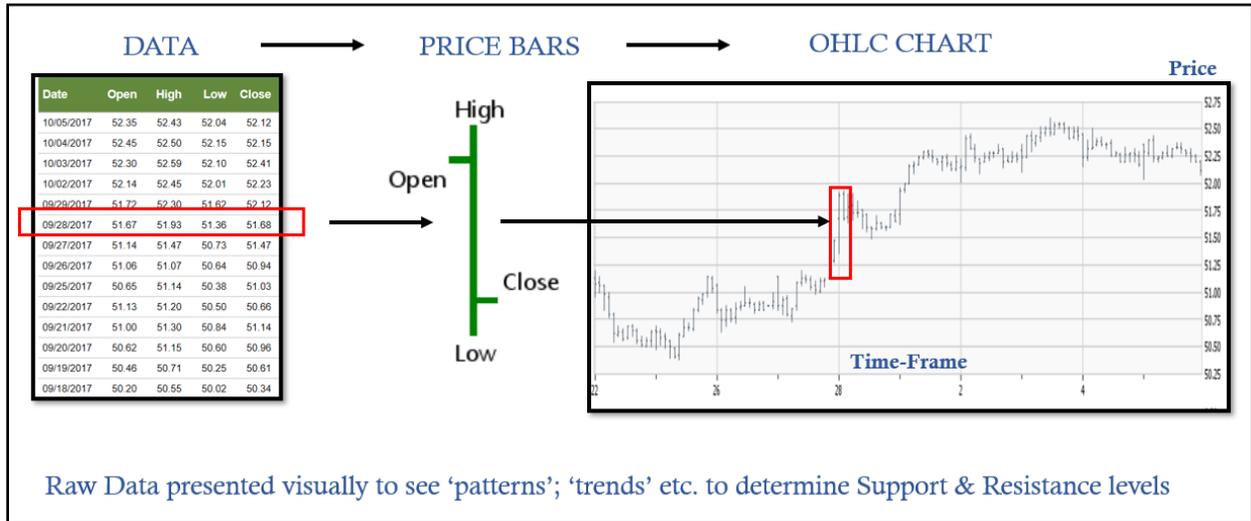
Example: Share Price Bar – Pictorial View (OHLC)



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From Raw Data to Charts

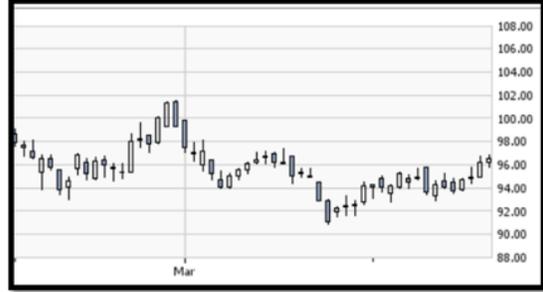


Numerous Chart Types: Examples

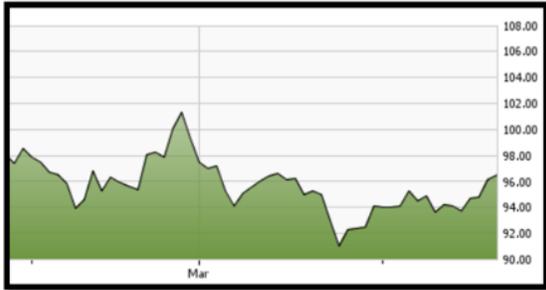
OHLC Chart Type:



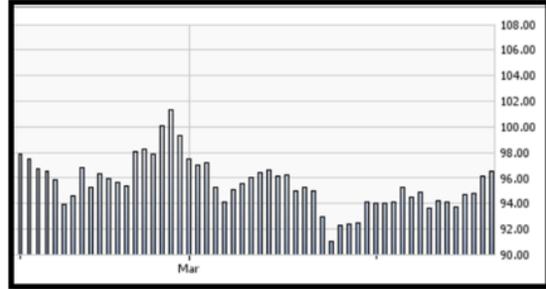
CANDLE STICK Chart Type:



MOUNTAIN Chart Type:



BAR Chart Type:



Bar Chart – Options of Chart Types

Enbridge Inc (ENB.TO)
 53.23 +0.16 (+0.30%) 04/21/23 [TSX]
 INTERACTIVE CHART for Fri, Apr 21st, 2023

My Charts Alerts Watch Help

ENB.TO GO +Study Tools Settings Compare f(x) Grid View Templates Print Clear

Range: 1D 5D 1M Frequency: Intraday 10D 60 Mins Date: [calendar icon]

- OHLC Bars
- Colored OHLC Bars
- HLC Bars
- Candlestick Hollow
- Candlestick Open-to-Close
- Candlestick Close-to-Close
- Heikin-Ashi
- Elder-Impulse-System
- Line Chart
- Area Chart
- Renko
- Column
- Baseline
- Line Break
- Range
- Kagi
- Point And Figure

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Setting Up Charts

Go To 'MY ACCOUNT' at www.train2invest.com

See **Charting Software Bar Chart** (Recording & Pdf Manual) - below

The screenshot shows the TRAIN2INVEST website interface. At the top, there is a navigation bar with links for Home, About us, The Program, Testimonials, Blog, Contact Us, and My account. Below the navigation bar is a 'WELCOME' banner with a 'Click below links to access the membership and other options.' instruction. The main content area is divided into two sections: 'Classes: Recordings' and 'Manuals: Class Sessions Pdf Documents'. Both sections feature a grid of five cards each, with the first card in each grid highlighted by a red box. A blue arrow labeled 'RECORDING' points to the first card in the 'Classes: Recordings' section, and another blue arrow labeled 'MANUAL' points to the first card in the 'Manuals: Class Sessions Pdf Documents' section. The first card in both sections is titled 'Charting Software Bar Chart'.

For our purposes, we NORMALLY look at 3 terms:

- Long Term 3 year Weekly OHLC Chart
- Medium Term 6 month Daily OHLC Chart
- Short Term 10 Day 30 minute OHLC Chart

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❑ Long Term: 3 Year Weekly Charts



❑ Medium Term: 6 Month Daily Charts



❑ Short Term: 10 Day 30 Minutes Charts



TREND LINES

Trend lines are one of the fundamental aspects of technical trading, which is chart based. One of the basic tenets put forth by Charles Dow in the Dow Theory is that security prices do trend. Trends are often measured and identified by "trend lines."

A trend line is a sloping line that is drawn between two or more prominent points on a chart.

Rising trends are defined by a trend line that is drawn between two or more troughs (low points) to identify price support.

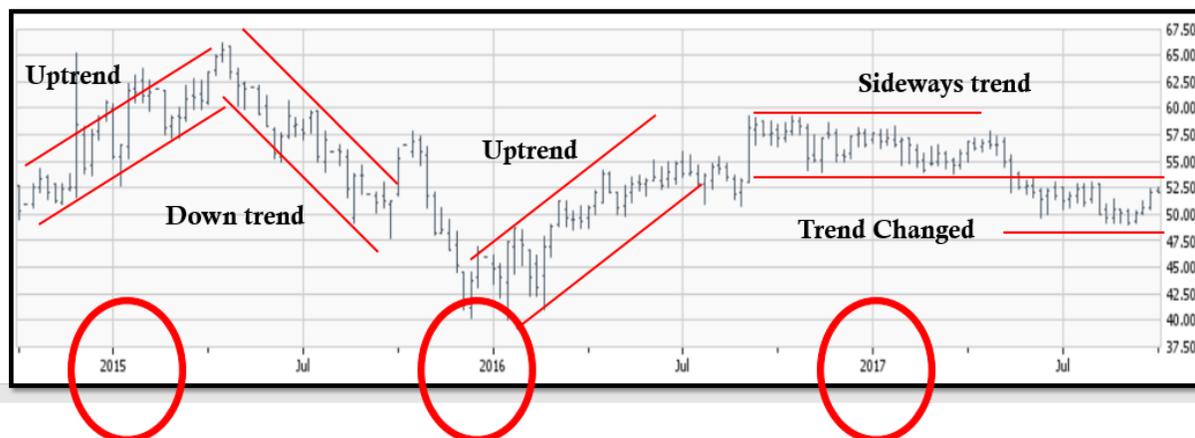
Falling trends are defined by trendlines that are drawn between two or more peaks (high points) to identify price resistance.

A principle of technical analysis is that once a trend has been formed (two or more peaks/troughs have touched the trendline and reversed direction) it will remain intact until broken.

One benefit of trendlines is they help distinguish emotional decisions from analytical decisions. Another benefit of trendlines is that they almost always keep you on the "right" side of the market. When using trendlines, it's difficult to hold a security for very long when prices are falling just as it's hard to be short when prices are rising, either way the trendline will be broken.

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Direction Estimated



Trend Lines & Trading Ranges



Trading range: The level of trading in a stock stopped by the price **resistance** level and bottomed by the price **support** level.

Support: The lowest price or price trend at which a stock is trading currently in its trading range; the price that buyers currently consider the lowest worthwhile price for that stock.

Resistance: The highest price or price trend at which a stock is trading currently in its trading range; the price that buyers consider the highest worthwhile price for that stock.

Types of Trends:

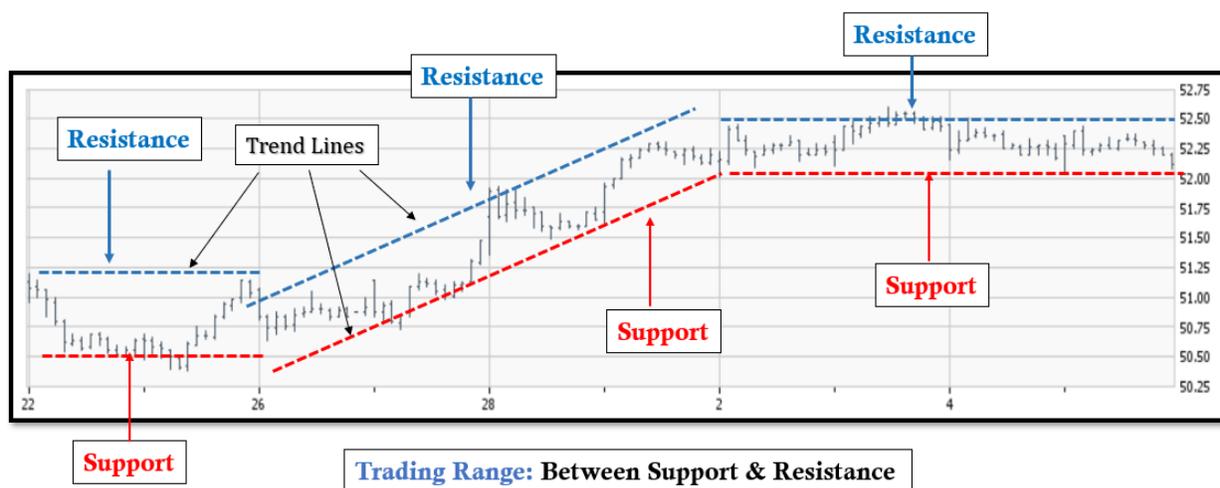
There are three types of trends:

- Uptrends
- Downtrends
- Sideways/Horizontal Trends

As the names imply, when each successive peak and trough is higher, it's referred to as an **upward trend**. If the peaks and troughs are getting lower, it's a **downtrend**. When there is little movement up or down in the peaks and troughs, it's a **sideways** or horizontal trend. If you want to get really technical, you might even say that a sideways trend is actually not a trend on its own, but a lack of a well-defined trend in either direction.

In any case, the market can really only trend in these three ways: up, down, or nowhere.

Trend Lines: Concept of Support & Resistance:



The concepts of support and resistance are undoubtedly two of the most highly discussed attributes of technical analysis and they are often regarded as a subject that is complex by those who are just learning to trade. - focus on the basics of what traders need to know.

It has been stated that the simplicity of the markets is its greatest disguise. The concept of “Support and Resistance” in the trading markets dates back to the original “Dow Theory,” and is perhaps often overlooked today due to its perceived simplicity. The reality is, support and resistance is perhaps the greatest contribution and most widely held concept in technical analysis, and has since become an invaluable method for technical trader and investor alike.

At its most basic level, support and resistance represents the “consensus of value” of all market participants at any given time. With the advent of technology and electronic quote

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dissemination and execution, newly devised applications make support and resistance (S&R) an even more robust and far reaching precept.

The progression of S&R's application to market analysis and psychology, when integrated with real-time data derived from today's new software charting programs, has been explosive. As a result, applying support and resistance methods has never been simpler or more effective for trading in today's markets. Conversely, with real-time technology, many participants see support and resistance analysis too microscopically, subjecting them to volatile and choppy whipsaw signals and creating diminished conviction. Therefore, while the concepts have changed little from original Dow Theory, the application of the concept in today's market environment has changed significantly.

The defining nature of SR (Support and Resistance) is what gives it such prominence in the practice of technical analysis. We should remember that the purpose in price analysis is not to accurately predict the future, but to improve our ability to forecast correctly more often than not. This is where support and resistance play a key role. In studying a chart of recent price movements, we are likely to see a trading range. This is the area of prices that can be clearly identified; recent trading activity is taking place within that range. At the bottom of the trading range is the price (or price trend) known as support. The support price level is an important signal point for identifying likely emerging new trends. This price is where the trend is likely to halt and possibly reverse a down trend—thus the name, “support,” which means price support in the current perception of buyers. Support is essentially the lowest price for the stock that is likely to be reached and considered a worthwhile price to pay.

Several traders have treated SR in purely economic terms, equating support with demand and resistance with supply. While this analogy is useful for understanding the market on economic terms, we should also realize that the market forces that go into the creation of price movement often have little to do with economic forces. In studying fundamental analysis (financial and other recent historical trends of a company), there certainly are economic forces at work. However, technical indicators have to be distinguished from the economics of corporations and viewed in terms of the forces at work in the market itself. When we think of supply and demand, we usually visualize business model. A company creates and markets product or service and has to compete with other companies in the same industry. When there is a lot of demand for that product, sales rise; when demand is soft, sales (and profits) fall. In this example, “supply and demand” are factors affecting company's profitability.

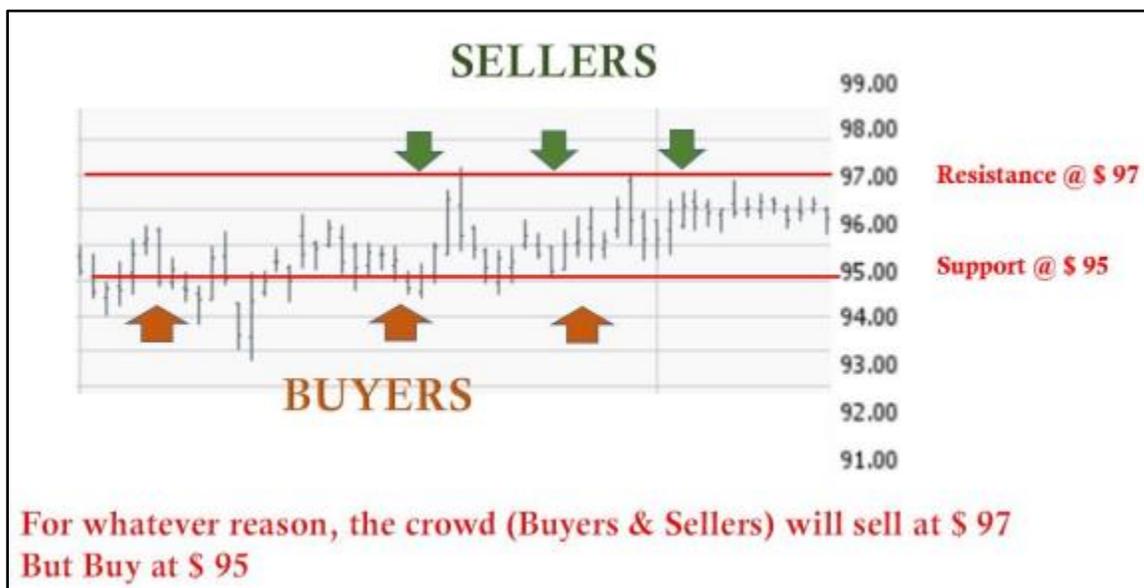
A study of the stock market reveals entirely different forces at work. Price of stocks really has little to do with economics as applied to sales and profits, the traditional models. Rather, prices change due to investor demand rather than market demand and the demand itself has nothing to do directly with a company's competitive success. Of course, the more profitable companies will have stronger price attributes in its stock, but the forces of supply and demand really do not affect price. In fact, it is fair to say that stock prices rise and fall as a result of a collective market perception of value. Today's rise or fall in a stock's price occurs in anticipation of what will happen next. When investors buy stock, they do so

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assuming that the price is going to rise; and when they sell, they are taking profits or reacting to changed perceptions about future value. An attempt to tie together the traditional supply and demand features of economics and market price movement is not an accurate approach.

As technical analysts, chartists generally are not at all interested in economic forces such as supply and demand (on a purely market level). Rather, they are interested in the perception of price support and resistance for individual stocks given a number of other factors: current trading range, recent trading patterns within the trading range, whether the range itself has been drifting up or down, signs of support exhaustion, profit-taking, and other trends related to price, not to the economy. SR does not apply well to market indexes, because no one trades the index (except through limited index options). Since an index represents a broad cross sample of many stocks, it cannot possess an individual SR. While an index trading range may appear to be acting in the same manner as that of an individual stock, it is not the same. The trading range of the index is a culmination of many trading ranges, and it is simply the averaging effect of those components that creates this artificial “trading range.”

PERCEPTION – Investors think that the stock (below) is not worth more than \$97 (resistance) but are willing buyers at \$95 (support). These support and resistance levels are seen as important in terms of market psychology and supply and demand. Support and resistance levels are the levels at which a lot of traders are willing to buy the stock (in the case of a support) or sell it (in the case of resistance)



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When these TRENDLINES are broken, the supply and demand and the psychology behind the stock's movements is thought to have shifted, in which case new levels of support and resistance will likely be established.

Concept of Support & Resistance

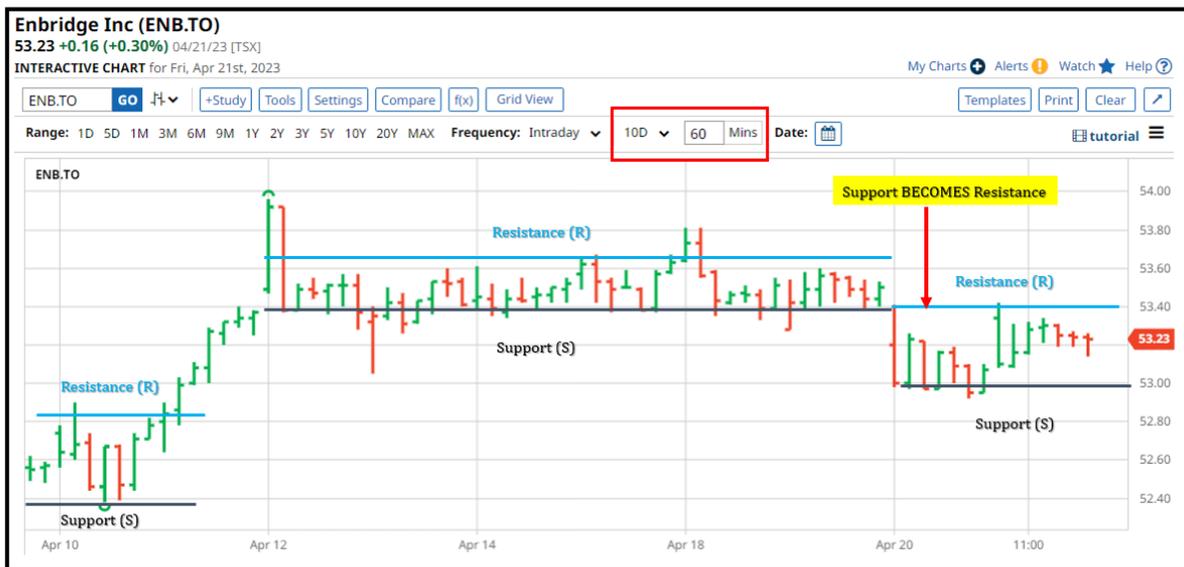
The purpose of Technical Analysis (forecasting future price trends based on historical trends) is NOT to accurately predict the future, but rather to improve our ability to forecast more often than not.

“GOOD ENOUGH” is fine!

We cannot ACCURATELY predict the day when snow will fall BUT we can fairly accurately predict when winter will arrive!

**Think like an Economist,
not like an Accountant**

Trends Change for numerous reasons



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52 Week High & 52 Week Low

Basically, illustrates the Support & Resistance for 1 Year (52 weeks). This does not need to be accurate as it is only used as a guideline to determine the actual trade to be executed. Is it closer to the low or the high? What are the reasons for that position it currently is must be articulated.

Eye Ball – approx. 52W High & Low



Ball Park Range: \$ 60 (High) and \$ 50 (Low)

Other Technical Indicators (TA Module 2)

Trend Indicators

Trend indicators reflect three tendencies in price movements: Up moves, Down moves and Sideways price moves. These indicators help define prevailing directions/ trends of the price moves by smoothing price data over a certain period of time. In simple words, Trend indicators allow us to visualize Trends in the market.

- Ichimoku Kinko Hyo
- Advance Decline Line (ADL)
- Average Directional Index (ADX)
- Average Directional Movement Index Rating (ADXR)
- Commodity Selection Index (CSI)
- Directional Movement Index (DMI)
- Double Exponential Moving Average (DEMA)
- Heiken Ashi
- Moving Average Convergence and Divergence (MACD)
- Moving Averages: EMA, SMA and WMA
- Parabolic SAR
- Percentage Price Oscillator (PPO)
- Point & Figure
- Triple Exponential Moving Average (TEMA)
- Triple Exponential Moving Average (TRIX)

Momentum Indicators

Momentum indicators show the strength of trends by recording the speed of prices moving over certain time period. At the same time, Momentum indicators track strength and weakness of a trend as it progresses over a given period of time: the highest momentum is always registered at the beginning of a trend, the lowest - at its end point.

- Accumulative Swing Index (ASI)
- Advance Decline Ratio (ADR)
- Aron Indicator
- Aron Oscillator
- Chande Momentum Oscillator (CMO)
- Commodity Channel Index (CCI)
- Intraday Momentum Index
- Centre of Gravity
- Linear Regression Slope
- Mass Index
- Momentum Indicator
- Price Oscillator
- Qstick
- Random Walk Index
- Rate of Change (ROC)
- Relative Momentum Index (RMI)
- Relative Strength Index (RSI)
- Smoothed Indexed Rate of Change (SIROC)
- Stochastics
- Stochastic RSI
- Stochastic Momentum Index

Volatility Indicators

Volatility indicators show the size and the magnitude of price fluctuations. In any market there are periods of high volatility (high intensity) and low volatility (low intensity). These periods come in waves: low volatility is replaced by increasing volatility, while after a period of high volatility there comes a period of low volatility and so on. Volatility indicators measure the intensity of price fluctuations, providing an insight into the market activity level.

- Average True Range (ATR)
- Bollinger Bands (BB)
- Chaikin Volatility (CHV)
- Donchian Channel
- Keltner Bands
- McGinley Dynamic indicator (MDI)
- Moving Average Envelopes
- Starc Bands

Volume Indicators

Volume indicators are used to determine investors' interest in the market. High volume, especially near important market levels, suggests a possible start of a new trend, while low volume suggests traders uncertainty and/or no interest in a particular market.

- Acceleration Bands
- Market Facilitation Index
- Chaikin Money Flow (CMF)
- Chaikin Oscillator
- Accumulation Distribution Oscillator (ADO)
- Volume Oscillator (VPO)
- Demand Index
- On Balance Volume (OBV)
- Money Flow

Source: BarChart

Creating a Sample Portfolio

The name of this Sample Portfolio is called the “FOCUS 5” which will be made up of 5 companies as follows::

1. Enbridge Inc (ENB.TO)
2. Suncor Energy Inc. (SU.TO)
3. Imperial Oil Ltd (IMO.TO)
4. Royal Bank of Canada (RY.TO)
5. Toronto-Dominion Bank (TD.TO)

Brief Overview

ENB – Enbridge owns extensive midstream assets that transport hydrocarbons across the U.S. and Canada. Its pipeline network consists of the Canadian Mainline system, regional oil sands pipelines, and natural gas pipelines. The company also owns and operates a regulated natural gas utility and Canada’s largest natural gas distribution company. Finally, the firm has a small renewables portfolio primarily focused on onshore and offshore wind projects.

SU – Suncor Energy Inc is an integrated energy company. The company’s operations include oil sands development, production and upgrading, offshore oil and gas, petroleum refining in Canada and the U.S. and the company’s Petro-Canada retail and wholesale distribution networks. The company is developing petroleum resources while advancing the transition to a low-emissions future through investment in power, renewable fuels and hydrogen. It also conducts energy trading activities focused principally on the marketing and trading of crude oil, natural gas, by-products, refined products and power.

IMO – Imperial Oil is one of Canada’s largest integrated oil companies, focusing on upstream operations, petroleum refining operations, and the marketing of petroleum products. Production averaged 398 thousand barrels of oil equivalent per day in 2020. The company estimates that it holds 5.2 billion boe of proved and probable crude oil and natural gas reserves. Imperial remains the largest refiner of petroleum products in Canada, operating three refineries with a combined processing capacity of 421 mboe/d. The Upstream segment operates to produce crude oil and its equivalent, and natural gas. The Downstream segment operates to refine crude oil into petroleum products. The Chemical segment manufactures hydrocarbon-based chemicals and chemical products.

RY – Royal Bank of Canada is one of the two largest banks in Canada. It is a diversified financial services company, offering personal and commercial banking, wealth-management services, insurance, corporate banking, and capital markets services. The bank is concentrated in Canada, with additional operations in the U.S. and other countries.

TD – Toronto-Dominion is one of Canada’s two largest banks and operates three business segments: Canadian retail banking, U.S. retail banking, and wholesale banking. The bank’s

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U.S. operations span from Maine to Florida, with a strong presence in the Northeast. It also has a 13% ownership stake in Charles Schwab.

BarChart

Creating a "FOCUS 5" PORTFOLIO

www.barchart.com

See NOTES for details

- **STEP 1** – Open an ACCOUNT
- **STEP 2** – Click on TOOLS and click on PORTFOLIO

STEP 1: Open Account

Click on PORTFOLIO

OR

[Watchlist](#) | [Portfolio](#) | [Dashboard](#)

My Account

[Stocks](#)
[Options](#)
[ETFs](#)
[Futures](#)
[Currencies](#)
[Investing](#)
[News](#)
Tools
[Learn](#)

Hi, Jonathan
Contact
🇺🇸

MEMBER TOOLS

- My Watchlist
- My Portfolio 2
- Portfolio Summary
- Dashboard
- Alert Center
- Alert Templates
- Screener
- My Charts
- Custom Views
- Chart Templates
- Compare Stocks
- Daily Prices Download
- Historical Data Download

MY CUSTOM REPORTS

- Watchlist Emails
- Portfolio Emails
- Screener Emails
- End-of-Day My Charts
- End-of-Day Reports

MANAGE TOOLS

- Organize Watchlists
- Organize Portfolios
- Organize Screeners
- Organize My Charts

MY ACCOUNT

- My Profile
- Site Preferences
- Subscription Details
- Author Followings

TD:TO Ratios	
Ratio	
Price/Earnings ttm	10.10
Price/Earnings forward	9.41
Price/Earnings to Growth	N/A
Return-on-Equity %	15.22%
Return-on-Assets %	0.81%
Profit Margin %	0.00
Net Margin %	0.31
Debt/Equity	1.68
Price/Sales	3.18
Price/Book	1.52

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Create Portfolio
Sun, Apr 23rd, 2023 [Help](#)

Name:

Cash Value: Adjust Cash by Default

Default View: Portfolio View

CANCEL CREATE

Email Portfolio Options:

Send at: Overnight (3a CT) Market Open (9a CT) Mid-Day (noon CT) Market Close (3p CT) End-of-Day (4:45p CT)

Email Format: Main View Attach .csv

SAMPLE:

Portfolio Focus 5 (Jan 1 20XX)
Sun, Apr 23rd, 2023 [Help](#)

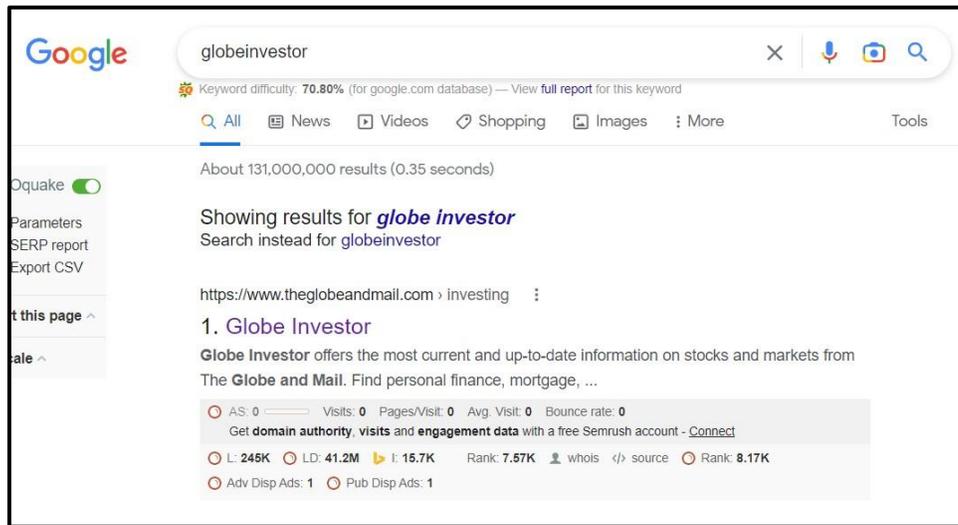
Cash Value: \$51,650.00 Total Fees: \$50.00
 Entry Value: \$51,650.00 Current Value: \$51,650.00
 Active P&L: \$0.00 (unch) Today's Return: \$0.00 (unch)
 Closed P&L: \$1,650.00 (+1.59%) Total P&L: \$1,650.00 (+1.59%)

+ Add transaction New Portfolio Edit

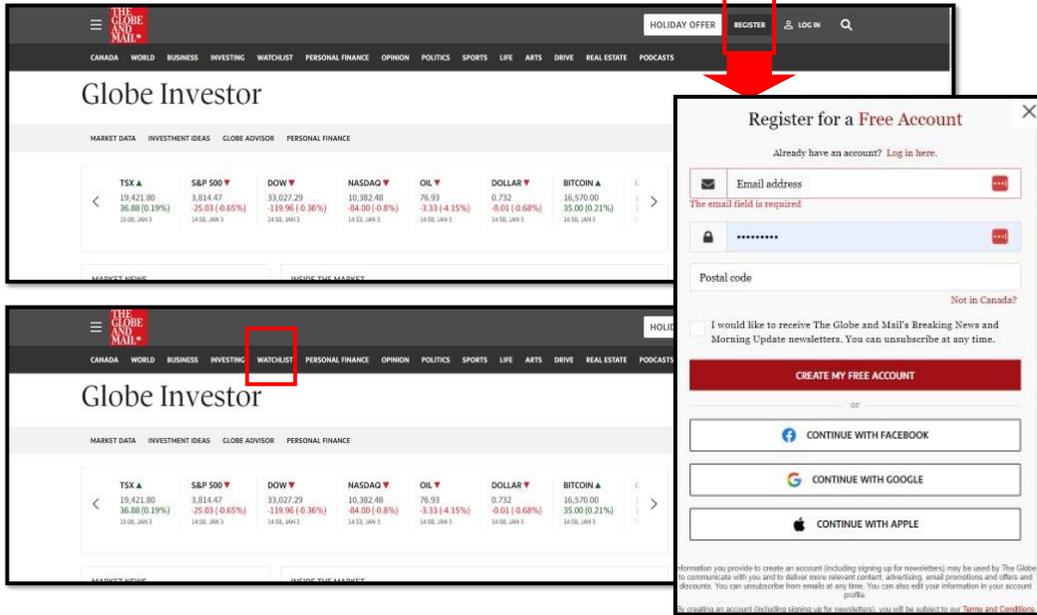
End-of-Day ▼ Portfolio View ▼ Show Closed Positions try Excel refresh screen flipcharts download max

Symbol	Name	Action	Last	Prev Change	Prev %Chg	Market Val	Total Chg	Total %Chg	Profit	Total Profit	Time	Notes	Edit	Links
+ ENB.TO	Enbridge Inc	Buy	53.23	+0.16	+0.30%	\$11,050.00	+2.00	+3.76%		\$390.00	04/21/23			
+ IMO.TO	Imperial Oil	Buy	71.94	+0.17	+0.24%	\$6,850.00	+4.00	+6.20%		\$390.00	04/21/23			
+ SU.TO	Suncor Energy Inc	Buy	41.20	-0.04	-0.10%	\$9,050.00	+2.00	+4.62%		\$390.00	04/21/23			
+ RY.TO	Royal Bank of Canada	Buy	135.30	+0.55	+0.41%	\$13,070.00	+2.00	+1.55%		\$190.00	04/21/23			
+ TD.TO	Toronto-Dominion Bank	Buy	83.55	+0.05	+0.06%	\$13,500.00	+2.00	+2.27%		\$290.00	04/21/23			

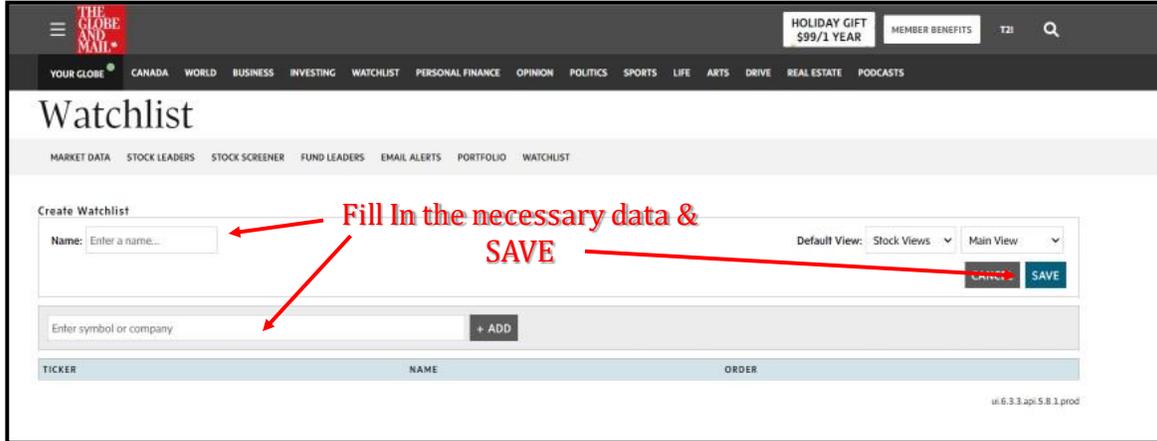
Other Options: Globeinvestor



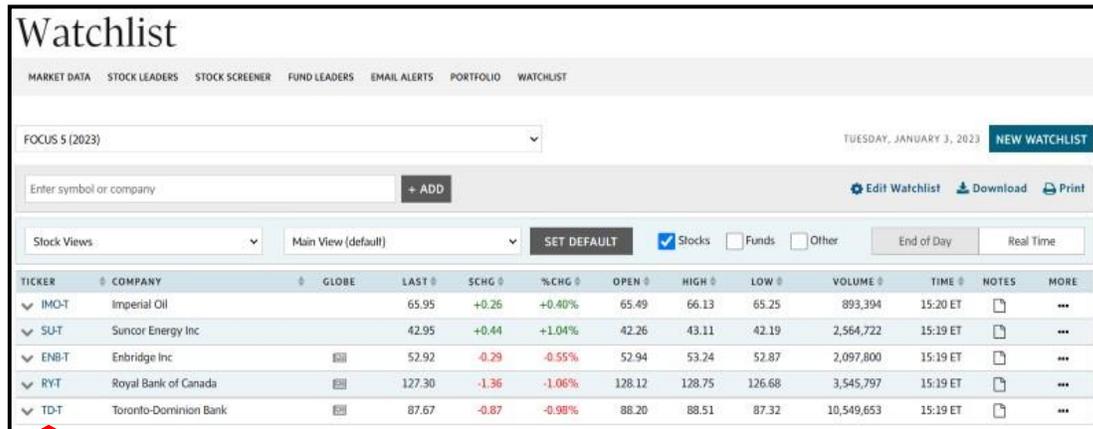
Default Page: : Globeinvestor



Creating a Portfolio (Watchlist)



Watchlist: Focus 5



Watchlist

MARKET DATA STOCK LEADERS STOCK SCREENER FUND LEADERS EMAIL ALERTS PORTFOLIO WATCHLIST

FOCUS 5 (2023) TUESDAY, JANUARY 3, 2023 NEW WATCHLIST

Enter symbol or company + ADD Edit Watchlist Download Print

Stock Views Main View (default) SET DEFAULT Stocks Funds Other End of Day Real Time

TICKER	COMPANY	GLOBE	LAST	5CHG	%CHG	OPEN	HIGH	LOW	VOLUME	TIME	NOTES	MORE
IMO-T	Imperial Oil		65.95	+0.26	+0.40%	65.49	66.13	65.25	893,394	15:20 ET		...
SU-T	Suncor Energy Inc		42.95	+0.44	+1.04%	42.26	43.11	42.19	2,564,722	15:19 ET		...
ENB-T	Enbridge Inc	CA	52.92	-0.29	-0.55%	52.94	53.24	52.87	2,097,800	15:19 ET		...
RY-T	Royal Bank of Canada	CA	127.30	-1.36	-1.06%	128.12	128.75	126.68	3,545,797	15:19 ET		...
TD-T	Toronto-Dominion Bank	CA	87.67	-0.87	-0.98%	88.20	88.51	87.32	10,549,653	15:19 ET		...

Make sure only **CANADIAN** STOCK is selected

Things To Complete

1. Focus 5 – using BarChart to create a Portfolio
2. Focus 5 – using Globeinvestor to create a Portfolio
3. Research Focus 5 Companies: RY; TD; SU; ENB & IMO e.g., what do they do?

The information provided in the APPENDIX (below) is for broadening your knowledge – **it not essential knowledge at this time.**

End

APPENDIX: What are PRICE PATTERNS?

PRICE Patterns are the interpretation of charts and the interpretation of patterns from those **charts**.

Chart reading, and pattern analyses are **not** simply mere memorization of patterns and recalling of their interpretations.

Any chart is a combination of differing diverse patterns and, hence, an accurate evaluation relies on chart reading skills and techniques, consistent pattern study of charts, experience in technical analysis, and personal knowledge both technical and fundamental analysis-wise, and the ability to evaluate differing and sometimes opposing indicators, to analyze and evaluate patterns in view of diverse, composite, and sometimes differing details as well as recognizing patterns in charts using, in some cases, fixed and memorized formulae.

All market participants are human beings (including 'institutional' investors). Therefore, knowing the reasons for market participant behaviors might help us in pattern analysis. There are hundreds of thousands, of diverse, differing and individual market participants in the stock market at any point, and these people are selling and buying securities for differing, diverse reasons, possessing various motives and from various financial positions.

Trying to figure out why participants are buying and selling can be daunting and very challenging. Chart patterns are therefore useful, because they place buying and selling into a kind of **limited** perspective by consolidating supply and demand into a single consolidated picture. As a complete, consolidated visual record of trading, the patterns in stock charts thus provide a framework to analyze stock market movements and can have data that can be extrapolated (projected): simply, chart patterns can help us analyze the big picture, so pattern analysis is indeed a key skill of technical analysis.

Pattern analysis can be used to make short or long-term forecasts. Yet, it should be noted, **technical analysis can be science and also art**.

For instance, what is the long term as opposed to the short term? Interpretation plays a role, so experience is important. In addition, pattern recognition can be open to personal and biased interpretation and is subject to bias. To defend ourselves against bias and to confirm actual, proper interpretations, other fields from technical analysis should be used to verify (or refute) conclusions based on pattern analysis. While patterns may seem similar, in reality, no two patterns are exactly the same. False breakouts and exceptions are all par for the course. Hence, consistent and constant study of various charts and the concomitant experience is required for successful pattern analysis.

It is also important to acknowledge that prices trend, and that pattern history repeats itself often.

An uptrend indicates that demand is in control, and, on the other hand, a downtrend indicates that supply is in control. These uptrend and downtrends are all reflected in the price movements and

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pattern analysis must take them into account. The vast majority of patterns in charts fall into two main groups: either a **REVERSAL** or **CONTINUATION**.

(These terms are all key understanding technical analysis - since technical analysis is technical, there are many "technical" terms.)

- † Reversal patterns in charts indicate a change of trend.
- † Continuation patterns in charts indicate a pause and indicate that the previous direction before that will resume after a while.

However, just because a pattern forms after an advance or decline does not mean simply or simplistically that it is a reversal pattern. Much actually relies here on prior price actions, volume, and other indicators, as the price pattern evolves.

This is where technical analysis stops being a SCIENCE, but really and definitely becomes an ART form.

The buying and selling, and so the moment's price, is driven by psychological forces (fear of lost opportunity, envy over the killing that a friend made in the market, good news, bad news) and economic forces (productivity, inflation, deflation, etc.). It's what the crowd thinks about all of this that creates demand or a lack of demand

Whether it's because of a company's growth or "because it's a big company that pays a regular dividend", big demand for a stock comes down to one thing, and only one thing: In a word – **PERCEPTION** - investors think that they will make money by buying the stock.

A chart pattern is a distinct formation on a stock chart that creates a trading signal, or a sign of future price movements. Chartists use these patterns to identify current trends and trend reversals and to trigger buy and sell signals.

The theory behind chart patterns is based on this assumption. The idea is that certain patterns are seen many times, and that these patterns signal a certain high probability move in a stock. Based on the historic trend of a chart pattern setting up a certain price movement, chartists look for these patterns to identify trading opportunities.

While there are general ideas and components to every chart pattern, there is no chart pattern that will tell you with 100% certainty where a security is headed. This creates some leeway and debate as to what a good pattern looks like, and is a major reason why charting is often seen as more of an art than a science.

There are two types of patterns within this area of technical analysis, **reversal** and **continuation**. A reversal pattern signals that a prior trend will reverse upon completion of the pattern. A continuation pattern, on the other hand, signals that a trend will continue once the pattern is complete. These patterns can be found over charts of any timeframe. In this section, we will review some of the more popular chart patterns.

Head and Shoulders

This is one of the most popular and reliable chart patterns in technical analysis. [Head and shoulders](#) is a reversal chart pattern that when formed, signals that the security is likely to move against the previous trend. As you can see in Figure 1, there are two versions of the head and shoulders chart pattern. Head and shoulders top (shown on the left) is a chart pattern that is formed at the high of an upward movement and signals that the upward trend is about to end. Head and shoulders bottom, also known as [inverse head and shoulders](#) (shown on the right) is the lesser known of the two, but is used to signal a reversal in a downtrend.



Figure 1: Head and shoulders top is shown on the left. Head and shoulders bottom, or inverse head and shoulders, is on the right.

Both of these head and shoulders patterns are similar in that there are four main parts: two shoulders, a head and a [neckline](#). Also, each individual head and shoulder is comprised of a high and a low. For example, in the head and shoulders top image shown on the left side in Figure 1, the left shoulder is made up of a high followed by a low. In this pattern, the neckline is a level of support or resistance. Remember that an upward trend is a period of successive rising highs and rising lows. The head and shoulders chart pattern, therefore, illustrates a weakening in a trend by showing the deterioration in the successive movements of the highs and lows.

Cup and Handle

A [cup and handle](#) chart is a bullish continuation pattern in which the upward trend has paused but will continue in an upward direction once the pattern is confirmed.

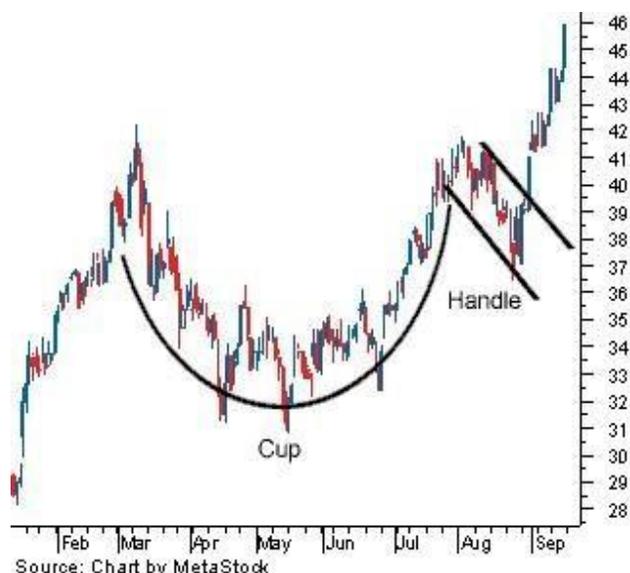


Figure 2

As you can see in Figure 2, this price pattern forms what looks like a cup, which is preceded by an upward trend. The handle follows the cup formation and is formed by a generally downward/sideways movement in the security's price. Once the price movement pushes above the resistance lines formed in the handle, the upward trend can continue. There is a wide-ranging time frame for this type of pattern, with the span ranging from several months to more than a year.

Double Tops and Bottoms

This chart pattern is another well-known pattern that signals a trend reversal - it is considered to be one of the most reliable and is commonly used. These patterns are formed after a sustained trend and signal to chartists that the trend is about to reverse. The pattern is created when a price movement tests support or resistance levels twice and is unable to break through. This pattern is often used to signal intermediate and long-term trend reversals.



Figure 3: A double top pattern is shown on the left, while a double bottom pattern is shown on the right.

In the case of the [double top](#) pattern in Figure 3, the price movement has twice tried to move above a certain price level. After two unsuccessful attempts at pushing the price higher, the trend reverses and the price heads lower. In the case of a [double bottom](#) (shown on the right), the price movement has tried to go lower twice, but has found support each time. After the second bounce off of the support, the security enters a new trend and heads upward.

Triangles

[Triangles](#) are some of the most well-known chart patterns used in technical analysis. The three types of triangles, which vary in construct and implication, are the [symmetrical triangle](#), [ascending](#) and [descending triangle](#). These chart patterns are considered to last anywhere from a couple of weeks to several months.

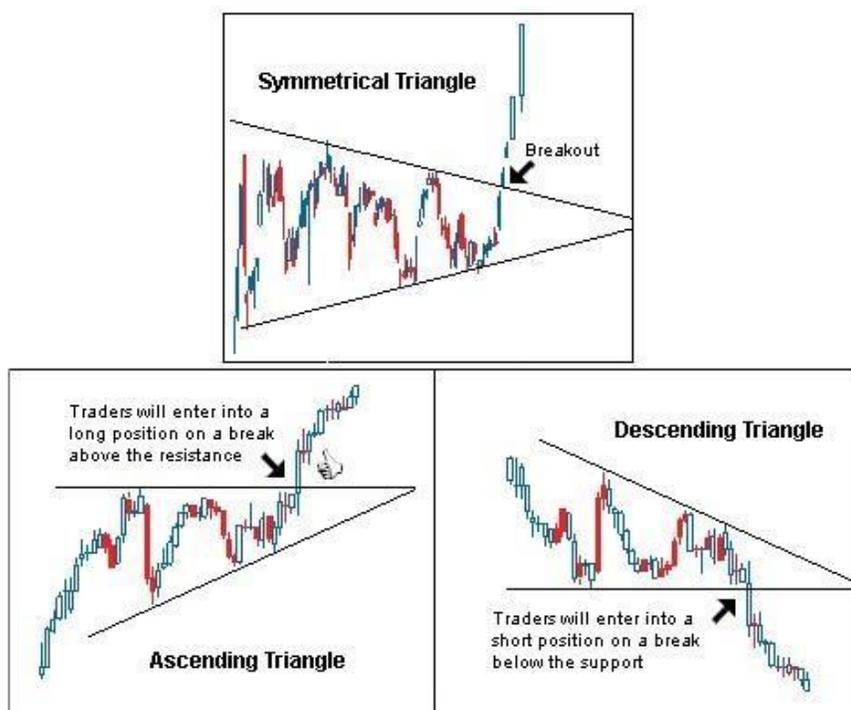


Figure 4

The symmetrical triangle in Figure 4 is a pattern in which two trendlines converge toward each other. This pattern is neutral in that a breakout to the upside or downside is a confirmation of a trend in that direction. In an ascending triangle, the upper trendline is flat, while the bottom trendline is upward sloping. This is generally thought of as a bullish pattern in which chartists look for an upside breakout. In a descending triangle, the lower trendline is flat and the upper trendline is descending. This is generally seen as a bearish pattern where chartists look for a downside breakout.

Flag and Pennant

These two short-term chart patterns are continuation patterns that are formed when there is a sharp price movement followed by a generally sideways price movement. This pattern is then completed upon another sharp price movement in the same direction as the move that started the trend. The patterns are generally thought to last from one to three weeks.



Figure 5

As you can see in Figure 5, there is little difference between a pennant and a flag. The main difference between these price movements can be seen in the middle section of the chart pattern. In a pennant, the middle section is characterized by converging trendlines, much like what is seen in a symmetrical triangle. The middle section on the flag pattern, on the other hand, shows a channel pattern, with no convergence between the trendlines. In both cases, the trend is expected to continue when the price moves above the upper trendline.

Wedge

The wedge chart pattern can be either a continuation or reversal pattern. It is similar to a symmetrical triangle except that the wedge pattern slants in an upward or downward direction, while the symmetrical triangle generally shows a sideways movement. The other difference is that wedges tend to form over longer periods, usually between three and six months.



Figure 6

The fact that wedges are classified as both continuation and reversal patterns can make reading signals confusing.

However, at the most basic level, a falling wedge is bullish and a rising wedge is bearish. In Figure 6, we have a falling wedge in which two trendlines are converging in a downward direction. If the price was to rise above the upper trendline, it would form a continuation pattern, while a move below the lower trendline would signal a reversal pattern.

Gaps

A [gap](#) in a chart is an empty space between a trading period and the following trading period. This occurs when there is a large difference in prices between two sequential trading periods. For example, if the trading range in one period is between \$25 and \$30 and the next trading period opens at \$40, there will be a large gap on the chart between these two periods. Gap price movements can be found on bar charts and candlestick charts but will not be found on point and figure or basic line charts. Gaps generally show that something of significance has happened in the security, such as a better-than-expected earnings announcement.

There are three main types of gaps, [breakaway](#), [runaway](#) (measuring) and [exhaustion](#). A breakaway gap forms at the start of a trend, a runaway gap forms during the middle of a trend and an exhaustion gap forms near the end of a trend.

Triple Tops and Bottoms

[Triple tops](#) and [triple bottoms](#) are another type of reversal chart pattern in chart analysis. These are not as prevalent in charts as head and shoulders and double tops and bottoms, but they act in a similar fashion. These two chart patterns are formed when the price movement tests a level of support or resistance three times and is unable to break through; this signals a reversal of the prior trend.

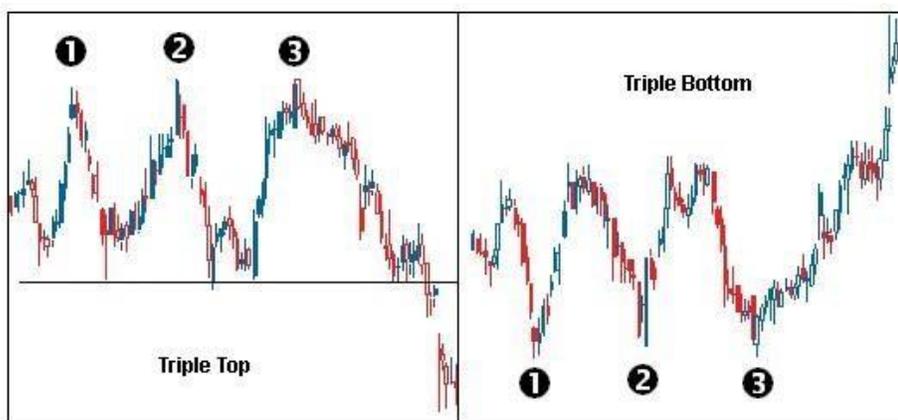


Figure 7

Confusion can form with triple tops and bottoms during the formation of the pattern because they can look similar to other chart patterns. After the first two support/resistance tests are formed in the price movement, the pattern will look like a double top or bottom, which could lead a chartist to enter a reversal position too soon.

Rounding Bottom

A rounding bottom, also referred to as a [saucer bottom](#), is a long-term reversal pattern that signals a shift from a downward trend to an upward trend. This pattern is traditionally thought to last anywhere from several months to several years.

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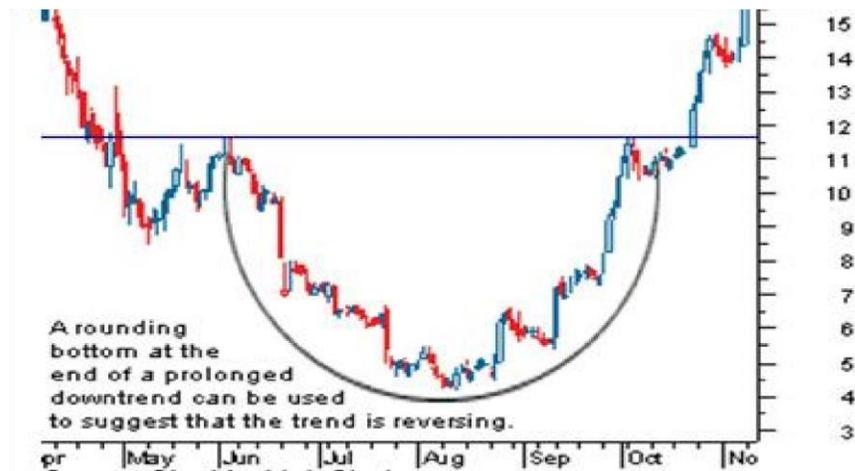


Figure 8

A rounding bottom chart pattern looks similar to a cup and handle pattern but without the handle. The longterm nature of this pattern and the lack of a confirmation trigger, such as the handle in the cup and handle, makes it a difficult pattern to trade.

END