Chapter 3:
Basic Concepts of Technical Analysis

3.1 What is Technical Analysis and Why You Should Learn About It?

"*For me, technical analysis is like a thermometer. Fundamentalists who say they are not going to pay any attention to the charts are like a doctor who says he's not going to take a patient's temperature*."

Bruce Kovner

Technical analysis is another popular evaluation system used by traders extensively in stock trading. Unlike fundamental value investors, who value a stock based on the business performance, financial health, and cash flow condition of the company, market technicians and technical analysts usually rely only on share price data, price movement, and trading volume of the stock to find their best entry and exit prices. They do not care who the new CEO is, how many new products are launched this year, and how much profits the company earned over the past few years.

"*I always laugh at people who say "I've never met a rich technician" I love that! It's such an arrogant, nonsensical response. I used fundamentals for 9 years and got rich as a technician*."

Martin Schwartz

In the previous chapter, we have learnt the importance of fundamental analysis. But, according to Koon, to be successful in investing, it is not enough to be good in fundamental analysis; we also need to master the concepts of technical analysis. A lot of good buying and selling opportunities would be slipping through our fingers if we focus solely on the financial statements of companies and ignore their price movements. Very often the share price of a stock would have gone up substantially before any good news, or changes of fundamentals are announced by the public listed company, as the insiders of the company have disseminated the news to their relatives, or good friends prior to the announcements. Do not get me wrong, I am not saying that the Securities Commission officers are sleeping on the job. In fact, the Securities Commission has done their best to ensure the fairness of the trading system and to keep insiders from getting any unfair advantages by profiting from the information unavailable to the general public. But, good news and bad news somehow still leaked out generally, and it happens almost everyday. For example, the relatives, and close friends of insiders would have received the latest good news when a major contract is signed, and would have started buying the stock aggressively, and bided up its share price before the good news is announced. They would then distribute the shares at high prices when the news is released by the company. As a result, only a small number of people who have excess to the insider news managed to make money from the company's progress whilst the general public does not gain any financial benefits, if not loses money, for investing based on the formal announcements, or change in fundamentals. This is the reason why the old adage "*buy the rumour and sell the news*" is still so popular in Malaysia today. If we rely only on published financial reports to make our investment decisions, we might be late to a party when good news is announced, and be unable to run for cover when bad news is released.

Also, a picture is worth a thousand words. A lot of information can be obtained from a chart if we know how to interpret it. For example, a steep downtrend line is a good indicator showing that a substantial shareholder has been disposing his, or her shares in the open market aggressively. If we are grasping at straws when our stock is on the way down, or rushing in to catch the falling knife without analysing its chart pattern, we would only have ourselves hurt by the plunging share price. In addition, it could mean that the fundamentals of the company have changed. Bear in mind that smart money managers, and substantial shareholders do not exit their positions in a stock easily unless the share price has gone far above its value, or the company's business has gone downhill, or it is suffering a heavy blow. By learning how to read charts, you do not have to wait for announcements in Bursa Malaysia again to learn that substantial shareholders have exited their positions, or something bad has happened to a company. In fact, your newly acquired analytical skill would have alerted you, and have you bailed out once the rout begins.

"*Since the market tends to go in the opposite direction of what the majority of people think, I would say 95% of all these people you hear on TV shows are giving you their personal opinion. And personal opinions are almost always worthless … facts and markets are far more reliable*."

William O'Neil

Remember, human can tell lie, but charts do not lie. Also, people's opinions have very little value. Charts, on the other hand, show the amount of money investors put on the table for their willingness to wager on the future of the companies. Hence the change of price trend of a stock tells a better, and often a more reliable, story about the change of the fundamentals, and future of a company. We do not have to listen to anyone's comments, including those from market pundits, or analysts to make our final decisions. Personal opinions, and comments are worthless. Just look at the trading records, or chart patterns. The stock market is always ahead of the real economy. Any developments to the economy will be first reflected on price charts before the effect is felt by the general public. In addition, smart money managers, usually those experienced analysts who are fairly accurate in their forecasts, would have invested heavily into some high growth companies, and therefore the price would have gone up in tandem with their business activities before the growth is reflected in their cash flow, and income statements. Likewise, the same group of money managers would have closed out their positions when they smell something wrong before it is reflected in the financial statements of the company. Technical indicators, in this case, would have given us some early warning signals about the shift of sentiment before the impact is felt by the general public, and would enable us to take action earlier than the crowd.

"*Everything's tested in historical markets. The past is a pretty good predictor of the future. It's not perfect. But human beings drive markets, and human beings don't change their stripes overnight. So to the extent that one can understand the past, there's a good likelihood you'll have some insight into the future*."

James Simons

It is also noteworthy that not only is the change of a company's fundamentals factored in the movement of a stock price, human emotions such as greed, and fear, hope, influence of politics, and the future development of a company too have been embedded in the movement of its share price. In other words, when we buy a stock, we do not just buy the business, we also pay for market's expectations for the stock, and the discounted future cash flow the company is expected to generate in the coming years. Regardless of how undervalued a stock is, if we buy a stock too early when market is still in panic selling mood, we would only see its price continues falling like a rock. Similarly, no matter how expensive a stock is, it can continue to rise if the market is in euphoria. If we sell it too early, we would only kick ourselves later for taking the profit too soon. These human emotions, and behaviours are usually reflected on price charts, and usually go in patterns. To avoid the problems of buying too early, and selling too soon, we can use charts to identify the best entry and exit points in order to maximise our profits.

That said, we should not rely solely on technical analysis in stock picking, and investing. It neither provides us a guarantee of 100% accuracy nor ensures us any profitable trades. Technical analysis can only be used as a guideline to determine a good entry or exit point. We must use it in conjunction with other techniques, and strategies to help us find the best stocks with profit growth potential at the best price so that we can build, and exit our position without leaving too much money on the table.

In this chapter, we will look at some basic and useful technical analysis tools, and indicators, which can be used to determine good entry and exit prices of a stock, and to study its price strength.

3.2 Type of Chart

The types of chart commonly used by investors and traders in technical analysis can be divided into three main types, namely Line Chart, OHLC Bar Chart, and Candlestick Chart.

Line Chart

Line chart is the simplest form amongst the charts used by investors. It consists of many single data points, which are connected in series to form a continuous line, or a chart. This type of charts is commonly used by Malaysian investors to study the price pattern of stocks, and the charts can be obtained from Bursa Malaysia. The main advantage of the charts is that they are easy to read compared to some other forms of charts. However, line charts are not very informative. Other than providing closing prices, they do not tell us how volatile the share price movement is in a particular trading session. Also, a lot of important information such as the highest and lowest prices of the trading session, trading range, and price gaps are not included in the charts.

Below is a sample line chart of V.S. Industry Berhad share price from January 2014 to July 2014. The *y*-axis indicates its share price, whereas the *x*-axis shows the trading period. The chart is also overlaid with trade volume information (at the bottom of the chart).

Figure 3.2.1: Line Chart of V.S. Industry Berhad, from Jan 2014 to Jul 2014

Source: TradingView (www.tradingview.com)

OHLC Bar Chart

OHLC (opening-high-low-close) bar chart is another form of chart, commonly used in the past. Every bar contains a vertical line indicating the lowest and highest prices for the trading day or week (depending of the time or period that you choose). The horizontal line on the left-hand side of the vertical line depicts the opening price, whilst the horizontal line on the right indicates the closing price for the trading day or week. Although this type of charts is more informative than line chart, it still lacks visibility compared to candlestick charts. Therefore, it takes more effort to interpret a trendline, to track and identify price patterns, to spot price gaps, and to distinguish between positive and negative trading sessions.

Figure 3.2.2: OHLC Bars for Positive and Negative Trading Sessions

Below is a sample OHLC bar chart of V.S. Industry Berhad share price from January 2014 to July 2014. The *y*-axis indicates its share price, whereas the *x*-axis shows the trading period. The chart is also overlaid with trade volume information (at the bottom of the chart).

Figure 3.2.3: Bar Chart of V.S. Industry Berhad, from Jan 2014 to Jul 2014
Source: TradingView (www.tradingview.com)

Candlestick Chart

As the name implies, candlestick charts comprise of candlesticks with various lengths, to form a chart. Some candlesticks have got thin line(s) above or/and below the real bodies, which are known as upper wick (or upper shadow) and lower wick (or lower shadow), respectively. Compared to the two chart types discussed above, candlestick chart is a more popular type of chart nowadays. The size and colourful nature of the candlesticks enables users to spot price patterns, and early reversal signals rather quick, and to make analysis easier. From the chart we can tell if the share price is generally on uptrend, downtrend, or going sideways. Also, we can tell whether the current trend is likely to resume, or reverse in the near future. In addition, candlestick charts are more informative compared to line charts. Every candlestick contains the information of open, close, highest and lowest prices for a particular trading session. Further, we can get the trading price range info (difference between lowest and highest prices) from the candlestick.

A black (or red) candlestick indicates a negative trading session/day, whereby the closing price is lower than the opening price. It reveals that the bears, or selling pressure dominated the trading session.

Figure 3.2.4: Bearish Candle

A white (or green) candlestick, on the other hand, shows a positive trading session/day. The closing price of a positive trading session is higher than the opening price. It indicates that the bulls or buying pressure dominated the trading session.

Figure 3.2.5: Bullish Candle

Below is a sample candlestick chart of V.S. Industry Berhad share price from January 2014 to July 2014. The *y*-axis indicates its share price, whereas the *x*-axis shows the trading period. The chart is also overlaid with trade volume information (at the bottom of the chart).

Figure 3.2.6: Candlestick Chart of V.S. Industry Berhad, from Jan 2014 to Jul 2014

Source: TradingView (www.tradingview.com)

Other Common Features of the Charts

When reading a chart, be it a line chart, an OHLC chart, or a candlestick chart, there are two other important parts we should also pay attention to, namely trade volume, and price scale. Trading volume information can be usually found at the bottom of a chart, whereby each volume bar indicates the trade volume in a particular session. We will discuss the importance of trade volume pattern in the later part of this chapter. The type of price scale used, whether it is a linear scale or a logarithmic scale, on the other hand, can be told from the *y*-axis of the chart. Linear price scale enables us to measure the length, or height of a trend easily, whereas log scale allows us to see a trendline, price movements, and patterns more clearly.

3.3 Candlestick Chart Indicators

"*I believe the very best money is made at the market turns. Everyone says you get killed trying to pick tops and bottoms and you make all your money by playing the trend in the middle. Well for twelve years I have been missing the meat in the middle but I have made a lot of money at tops and bottoms.*"

Paul Tudor Jones

Candlestick chart indicators are usually used as a guideline for short-term trading, through which traders profit from the difference by buying a stock when its indicators point to a short-term strength, and by selling it once the indicators signal a short-term technical weakness. Without further ado, let us have a look at the candlestick chart indicators commonly used by short-term traders and investors below.

Bearish Candlestick Patterns:

3.3.1 Bearish Engulfing Candlestick

A Bearish Engulfing Candlestick has got a long black- (or red-) coloured real body candlestick that eclipses the shorter white- (or green-) coloured body candlestick of the previous trading session. The candlestick may contain an upper wick and/or a lower wick. The candlestick pattern portends that the existing uptrend is likely to come to an end soon, and will be followed by a reversal if it appears at the peak of an uptrend, or near the resistance level. It reveals that selling pressure is currently dominating the trading session, and sellers are in control of the stock's price movement. Even though the opening price of today session is higher than that of the previous session, the bears strike with their powerful paws, and push the price down. The share price is likely to fall following the formation of bearish engulfing pattern. Short-term traders will usually run for the hills when the pattern appears. If we do not want to hold the stock any longer, we can dispose our stock when the next candlestick closes below the low of the Bearish Engulfing Candlestick.

Figure 3.3.1.1: Bearish Engulfing

Figure 3.3.1.2: Bearish Engulfing Candlestick, Prestariang Berhad, on 13 Jan 2016 (Zoom-In View)
Source: TradingView (www.tradingview.com)

Figure 3.3.1.3: Bearish Engulfing Candlestick, Prestariang Berhad, from Jan 2012 to Oct 2018 (Zoom-Out View)

Source: TradingView (www.tradingview.com)

3.3.2 Bearish Harami

Also, Bearish Harami is a chart pattern signalling that the existing uptrend has almost come to an end and reversal may be happening soon. It consists of a long positive candlestick followed by a shorter negative candlestick with a smaller real body, whereby the real body of the former is so long that could contain the latter. On the second trading day, those sellers who intend to lock in their profits rush to sell when the bell rings, which results in the share price gapped down initially, and then closes below the opening price on the second trading day, but above the opening price of the first trading day. If we intend to exit our position, we can prepare to sell our shares when the pattern is formed near the peak, or the resistance level, as the share price is likely to move downward after this. Then start selling our shares when the next candlestick closes below the low of the Bearish Harami.

Figure 3.3.2.1: Bearish Harami

Figure 3.3.2.2: Bearish Harami, Ucrest Berhad, on 23 Jan 2018 (Zoom-In View)

Source: TradingView (www.tradingview.com)

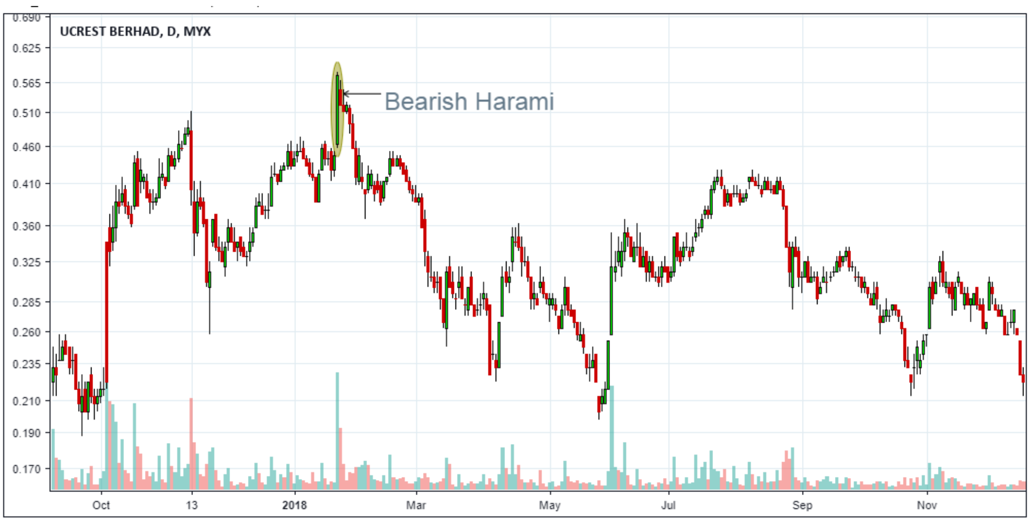

Figure 3.3.2.3: Bearish Harami, Ucrest Berhad, from Sep 2017 to Nov 2018 (Zoom-Out View)

Source: TradingView (www.tradingview.com)

3.3.3 Bearish Doji

Any Doji (be it a common Doji or Doji Star, a Long Wick Doji, or a Gravestone Doji) formed at the peak of an uptrend is called Bearish Doji. It usually signals that the existing uptrend is likely to end soon. Just like any other Doji, the candlestick has either no real body or a very short real body. The closing price of the candlestick is very similar with its opening price on the particular trading day or session. Neither sellers nor buyers win the battle. In an uptrend market, especially if the stock is at the peak, or near the resistance level, when buying pressure is balanced by equal magnitude of selling pressure, price would stop climbing, and reversal is likely to occur soon. The longer the upper wick, the stronger the bearish signal is. If you do not plan to hold the stock for long-term, you may start selling it as soon as the next candle closes below the Doji.

Figure 3.3.3.1: Type of Bearish Doji

Figure 3.3.3.2: Gravestone Doji, BP Plastic Holding Berhad, on 15 Jan 2016 (Zoom-In View)

Source: TradingView (www.tradingview.com)

Figure 3.3.3.3: Gravestone Doji, BP Plastic Holding Berhad, From Jul 2015 to Oct 2017 (Zoom-Out View)

Source: TradingView (www.tradingview.com)

3.3.4 Shooting Star

When a shooting star appears during a bull run near the peak of an uptrend, it is a warning sign that the sentiment has turned bearish. It is formed due to great selling pressure forces the share price of an advancing stock closes near its opening price. As a result, a candlestick with a long upper wick (at least twice of the length of the candlestick body) is usually seen near the resistance level, or at the peak of an upward price trend. The real body can be a white- or black-coloured body. The longer the upper wick, the stronger the bearish signal is. Traders will generally sell their shares when the next candle closes below the low of the Shooting Star. If you believe that the stock is overvalued, and plan to sell the stock, you may get ready to close out your position as soon as the candlestick appears at the peak of the price trend.

Figure 3.3.4.1: Shooting Star

Figure 3.3.4.2: Shooting Star, George Kent Berhad, on 02 Mar 2018 (Zoom-In View)

Source: TradingView (www.tradingview.com)

Figure 3.3.4.3: Shooting Star, George Kent, from May 2017 to Nov 2018 (Zoom-Out View)

Source: TradingView (www.tradingview.com)

3.3.5 Hanging Man

Hanging Man is another bearish reversal signal indicating that the existing uptrend is coming to an end soon. It is usually formed near the resistance level, or at the peak of an uptrend, as smart money have begun to close their positions in the morning, and the share price is bided up later by some uninformed speculators, or unwise "bargain hunter" who see the sell-off as an opportunity buy the stock on the cheap. As a result, a long lower wick is seen below the candlestick body. The real body can be a white- or black-coloured body. If you plan to close out your position in the stock when it reaches its peak, you can do so as soon as the next candlestick closes below the low of the Hanging Man Candlestick body.

Figure 3.3.5.1: Hanging Man Candlesticks

Figure 3.3.5.2: Hanging Man, AMMB Holding Berhad, on 14 Aug 2013 (Zoom-In View)

Source: TradingView (www.tradingview.com)

Figure 3.3.5.3: Hanging Man, AMMB Holding Berhad, from Aug 2012 to Jan 2016 (Zoom-Out View)

Source: TradingView (www.tradingview.com)

3.3.6 Tweezer Top

Tweezer Top pattern is also usually seen at the peak, or near the resistance level. It is signalling that the existing uptrend has almost come to an end. The pattern consists of a pair of two different coloured candlesticks, a white- (green-) coloured candlestick followed by a black- (red-) coloured candlestick, with the same high, as the second candlestick fails to make a new high due to strong selling pressure, or resistance at the previous high, where bears fight strongly to push the price downward. As a result, the share price retreats when it hits the previous high. If the stock is no longer meeting our investing criteria, selling it when the subsequent candlestick closes below the low of Tweezer Top candlesticks may be a good idea to maximising our gain.

Figure 3.3.6.1: Tweezer Top

Figure 3.3.6.2: Tweezer Top, Jaya Tiasa Berhad, on 22 Nov 2016 (Zoom-In View)

Source: TradingView (www.tradingview.com)

Figure 3.3.6.3: Tweezer Top, Jaya Tiasa Berhad, from Jul 2016 to May 2018 (Zoom-Out View)

Source: TradingView (www.tradingview.com)

Bullish Candlestick Patterns:

3.3.7 Bullish Engulfing Candlestick

Every Bullish Engulfing Candlestick pattern has got a long white- (green-) coloured real body candlestick that eclipses the real body of a shorter black- (red-) coloured candlestick of the previous trading session. The candlestick pattern portends that the existing downtrend is likely to come to an end soon, and it will be followed by a reversal if it appears at the trough of a downtrend line, or near the support level. It reveals that buying pressure is currently dominating the trading session, and buyers are in control of the stock's price movement. Share price is likely to rise following the formation of the bullish engulfing pattern. If you plan to build your position in an undervalued stock, or add to your position in a growth stock, this is probably a good window for you to buy it on the cheap before the share price trends upward. You may buy it when the next candlestick closes above the high of the Bullish Engulfing Candlestick.

Figure 3.3.7.1: Bullish Engulfing

Figure 3.3.7.2: Bullish Engulfing Candlestick, Petronas Chemicals Group Berhad, on 25 Aug 2015 (Zoom-In View)

Source: TradingView (www.tradingview.com)

Figure 3.3.7.3: Bullish Engulfing Candlestick, Petronas Chemicals Group Berhad, from Jul 2015 to Jul 2018 (Zoom-Out View)

Source: TradingView (www.tradingview.com)

3.3.8 Bullish Harami

A Bullish Harami is a bullish chart pattern, when appears at the bottom of a chart, signalling that the existing downtrend has almost come to an end, and reversal may be happening soon. It consists of a long negative candlestick followed by a shorter positive candlestick with a smaller real body, whereby the real body of the former is so long that can contain the latter. On the second trading day, buyers, who intend to buy on the cheap, rush to buy when the opening bell rings, which results in the share price gapped up, and closes above the opening price of the second trading day, but below the opening price of the first trading day. The signal is stronger if the second candlestick closes above the midpoint of the first candlestick. If you are on the sideline, and waiting to buy the stock, you may get ready to jump on the bandwagon, when the Bullish Harami pattern appears near the support level, or at the valley of a downtrend chart. You may buy it when the next candlestick closes above the high of the bullish candlestick.

Figure 3.3.8.1: Bullish Harami

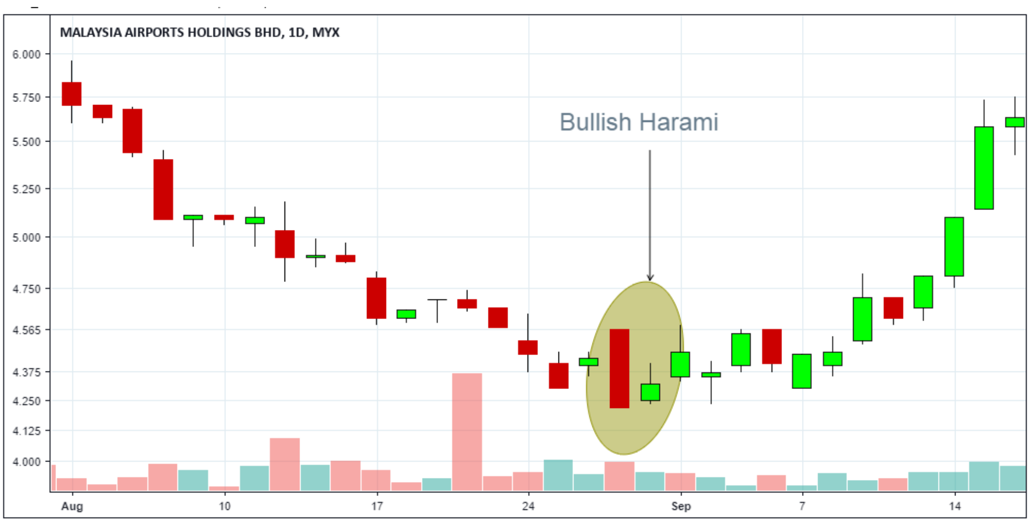

Figure 3.3.8.2: Bullish Harami, Malaysia Airports Holdings Berhad, on 28 Aug 2015 (Zoom-In View)

Source: TradingView (www.tradingview.com)

Figure 3.3.8.3: Bullish Harami, Malaysia Airports Holdings Berhad, from Oct 2014 to Nov 2017 (Zoom-Out View)

Source: TradingView (www.tradingview.com)

3.3.9 Bullish Doji

Doji formed at the trough of a downtrend chart is known as Bullish Doji (be it a common Doji or Doji Star, a Long Wick Doji or a Dragonfly Doji). Just like any other Doji, the candlestick has either no real body, or a very short real body. The closing price of the stock on a particular trading day is very close to its opening price. It reveals that neither sellers nor buyers win the battle. In a downtrend, when selling pressure is balanced by an equal magnitude of buying pressure in a particular trading day near the support level, the share price would stop falling and reversal is likely to occur soon, as the bulls fight vigorously to push the price back up. If we plan to trade the stock for short-term or buy it on the cheap, we can get ready to accumulate it as soon as the Doji appears on the chart. We should buy it when the next candlestick closes above the Doji candlestick. Note that whilst Doji generally signals an impending reversal, sometimes it (Doji Star, or Long Legged Doji) may signal a continuation of the existing pattern.

Figure 3.3.9.1: Bullish Doji

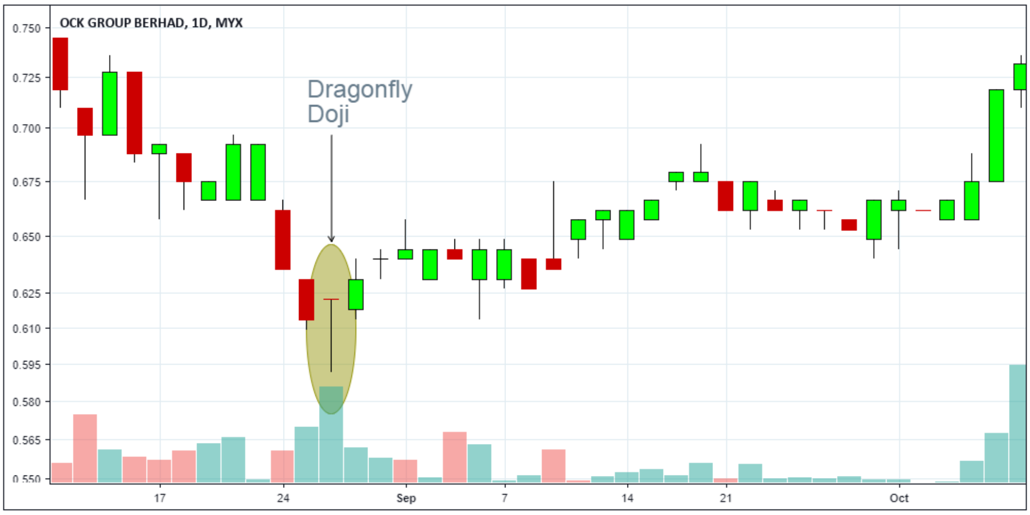

Figure 3.3.9.2: Dragonfly Doji, OCK Group Berhad, on 26 Aug 2015 (Zoom-In View)

Source: TradingView (www.tradingview.com)

Figure 3.3.9.3: Dragonfly Doji, OCK Group Berhad, from Jun 2015 to May 2017 (Zoom-Out View)

Source: TradingView (www.tradingview.com)

3.3.10 Hammer

Hammer candlestick pattern is usually found near the support level, or at the trough of a declining price trend, as the initial selling pressure is subsequently met with a great buying pressure. After the bears drag the share price to the lowest point the bulls fight back strongly, which eventually forces the share price closes near the opening price. As a result, a long lower wick, at least twice the length of the candlestick body, is seen below the candlestick body. The real body can be a white- or black-coloured body. The longer the wick, the stronger the bullish signal. If you plan to buy on the cheap, a close above the top of hammer's real body the next trading session is probably a good entry point during a short-term correction, or at the bottom of a chart.

Figure 3.3.10.1: Hammers

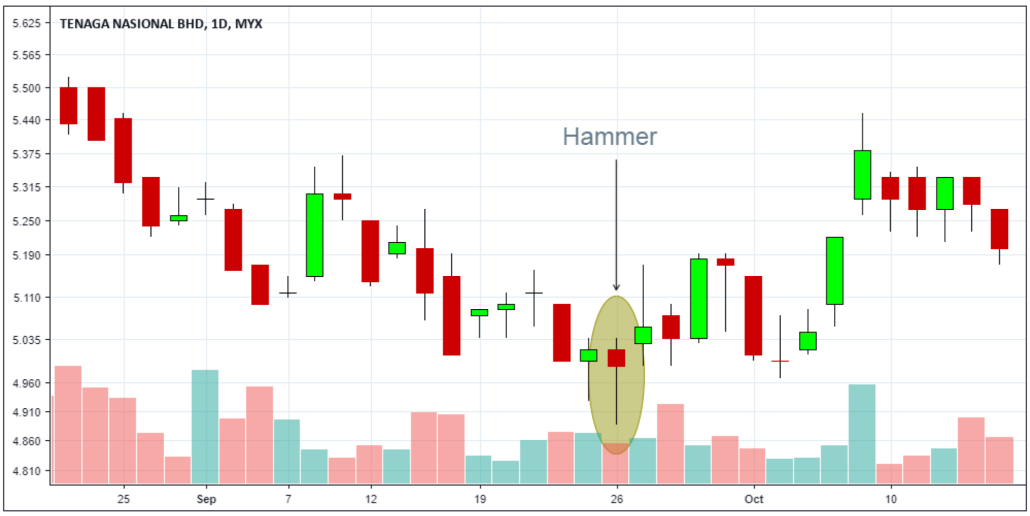

Figure 3.3.10.2: Hammer, Tenaga Nasional Berhad, on 26 Sep 2011 (Zoom-In View)

Source: TradingView (www.tradingview.com)

Figure 3.3.10.3: Hammer, Tenaga Nasional Berhad, from Apr 2011 to Jul 2014 (Zoom-Out View)

Source: TradingView (www.tradingview.com)

3.3.11 Tweezer Bottom

A Tweezer Bottom pattern appears at the valley of a chart, or near the support level is an indicator signalling that the existing downtrend has almost come to an end. The pattern consists of a pair of different coloured candlesticks, a black- (red-) coloured candlestick followed by a white- (green-) coloured candlestick, with the same low. The second candlestick fails to make a new low due to strong buying pressure, or support at the lowest level, where bulls fight strongly to push the price upward. As a result, the share price rebounds when it hits the previous low. If you intend to buy a stock for a short-term trade, or to build a position in the stock, scooping some shares when the subsequent candlestick closes above the high of Tweezer Bottom candlesticks can be a wise move.

Figure 3.3.11.1: Tweezer Bottom

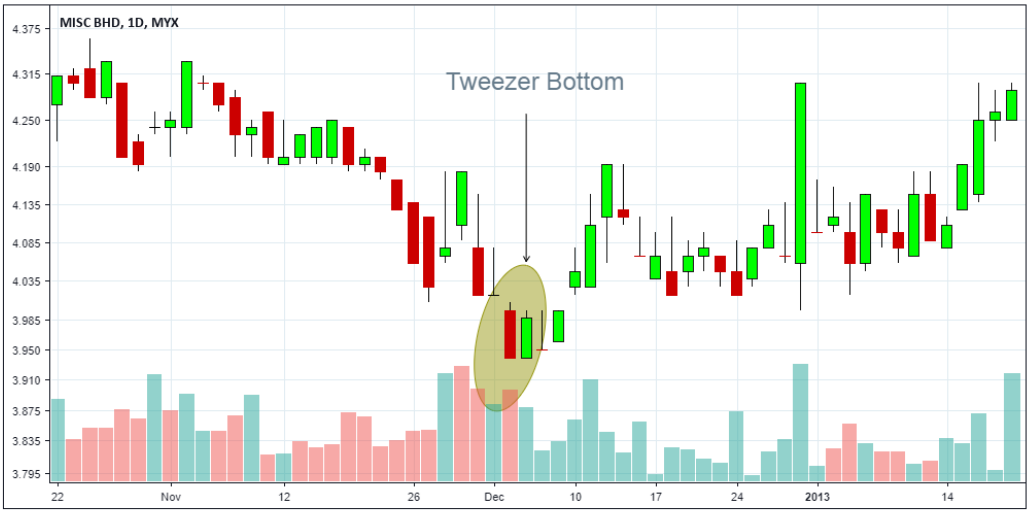

Figure 3.3.11.2: Tweezer Bottom, MISC Berhad, on 05 Dec 2012 (Zoom-In View)

Source: TradingView (www.tradingview.com)

Figure 3.3.11.3: Tweezer Bottom, MISC Berhad, from Jul 2011 to Jan 2016 (Zoom-Out View)

Source: TradingView (www.tradingview.com)

What we have studied so far are just some commonly seen candlesticks. There are many more types of bullish and bearish candlestick pattern, such as dark cloud cover, rising sun, evening star, evening doji star, falling window, morning star, morning doji star, three black crows, three white soldiers, bearish 3-method, bullish 3-method, three inside down, three inside up, piercing pattern, and etc. if you are interested to know about these candlesticks, you may learn about them from Japanese candlestick patterns' books.

Note: whilst most of the bearish reversal patterns do have a bearish candlestick, or a few bearish candlesticks formed at the peak, we should not be terrified by the negative candlesticks, as not of them signify the peaking of a long-term uptrend. Likewise, we should not start buying a stock simply because a bullish candlestick appears at the bottom of a chart, as it does not give us any guarantee that a long-term uptrend will begin soon. We need to study them in conjunction with other technical indicators in our analysis to make an informed judgement.

3.4 Support and Resistance

A support line is the level where investors and traders will buy aggressively, which prevents the share price declines further temporarily. Conversely, a resistance line is the level where people will sell like there is no tomorrow when share price hits a particular point, which prevents the share price rises continuously.

One of the reasons why support and resistance are formed is due to presence of cognitive biases. For example, a trader who intends to build a position in a stock but refuses to buy it at Rm1.00/share initially, would change his or her mind later to buy it at Rm1.00/share if it descends to that level again after watching the share price rose to Rm1.10, due to anchoring bias. As a result, strong support is formed at Rm1.00 level as the trader together with other buyers who missed the previous buying opportunity will join the buying spree when the share price declines to Rm1.00, preventing it from falling further and causing the share price held up steadily at Rm1.00 for a while.

Likewise, a trader who plans to exit his or her position, but reluctant to sell at Rm2.00/share initially, will then grab the offer when the share price return to Rm2.00/share level after the stock trades below Rm2.00/share for an extended period of time. As a result, the resistance level is formed, at Rm2.00 price zone, as the trader together with other sellers who missed the previous selling opportunity will sell when its price ascends to Rm2.00, preventing it from rising further and causing the share price to fluctuate around Rm2.00 for a while.

In this section, we will just focus on the concept of support and resistance. Other cognitive biases will be discussed in greater detail in the latter chapter called "The Biggest Behavioural Pitfalls in Investing".

How to Draw a Support Line
To begin with, we need to identify the lowest points of the candlestick bodies at two valleys, and then we connect them in a straight line (refer to Figure 3.4.1). The straight line can be a horizontal line, or an inclined line with negative gradient or positive slope. The straight line, when extrapolated, can be used as a support line to determine a good buying point, where the share price is less likely to decline further in the near future. The higher frequency the support line is touched by the share prices, the greater significance the support is.

How to Draw a Resistance Line
Likewise, to draw a resistance line, we need to identify the highest points of the candlestick bodies at two peaks, and then we connect them in a straight line (refer to Figure 3.4.1). Similarly, the straight line can be a horizontal line, a linear line with positive slope or an inclined line with negative gradient. The straight line, when extrapolated, will serve as a resistance line, with which we can find a good selling point, where the share price is less likely to rise further

in the near future. The higher frequency the resistance line is touched by the share prices, the greater significance the resistance is.

Figure 3.4.1: Support and Resistance Lines, IJM Corporation Berhad
Source: TradingView (www.tradingview.com)

The Importance of Support and Resistance Lines
Finding the support and resistance lines is an important task to many traders, as the lines enable them to determine the trend so that they won't play on the wrong side of the game. For example, countertrend traders will use the levels as guidelines to find the best entry and exit points, and to place their orders – buy and sell orders – when share prices bounce off the support and resistance levels, respectively. Trend-following traders, on the other hand, will use them as a guideline to find the best selling price when the support is broken down, or to find the best buying price when price breaks out through the resistance at unusually high volume transactions. Also, they use the lines as a guideline to determine their stop loss points, in case if the market goes against them, and to determine the exit point, so that they won't be trapped in a sideways market.

"*In a bull market it is better to always work on the bull side; in a bear market, on the bear side.*"

Charles Dow

When the economy is booming, or in a bull market, stocks tend to perform well, as demand is greater than supply; the resistance of the stocks is generally weak, and their support is very strong. Therefore, most stocks tend to show a series of higher lows and higher highs (refer to Figure 3.4.3). These signs indicate that the trend is generally up. Conversely, during a correction, or a bear market, the support of a stock's price is generally weak, and its resistance is very strong. Therefore, the respective stock will be displaying a series of lower highs and lower lows (refer to Figure 3.4.2). This is an indicator of a downtrend market. By mastering the concept, we will be able to capture the best buying opportunity after the market capitulates, and when an upside breakout occurs. Also, it allows us to exit our position when the downside breakout occurs. We are able to change our direction when reversal occurs if we pay enough attention to the signals given by the indicators.

Figure 3.4.2: Lower highs and lower lows pattern

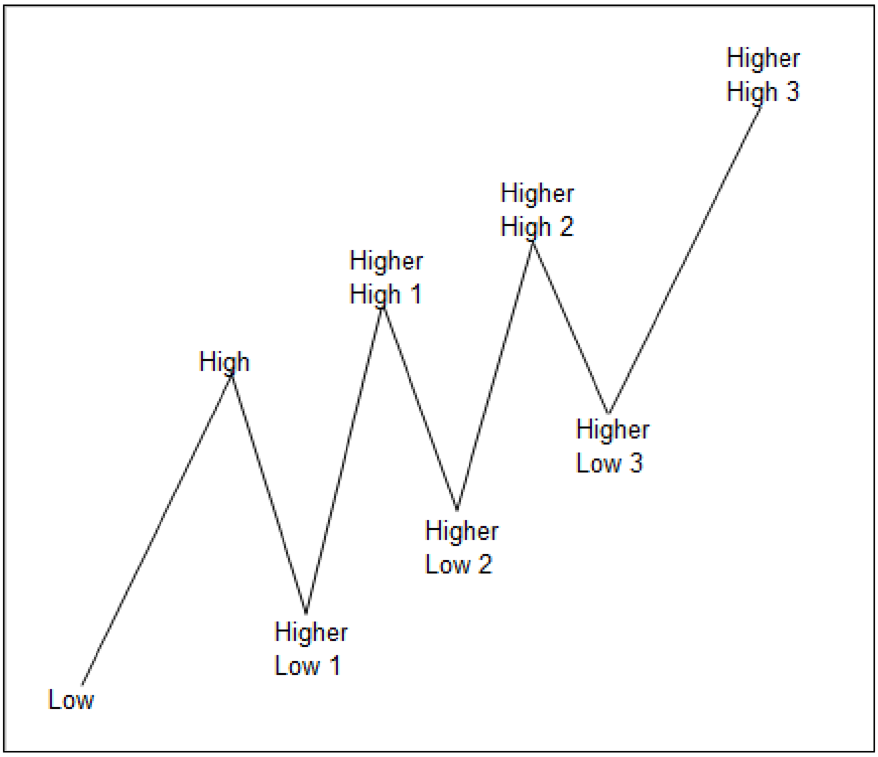

Figure 3.4.3: Higher lows and higher highs pattern

If you have missed out an opportunity to buy a stock when a breakout occurs earlier on, do not be disheartened. Usually when an upside breakout occurs with a strong volume, the old resistance line would immediately become a new support line. You may wait for a pullback near the new support level, as people who intend to cash in their profits after the breakout would sell it down for you to buy at the new support level. Likewise, you do not have to be nervous if you have missed out an opportunity to sell your shares when a downside breakout occurred earlier on. Usually when a downside breakout occurs, the old support line will become a new resistance line. You may sell your stock near the resistance level, as unwise “bargain hunters” would buy it and push the share price up to the resistance region.

3.5 The Importance of Trading Volume

Trading volume is the number of shares traded every minute, day or month, depending on the period that you choose. For instance, in a daily price chart, each bar shown in the bar chart below share price indicates the number of shares bought and sold in a specific day.

To beginners, other than showing them the number of shares change hand in a particular trading day, trading volume has no other functions. In actual fact, the importance of trading volume extended beyond the main function of indicating the activity level of a stock.

For example, the volume data can be used to confirm the validity of a breakout. As we know, trade volume is generated due to the buy sell activities of traders. These activities are induced mainly by human emotions such as greed and fear, which may cause market participants to push the share price up aggressively, and sell down a stock in panic, respectively. If the accompanying trading volume is low, the breakout is more likely to be a whipsaw, as interested buyers are not aggressive enough in pushing the price upward. When the interest falters, the breakout fails. Therefore, shrewd traders always use trading volume as a tool to confirm a trend breakout. They would not commit their money if the volume is too low, as the breakout could be a false one. Whilst a high volume breakout is an ideal case, we should not discount the breakout if the trade volume is flat. Sometimes the trade volume only picks up a few days after the breakout. Also, we could not expect to have a high volume breakout for a stock if the trade volume of its industry or the general market is light.

In addition, trading volume shows the significance of a trend. An upward share price movement is more sustainable if the accompanying volume is increasing continuously, as more and more buyers with great enthusiasm join the bull camp. On the other hand, an upward share price movement with a declining trade volume trend is less likely to be sustainable, as buyers are becoming less willing to bid up the share price, or are showing lack of interest. This phenomenon is known as price-volume divergence, which is a leading momentum indicator showing that trend reversal is imminent. We can get ready to dispose our shares if we no longer want to hold the stock after the first sign of exhaustion move appears.

Also, learning how to read volume chart allows us avoid illiquid stocks. Many of the stocks listed on Bursa Malaysia are illiquid stocks. These stocks cannot be easily sold in the open market due to lack of buyers or interest in the stocks.

According to Koon, selling a stock with low trading volume is a difficult task. It would take us weeks, if not months, to exit our position in the stock completely, and very often with a loss, if we hold any illiquid stock.

3.6 Moving Average

Moving Average (MA) is one of the most useful tools in technical analysis that we should not disregard. In the past, market technicians have to calculate moving average data manually in order to draw MA lines, which is a tedious job. Thanks to the invention of computer software and smart phone apps, we can now access to the MA line chart at our fingertips, which has made analysis easier for all investors. Moving average can be divided into three main types, namely simple moving average (SMA), exponential moving average (EMA), and weighted moving average (WMA).

Simple moving average (SMA) indicates the average price of a stock within a specific period of time. For example, if we select 5-day SMA for a stock, our charting software will take the sum of the stock's closing prices over the past 5 days and divide the figure by 5. Whilst most of the computer programmes have this tool or function built into their charting system, which allows users to plot the SMA line within seconds, we may also calculate it ourselves using the SMA formula below.

$$5\text{-day SMA} = \frac{P_1 + P_2 + \ldots\ldots + P_5}{5}$$

Just like SMA, Weighted Moving Average (WMA) also shows the average price of a stock over a period of time, but it applies more weight to the recent data and less weight on distant past data. Since WMA gives more weight to the recent share prices, it responds faster to the change in the share price and it is more sensitive to share price movement than SMA. Below is the formula of 5-day WMA.

$$5\text{-day WMA} = \left(P_5 \times \frac{5}{15}\right) + \left(P_4 \times \frac{4}{15}\right) + \left(P_3 \times \frac{3}{15}\right) + \left(P_2 \times \frac{2}{15}\right) + \left(P_1 \times \frac{1}{15}\right)$$

Similar to WMA, Exponential Moving Average (EMA) also put more weight to the recent past data. But it uses a more complex formula. In order to calculate EMA, first of all, we need to calculate the SMA for the initial EMA. Subsequently, we calculate the multiplier using the following formula

Multiplier = $\frac{2}{N+1}$, where N is the period used.

Next, we determine the latest EMA using the following formula,

EMA = Closing Price – EMA (previous day) × Multiplier + EMA (previous day)

Note that the longer the period of time we select, the slower the moving average responds to the change in share price. Conversely, the shorter the period of time we select, the faster the moving average responds to the change in share price.

Some of you must be wondering now which period of time is the best indicator you should use to keep track of share price movement. Well, actually there is no exact answer to the question. But as a rule of thumb, if you are a short-term trader, you may want to consider using 5-day, 10-day, 20-day, 30-day moving averages. If you are a long-term investor, I would suggest that you consider using 50-, 100-, 150- and 200-day moving averages. Also, you may combine four lines together, and then use the long-term MA lines crossover to devise your strategy, and the short-term MA lines crossover to develop your buy and sell tactics. This guideline is just a simple strategy for beginners to help them hit the ground running, and is by no mean the only approach to increasing your chance of making a profitable trade or investment. You may experiment with some other moving averages, and with different time periods to find the set of MA lines that is more suitable for you.

In general, medium- and long-term investors will buy a stock when its 50-day moving average (DMA) line crosses up through the 200-DMA line, which is also known as golden cross. They will exit their positions when the 50-day moving average line of a stock crosses down through the 200-day moving average line, which is known as death cross. Let us take Figure 3.6.1 as an example; golden cross, and death cross formed in Jan 2017, and Nov 2017, respectively. Had anyone bought Eversendai at Rm 0.610 when the golden cross appeared, and sold it at Rm 0.885 when the death cross formed, he or she would have made 45% gain out of the investment.

Figure 3.6.1: Moving Average Crossover, Eversendai Berhad
Source: TradingView (www.tradingview.com)

The reason why market technicians buy a stock when a golden cross forms is that smart investors would have built a large position in the stock near the base, and continue to buy when a company's business grow, thus causes the share price to rise. Bear in mind that a growing company with good performance is more likely to continue thriving. Take a manufacturing firm as an example, when its industry starts booming, the company is likely to get more and more contracts, and is able to expand its capacity due to rising demand. When its earnings grow in corresponding to the growing orders, so does its share price.

On the other hand, selling a stock when a death cross signal is triggered is also important that it will protect our capital and profit. An overvalued stock will experience a price drop until it reaches its value zone. Also, a company with some serious problems, such as having a financial difficulty, or facing oversupply problem, is more likely to continue showing dreadful performance. When the correction, and problem begins, well-informed and smart investors will start disposing their shares, which will result in the 50-DMA line crosses down through the 200-DMA line. That is a good window for shareholders who still hold on to the stock to escape.

"*Big money is made in the stock market by being on the right side of the major moves. The idea is to get in harmony with the market. It's suicidal to fight trends. They have a higher probability of continuing than not.*"

Martin Zweig

The trend is our friend, do not bet against it. A stock will continue to be in downtrend until the trend is broken, that is when its share price is either going sideways or heading upward. In other words, a trend will continue in its original direction until something forces it to change its direction. For example, the business of a poorly managed company will continue to deteriorate until a competent management team steps in to turn the business around. Investors who refuse to heed to the signal is more likely to see their stock plunging continuously.

In general, the trend line of 200-DMA usually reflects the underlying business and financial health of a company; whilst the trend line of 50-DMA reflects some new developments in the company. Moving averages with shorter time frames mostly reflect market expectations on the company, and the occurrence of random event which may lead to a change of the company's business.

Also, MA lines can be used as support and resistance lines. In a bull market, 50-DMA and 200-DMA lines can be used as support lines. Share price crosses below the MA lines may be signalling some weakness, or indicating that the trend has changed. Let us use the chart below (Figure 3.6.2) as an example; the uptrend of KESM was still intact until its SMA50 (50-day SMA or 50-DMA) and SMA200 (200-day SMA or 200-DMA) support lines are breached. Had anyone paid enough attention to its MA lines, they would have made some good money out of the trend. In a bear market, however, 50-DMA and 200-DMA lines are used as resistance lines. Share price crosses above the MA lines may be indicating that the trend has changed. That said, the MA lines cannot be used as a sole indicator to judge if a trend has reversed. We should also use it in conjunction with a few other tools such as chart patterns, and momentum indicators to confirm the trend.

Figure 3.6.2: SMAs of KESM Industries Berhad (as support lines)

Source: TradingView (www.tradingview.com)

3.7 Common Chart Patterns

"*To be a good trader, you need to trade with your eyes open, recognize real trends and turns, and not waste time or energy on regrets and wishful thinking.*"

Alexander Elder

In general, stock price moves in trend. That's why common patterns can be spotted easily in stock charts. But not many people pay attention to the patterns. Most gamblers, and fundamental analysts do not look for chart patterns to trade. If we are willing to devote some effort to learn how to read chart patterns, and spend time to interpret them we would have a better grasp of mass psychology, and would have the odds stacked in our favour. For instance, we can initiate a position when the breakout of a pattern occurs, and then set a stop loss point (in order to get us out in case if the market goes against our bet) and close the position out when trend has reversed. Without further ado, let us have a look at the common chart patterns we should not miss.

Bearish Chart Patterns:

3.7.1 Double Tops

A Double Tops pattern is a bearish reversal of an uptrend. It gives a warning signal to people that the existing bullish trend is likely to come to an end soon. It demonstrates strong resistance at the peak, mostly at the top of a price chart. The pattern has got two peaks separated apart by a shallow valley, where the lowest point of which serves as a support or neckline level. The pattern is formed when the share price of a stock is unable to penetrate the first peak, or resistance level, as sellers who missed the previous selling opportunity or people who could not exit their positions completely at the first top would sell aggressively near the resistance level again, thus forming the second peak. As the selling momentum continues, the stock price heads lower and lower. The pattern is confirmed when the neckline is broken down (a close below the neckline). If you plan to exit to your position in a stock, a break down (often accompanied by a high volume) like this pattern is a good selling window. Once the neckline is broken, the previous support level will become a new resistance level, as sellers who missed the previous selling opportunity will rush in to sell it when share price approaches the level again in the near future.

Figure 3.7.1.1: Double Tops

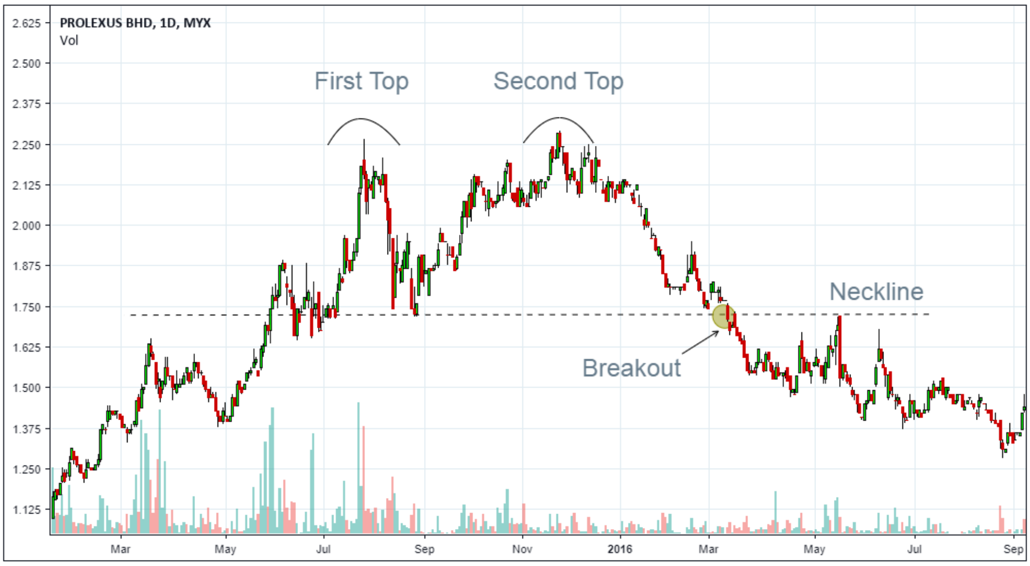

Figure 3.7.1.2: Double Tops, Prolexus Berhad, from to Feb 2015 to Sep 2016
Source: TradingView (www.tradingview.com)

3.7.2 Head-and-Shoulders Top

A Head-and-Shoulders Top pattern is another potential bearish reversal of an uptrend, indicating the possible end of a bullish trend. After the formation of the first shoulder or left shoulder, a pullback occurs, as those well-informed investors start to dispose their shares. The share price will then find its new support at the neckline level. It subsequently advances to a new high level. At the peak, the selling pressure is so great that it causes the share price to move downward again. When it approaches the neckline level, those uninformed buyers who missed the previous buying opportunity will go in to buy during the final round of rally before the price tumbles. At the peak of the right shoulder, the share price meets its resistance and the price retraces, thus forming the right shoulder. The head-and-shoulders top pattern is confirmed when the neckline (a line drawn across the left and right armpits) or support is broken down with a close below the line. The volume at the breakdown point is usually quite high. If you intend to exit your position in the stock, a close below the downside breakout (breakdown) point is a good selling window for you to get out of your position.

Figure 3.7.2.1: Head-and-Shoulders Top

Figure 3.7.2.2: Head-and-Shoulders Top, Coastal Contract Berhad, from Jun 2014 to Oct 2014

Source: TradingView (www.tradingview.com)

3.7.3 Descending Triangle

A Descending Triangle is a right-angled triangle pattern showing the continuation of the previous downtrend, or a trend reversal when share price breaks out downward after a period of sideways consolidation. The share price is making a series of lower highs, thus forming a descending resistance line. Every time when share price approaches the support level, it is unable to go lower, as buyers who wait at the sideline will buy aggressively, thus forming a level support line. After entering the zone, the market will trade range bound (in descending order) until breakout occurs. Volume is usually quite high at the downside breakout point, where selling pressure is pretty strong.

Remark: whilst the price usually breaks out downward, it may sometimes go in opposite direction. If the share price breaks out upward (above the descending resistance line), it then signals the start of a bullish trend. As traders and investors, we must always pay attention to the direction where the breakout occurs prior to making our trade decision.

Figure 3.7.3.1: Descending Triangle

Figure 3.7.3.2: Descending Triangle, Aeon Berhad, from Jan 2018 to Dec 2018

Source: TradingView (www.tradingview.com)

3.7.4 Ascending/Rising Wedge

A Rising Wedge is a short-term bearish reversal pattern that sloped upward, with contracting price range, and the price movement of share is usually bounded by the converging ascending support and resistance lines, signalling the beginning of a bearish trend. From the chart below, we can see that as the share price increases, its growth rate dwindles. It will cease producing higher highs and higher lows when downside breakout occurs. Trade volume would usually pick up at the breakdown point. If you intend to exit your position in the stock, this is probably a good window for you to sell your shares at a high price.

Figure 3.7.4.1: Ascending/Rising Wedge

Figure 3.7.4.2: Ascending/Rising Wedge, IOI Corporation Berhad, from Jul 2017 to Nov 2018

Source: TradingView (www.tradingview.com)

3.7.5 Bearish Symmetrical Triangle

A downtrend will begin when the support (or lower ascending trendline) of a Symmetrical Triangle is broken. The price movement is usually bounded by the converging upper descending, and lower ascending trendlines. The trade volume before the breakout is generally low. A close below the lower ascending trendline with a high volume confirms the pattern. If you intend to exit your position in the stock, this is a good window for you to sell your shares. Note that if the share price breaks out upward (above the upper descending resistance line), it then signals the start of a bullish trend. Again, you must pay attention to the direction where the breakout occurs to make an informed judgement.

Figure 3.7.5.1: Bearish Symmetrical Triangle

Figure 3.7.5.2: Bearish Symmetrical Triangle, A-Rank Berhad, from Sep 2016 to May 2018

Source: TradingView (www.tradingview.com)

Bullish Chart Patterns

3.7.6 Bullish Symmetrical Triangle

An uptrend will begin when the resistance (upper descending trendline) of a Symmetrical Triangle is broken. The price movement of the stock is bounded by upper descending, and lower ascending trendlines. The volume before the breakout is usually low. A close above the upper descending trendline (usually with high volume) confirms the pattern. This type of trend is commonly seen in the charts of uptrend stocks. It gives the stocks a chance to take some breathers before they continue the 'marathon'. If you have missed the boat earlier, but still want board it, the sideways trade gives you an opportunity to catch it when the breakout happens. That said, you should not act hastily. It is advisable that you wait patiently at the sideline until the breakout occurs whenever you see this type of chart pattern. Buying before the breakout occurs is a blind bet, do not ever try it. For traders who have no plan to hold the stock for long term, after buying it, you may use the height of its base as a guideline to set your price target, where you may exit your position when the price target is reached.

Figure 3.7.6.1: Bullish Symmetrical Triangle

Figure 3.7.6.2: Bullish Symmetrical Triangle, Magni-Tech Industries Berhad, from May 2015 to Jul 2017

Source: TradingView (www.tradingview.com)

3.7.7 Double Bottoms

A Double Bottoms pattern is a bullish reversal of a downtrend indicating that the existing bearish trend has come to an end. The stock has got strong buying force near the support level, mostly at the bottom of a price chart. The first bottom is formed when its share price bounces up once it reaches the support level. As it bounces up, selling pressure will rise, and it causes the price to stop advancing near the resistance. After hitting the resistance or neckline, a pullback will occur. When it approaches the support level again, buyers who missed the first bottom will rush in to buy near the support level, thus causing the share price to go up, and forming the second bottom. Even if you are tempting to buy at the second bottom, do not do it. It may be a trap, and your purchase might turn into a losing trade if the share price is descending further and the support is broken down. Wait for the breakout at the neckline level with high volume to confirm the trend. Once the neckline is broken, the previous resistance level will turn into a new support level, as people who missed the previous buying opportunities will rush in to buy it when the share price approaches the level again. For traders who have no plan to hold the stock for long term, after buying it, you may use the range as a guideline to set your price target, where you may exit your position when your price target is reached.

Figure 3.7.7.1: Double Bottoms

Figure 3.7.7.2: Double Bottoms, British American Tobacco Berhad, from Feb 2018 to Jul 2018

Source: TradingView (www.tradingview.com)

3.7.8 Inverse Head-and-Shoulders

An Inverse Head-and-Shoulders pattern is a bullish reversal of a downtrend indicating the end of a bearish trend. The downtrend ends with the formation of head followed by right shoulder when bulls bid the price up continuously until the neckline level second time. After encountering strong resistance at the neckline level, the share price retraces to the nearest support level, a level pretty close to the level of the first shoulder (left shoulder), where late buyers who missed the buying opportunity would rush in to buy. As buying pressure grows, price advances. A breakout occurs when share price closes above the neckline, with an unusually high volume. As soon as the neckline (a line drawn across the left and right armpits) is broken with a close above the line, the inverse head-and-shoulders pattern is confirmed. If you plan to long the stock but have not found a window to get in, the breakout actually provides you a good opportunity to buy it at a very low risk. After buying the stock, if you do not intend to hold it for long-term, you may use the height between head and neckline as a guideline to estimate how high the share price can reach, and use it to plan for your exit.

Figure 3.7.8.1: Inverse Head-and-Shoulders

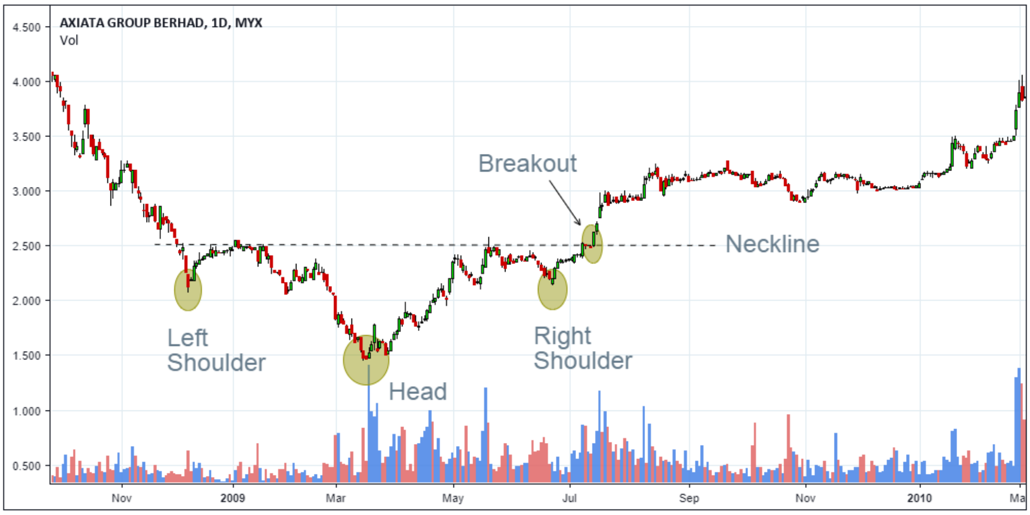

Figure 3.7.8.2: Inverse Head-and-Shoulders, Axiata Group Berhad, from Oct 2008 to Feb 2010

Source: TradingView (www.tradingview.com)

3.7.9 Ascending Triangle

Ascending Triangle is a right-angled triangle pattern showing the continuation of the previous uptrend when share price breaks out upward after a period of sideways consolidation. The share price is making a series of higher lows, thus forming a rising support line. Every time when share price approaches the resistance it is unable to climb higher and will be pulled back, as sellers who wait at the sideline will sell aggressively, thus forming a flat resistance line. The market, after entering the zone, will trade range bound (in ascending manner) until breakout occurs. Volume is usually quite high at the breakout point, where buying pressure is strong. This type of trends is also commonly seen in the charts of uptrend stocks. It gives the stocks chances to take some breathers before they continue the 'marathon'. If you have missed the boat earlier on, but still want board it, this is an opportunity for you to catch it when the breakout happens. That said, you should not act hastily. It is advisable that you wait patiently at the sideline until the breakout occurs when you see this type of chart pattern. If you have sold your shares by mistake earlier on, you may buy back the shares to take advantage of the bullish momentum. If you plan to add to your position, the breakout also provides you an opportunity to buy more at a lower risk level. For traders who have no plan to hold the stock for long term, you may use the height of its base as a guideline to set your price target, where you can exit your position when the price is reached.

Remark: whilst the price usually breaks out upward, it may sometimes go in opposite direction. If the share price breaks down or breaks out downward (below the rising support line), it then signals the start of a bearish trend.

Figure 3.7.9.1: Ascending Triangle

Figure 3.7.9.2: Ascending Triangle, Apex Healthcare Berhad, from Jun 2016 to Aug 2018, from Jan 2017 to Jul 2017

Source: TradingView (www.tradingview.com)

3.7.10 Descending/Falling Wedge

A Falling Wedge pattern is a bullish reversal pattern that sloped downward, with contracting price range, signalling the beginning of a bullish trend. From the chart below we can see that as the share price falls, its declining rate dwindles. It will cease producing more lowers lows when breakout occurs. Trade volume usually picks up at the breakout point after a period of consolidation. This is a good time to build a position in our favourite stock, to add more shares to our existing position or to buy back the shares we have sold earlier on.

Figure 3.7.10.1: Descending/Falling Wedge

Figure 3.7.10.2: Descending/Falling Wedge, Lion Industries Corporation Berhad, from Jul 2016 to Mar 2017

Source: TradingView (www.tradingview.com)

3.7.11 Cup-with-Handle

A Cup-with-Handle pattern is a bullish pattern signalling the continuation of the previous bullish trend after a period of share price consolidation, as selling pressure dissipates, and buying pressure regains its lost ground. A close above the breakout point (and old high) confirms the pattern. Volume tends to be high at the breakout point, as there is more enthusiasm from eager buyers than pessimism from disheartened sellers. It usually happens due to some new developments, positive news announcements, or a change in market sentiment. You may start building a position in the stock, add to your profitable position, or even buy back the shares you have sold earlier on when the breakout happens.

Remark: breakdown may occur within a short period of time after the breakout if the cup with handle formation is an improper base. Therefore, we should also pay attention to the formation of the cup.

Figure 3.7.11.1: Cup-with-handle

Figure 3.7.11.1: Cup-with-handle, Malaysia Steel Works Berhad, from Jan 2016 to Nov 2016

Source: TradingView (www.tradingview.com)

3.8 Commonly Used Momentum Indicators

People will turn greedy when the share price of a stock keeps rising to an irresistible level. Likewise, investors will feel anxious, and become panic when the share price sinks like a stone. Of all the indicators we have learnt so far, none of them could give us a guarantee that the emotions of market participants have changed. Therefore, we need another set of indicators to confirm the signals of change in human emotions.

Below are some useful leading and lagging momentum indicators that can help us get a better grasp of mass psychology, and increase our probability of finding the next uptrend stock near the inflection point, or buying an uptrend stock near the turning point of a minor correction before the share price surging upward again, by assessing the change in human emotions when people turn greedy.

3.8.1 Moving Average Convergence and Divergence (MACD)

Moving Average Convergence and Divergence (MACD) is a momentum indicator showing the strength of a price movement by subtracting 26-period EMA from 12-period EMA. The MACD line is above the base line when the12-period EMA is above the 26-period EMA. The line is subsequently compared with a 9-day EMA line, called signal line, to determine a good buying point when the MACD line crosses above the signal line (a bullish signal) and to find a good selling point when the MACD line crosses below the signal line (a bearish signal). A histogram is usually used to display the difference, whereby a positive bar indicates that the MACD line is above the signal line, whereas a negative bar indicates that the MACD line is below the signal line.

Let's use Figure 3.8.1.1 as an example for discussion. If you had bought Mycron Steel when its MACD line (light blue) is above the base line and crosses above the signal line (orange) at Rm 0.590/share, and sold it when its MACD line (light blue) crosses below the signal line (orange) at Rm 0.895/share, you would have made 51% profit out of the trade.

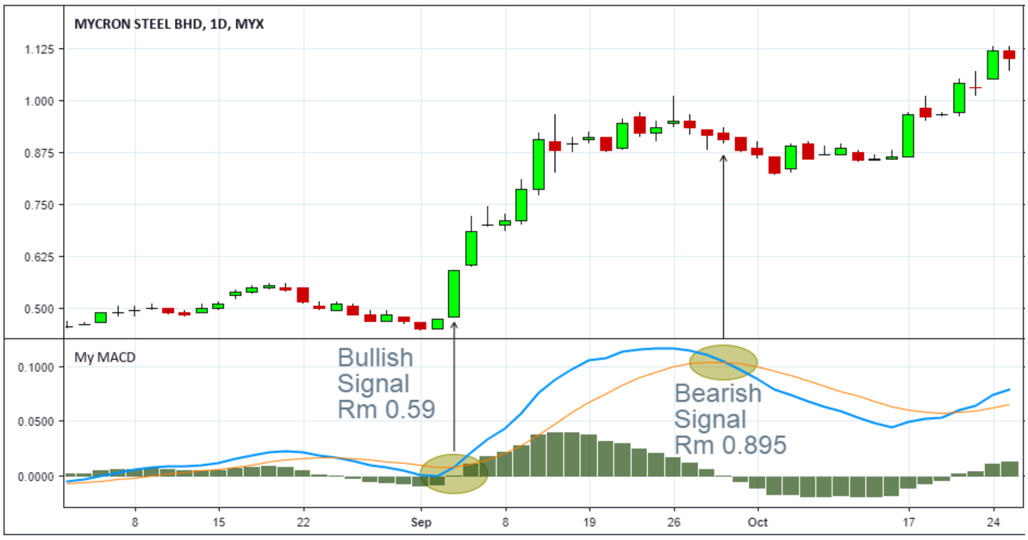

Figure 3.8.1.1: MACD-Signal Line Crossover, Mycron Steel Berhad, from Aug 2016 to Oct 2016

Source: TradingView (www.tradingview.com)

Another function of MACD line is to find out if the trend is about to reverse, by spotting the divergence between MACD line and share price movement. For example, even if the share price shows higher highs, when the MACD line forms lower highs, it reveals that the current price trend is unsustainable, and reversal is likely to happen in near future. This is a bearish signal. If you intend to exit your position, you may get ready to dispose your shares when a bearish candlestick appears subsequently.

Let us use the previous example, Mycron Steel, for discussion. We can see from Figure 3.8.1.2 that its MACD had formed a lower high (from late Sep 2016 to early Nov 2016) even though its share price kept showing higher highs. The divergence was a warning sign indicating that the prevailing uptrend was unsustainable. Had any of its investors paid an attention to the signal, they would have exited their position in the end of Oct 2016 without leaving much money on the table.

Figure 3.8.1.2: Price-MACD Divergence, Mycron Steel Berhad, from Sep 2016 to Dec 2016

Source: TradingView (www.tradingview.com)

3.8.2 Relative Strength Index (RSI)

Relative Strength Index (RSI) is a momentum indicator showing that a stock is oversold or overbought. The standard period normally used by traders is 14 (or 14 days). A stock is said to be oversold when its RSI is below the level of 30, and overbought when its RSI is above the level of 70. That said, we should not buy a stock once the RSI of the stock crosses below the oversold line. The share price of an oversold stock can keep going lower despite staying in the oversold region (below RSI 30) for an extended period of time. It is advisable that you pay a close attention to its share price movement when it enters the oversold territory, and begin to buy it only when its RSI crosses above the oversold line. When the oversold line is crossed up, the share price is likely to climb higher. Likewise, we should not sell a stock immediately if the RSI of the stock has crossed above the overbought line. The price of an overbought stock could keep rising even if it remains in the overbought region (above RSI 70) for a long period of time. If you really want to take the profit off the table, sell it only when its RSI crosses below the overbought line. When the overbought line is crossed down, its share price is likely to fall lower.

Let us take a look at the chart of CIMB share price (Figure 3.8.2.1) below. The RSI of CIMB crossed below the oversold line in mid-Jan 2016, but its share price kept falling until late Jan 2016. The price only ceased falling when RSI crosses above the oversold line (RSI 30) in late Jan 2016. The RSI then moved upward until it crossed above the overbought line and subsequently crossed below the line in mid Mar 2016. Had anyone bought it at Rm 3.94/share when the RSI line crossed above the oversold line, and sold it at Rm 4.75/share when the RSI line crossed below the overbought line, he or she would have made about 20% profit within two months. Not too shabby though.

Figure 3.8.2.1: Price-RSI crossover, CIMB Group Holdings Berhad, from Oct 2015 to May 2016

Source: TradingView (www.tradingview.com)

Similarly, the divergence concept can be applied when using RSI indicator. The trend is about to reverse when the divergence between RSI and share price movements occurs. For example, even though the share price of a stock shows lower lows when it is on a downtrend, if its RSI shows higher lows, it reveals that the current price trend is unsustainable, and reversal is likely to happen in near future. That is a bullish signal. If we plan to build a position, we may get some dry powder ready, and buy it when a bullish candlestick appears.

Let us use the same example, CIMB Group Berhad, for discussion. From the chart below (Figure 3.8.2.2), we can see that even though the share price of CIMB kept falling from Jun 2015 to Jan 2016, its RSI had ceased making more lower lows. That was an early sign of trend reversal. Had any investor paid a close attention to the indicator in Jan 2016, he or she would have made some money out of the reversal.

Figure 3.8.2.2: Price-RSI Divergence, CIMB Group Berhad, from Mar 2015 to Jan 2017

Source: TradingView (www.tradingview.com)

3.8.3 Rate of Change (ROC)

Rate of Change (ROC) is another momentum indicator used to determine the rate of change in share price over a period of time. Below is the formula of ROC

$$ROC = \left(\frac{current.price}{previous.price} - 1 \right) \times 100$$

The share price of stock with a positive or high momentum (bullish signal) will be rising and the stock is likely to outperform the market. A stock with a negative or low momentum (bearish signal), on the other hand, will be falling and the stock will probably underperform the market. Note, however, that ROC has no upside limit. Unlike RSI, the value of ROC can surge to a very high level, depending on the movement of the share price.

The example below (Figure 3.8.3.1) shows that the share price of Dialog Group increased about 22% when its ROC was having a positive momentum from 17 Dec 2014 to 22 Dec 2014.

Figure 3.8.3.1: ROC-Baseline Crossover, Dialog Group Berhad, from Nov 2014 to Feb 2015

Source: TradingView (www.tradingview.com)

The divergence concept can also be applied here when using ROC indicator. The trend is about to reverse when divergence between ROC and share price movements occurs. For example, even though the share price of a stock shows lower lows when it is on a downtrend, if the ROC shows higher lows, it reveals that reversal is likely to happen in near future. That said; do not take it for granted, especially when the share price of a stock starts advancing. When the price starts to advance, ROC will be surging to a very high level, the subsequent advance may probably not be able to produce a higher ROC. If you sell the stock after getting a lower but positive ROC, you may be kicking yourself later for selling it too early, when the share price continues to advance again. You should use the indicator in conjunction with other indicators to make an informed judgement.

Let us use the same example, Dialog Group Berhad, for analysis. The surge of its share price was actually not an accident. In fact, before the surge, its ROC had made a couple of higher lows from 9 Dec 2014 to 16 Dec 2014 even though its share price went downhill. That was a sign of impending trend reversal.

Figure 3.8.3.2: Price-ROC Divergence, Dialog Group Berhad, from Oct 2014 to Feb 2015

Source: TradingView (www.tradingview.com)

3.8.4 Accumulation and Distribution (A/C)

Accumulation and Distribution (A/C) is another commonly used momentum indicator we should not ignore. As the name implies, it generally indicates if investors are accumulating the shares of a stock aggressively or in a net distribution mood. A positive gradient indicates that the stock is having high demand, as investors are accumulating it. Conversely, a negative slope indicates that the stock has greater supply than demand, as investors are distributing it. The higher the volume the steeper the slope is.

Figure 3.8.4.1: Price-A/C Relationship, Favelle Favco Berhad, from Oct 2013 to Apr 2014

Source: TradingView (www.tradingview.com)

Figure 3.8.4.1 above shows that the share price of Favelle Favco Berhad was on an uptrend when its A/C indicator showed a positive gradient, as investors had been accumulating it from the end of 2013 to mid-Feb 2014.

Whilst A/C indicator support and confirm share price movement most of the time, divergence does occasionally occur. When it happens, we need to pay a close attention to the share price movement and confirm the signal using other momentum indicators. More often than not when share price climbs higher, but A/C indicator is on a downtrend, then the share price is likely to fall later. Likewise, even when share price continues to fall lower, but the momentum indicator is on an uptrend, then the share price is likely to rise later. Remember, the divergence, when occurs, always tells a different story even if share prices continue to move higher or lower.

Figure 3.8.4.2: Price-A/C Divergence, Favelle Favco Berhad, from Nov 2013 to Oct 2014

Source: TradingView (www.tradingview.com)

Let us use the same example, Favelle Favco Berhad, for discussion again. We can see from Figure 3.8.4.2 that after its A/C reading peaked in mid-Feb 2014, the indicator had begun to fall even though its share price was still making higher highs. That was an early warning showing that the uptrend was not sustainable.

3.9 Final Note

What we have discussed earlier in this chapter are just some basic tools in technical analysis every serious investor should know. Actually there are many other tools, such as ADX Line, Chaikin Money Flow (CMF), Force Index, Money Flow Index (MFI), On Balance Volume (OBV), Stochastic Oscillator and etc., can be used to determine the momentum of share price movement. If you are interested to learn more about these indicators, you may learn them from technical analysis books. But, mind you, just because you are using more tools in your analysis does not mean that you will be getting better results. When it comes to investing, more is not always better. It all depends on your skill level, and competency in using those tools. In fact, good chartists or successful technicians only use a few simple tools they are good at to study trends and analyse share price movement, and trade with conviction when a reliable signal (or a confluence of several signals) is spotted. Most importantly, you need to know which type of investor you are. Are you a scalper, a day trader, a swing trader, or a long-term investor? Choose a set of tools that is suitable for you.

Again, we cannot stress enough the importance of volume in all the above-mentioned trends. Never underestimate the importance of trading volume, and the volume of buy and sell queue orders. A valid breakout is usually accompanied by a high trade volume. Without having an unusually high volume to support a share price movement, the breakout might be a whipsaw, or a false signal, as people are not buying in greed. The trend is not sustainable and it might reverse soon due to the lack of momentum.

"*I believe that good investors are successful not because of their IQ, but because they have an investing discipline*."

Stanley Druckenmiller

"*After spending many years in Wall Street and after making and losing millions of dollars I want to tell you this: It never was my thinking that made big money for me. It was always my sitting.*"

Jesse Livermore

As Koon advised, no matter how knowledgeable we are in technical analysis, we need to develop good discipline in trading and investing. We need to be patient whilst waiting for a pattern to be developed to build a position in a stock, and whilst waiting for a signal to close out our position. If the trend of a share price is unclear, we should just ignore the stock, and look for another better one, or wait until a clear trend emerges. Once a signal is received, we must not hesitate to pull the trigger. Buy or sell immediately when the buying/selling signal of our systems is triggered.

"*Don't be a hero. Don't have an ego. Always question yourself and your ability. Don't ever feel that you are very good. The second you do, you are dead… my guiding philosophy is playing great defence. If you make a good trade, don't think it is because you have some uncanny foresight. Always maintain your sense of confidence, but keep it in check*."

Paul Tudor Jones II

Another important advice from Koon is not to let our ego affect our judgements and decisions. If we realise that the trend has gone against us, just cut loss, and move on. Do not be a kamikaze investor in the stock market. "*There are old soldiers and there are bold soldiers, but there are no old, bold soldiers*." Cut loss will protect most of our capital so that we can live to fight another day.

"*Actually, the best traders have no ego*."

Jack D. Schwager

Last but not least, technical analysis is not a perfect tool. Just like fundamental analysis, it too has its own flaws. How can we invest our hard-earned money in a stock based its share price movement alone without even knowing who is running the company, and if the future of the company is bright? If we want to be able to sleep well at night whilst leaving our money to work for us in the stock market, we also need to tap into the power of our experience, business sense, and intuition in the judgment making process before deciding to invest in a company.

Chapter Summary

- Unlike fundamental analysis, technical analysis requires only share price data, and trade volume to find good entry and exit prices.

- Technical analysis enables investors to capture investing opportunities, ride when new trends emerge, exit their positions early when reversal occurs, and increase overall returns.

- The three main types of charts commonly used in technical analysis are Line Chart, OHLC Chart, and Candlestick Chart.

- Candlestick patterns can be divided into two types
  - ✓ Short-term bearish indicators: Bearish Engulfing Candlestick, Bearish Harami, Bearish Doji Star, Shooting Star, Hanging Man, and Tweezer Top, and etc.
  - ✓ Short-term bullish indicators: Bullish Engulfing Candlestick, Bullish Harami, Bullish Doji Star, Hammer, and Tweezer Bottom, and etc.

- A support line is the level where traders will come in to buy aggressively, which prevents the share price declining further temporarily. Conversely, a resistance line is the level where people will sell like no tomorrow when share price hits a particular point, which prevents the share price rising continuously.

- Smart traders also use support and resistance determine the validity of a trend so that they won't play on the wrong side of the game.

- Trading volume does not only indicate number of shares change hand over a period of time, it also can be used to confirm the validity of a breakout, and the significance of a trend. Further, it allows traders to avoid illiquid stocks.

- There are three main types of Moving Average
  - ✓ Simple Moving Average (SMA)
  - ✓ Weighted Moving Average (WMA)
  - ✓ Exponential Moving Average (EMA)

- Short-term traders and long-term investors also use fast- and slow-moving MA lines crossover to find good buying and selling points and use the line as a support or resistance line to determine whether a trend has changed.

Chapter Summary (Continued)

- Chart patterns can be divided into two main groups, namely
  - ✓ Bearish chart patterns: Double Tops, Head-and-Shoulders Top, Descending Triangle, Rising Wedge, and Bearish Symmetrical Triangle.
  - ✓ Bullish chart patterns: Double Bottoms, Inverse Head-and-Shoulders, Ascending Triangle, Falling Wedge, Bullish Symmetrical Triangle, and Cup-with-Handle.

- A few main types of momentum indicators you should know are
  - ✓ Moving Average Convergence and Divergence (MACD)
  - ✓ Relative Strength Index (RSI)
  - ✓ Rate of Change (ROC)
  - ✓ Accumulation and Distribution (A/C)

- When using momentum indictors, do not just focus on signal line crossover, we should also pay attention to the direction of share price movement and the indicator's trendline. When the divergence ensues, it always tells a different story even if share price continues to move higher or lower.

- Just because you are using more tools in your analysis does not mean that you will be getting better results. When it comes to investing, more is not always better. It depends on your skill and competency levels in using those tools. In fact, good chartists or successful technicians only use a few simple tools they are good at to study patterns and analyse share price movement.

- No matter how knowledgeable we are in technical analysis, we need to develop good discipline in trading and investing.

- Most importantly, do not to let your ego affect your judgments and decisions. If you realise that the trend has gone against you, just cut loss and move on. Cut loss will protect most of your capital so that you can live to fight another day.

- Just like fundamental analysis, technical analysis is not a perfect tool. You also need to tap into the power of your experience, business sense, and instinct in the judgment making process.