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Technical Analysis Tools

r e trader

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TODAYS AIMS & OBJECTIVES

Pivot Points

- How they are calculated
- How they can be used
- Points of caution

Fibonacci Retracement

- Brief History
- Why they are prevalent in financial markets
- Use in various time frames

Moving Averages

- How they are calculated
- Simple trading strategies
- Swing Trading

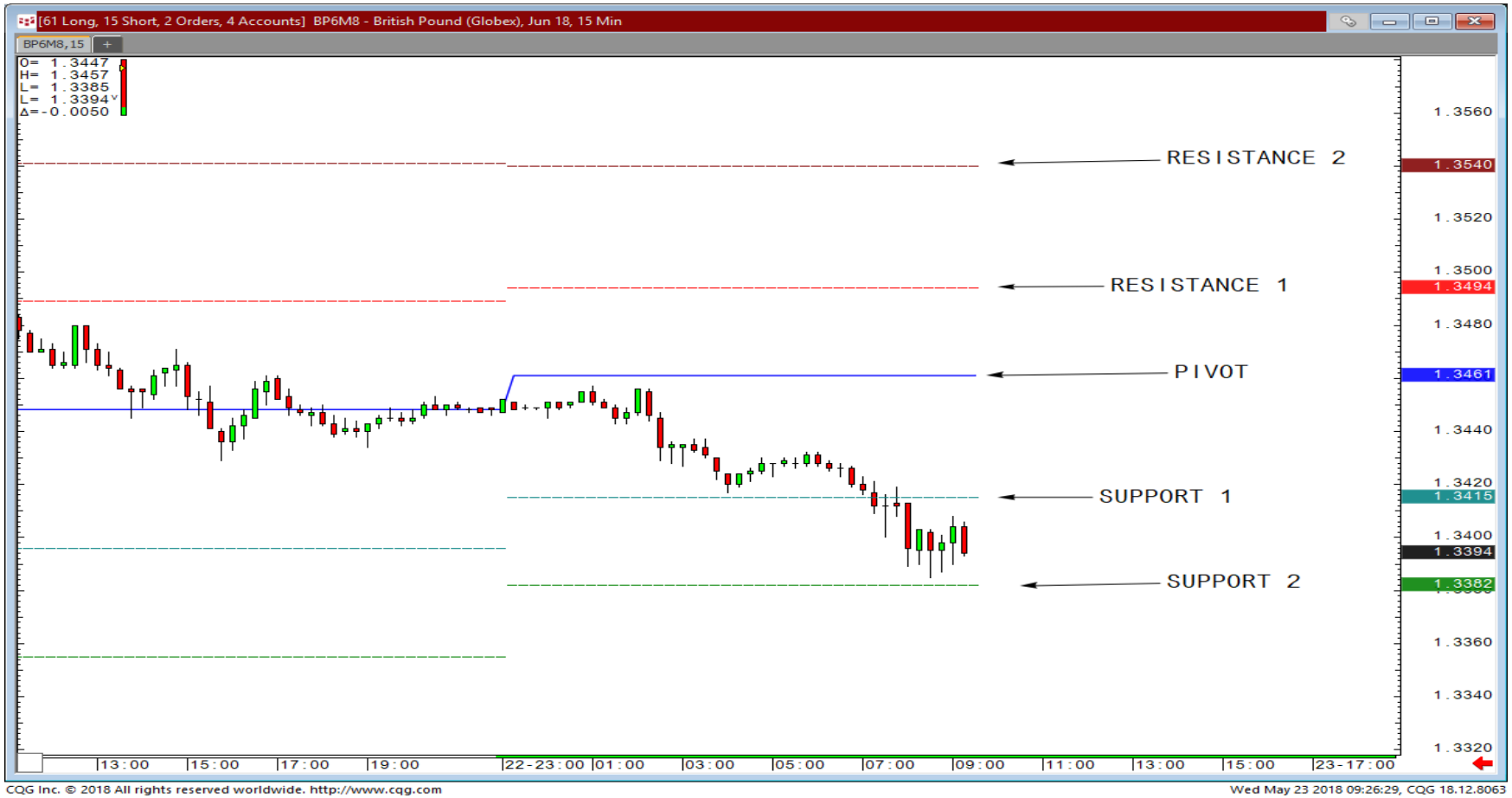
RSI

- Introduction
- When and how to use them

BY THE END OF THE SESSION PARTICIPANTS WILL BE ABLE TO:

- Know the most releant technical tools in the market
- Know when to apply them

Pivot Points



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Pivot Point Calculations

Pivot Points provide areas of likely support and resistance by **projecting previous days volatility onto the next day**.

<u>Calculation</u>

The most common calculation is the five point system:-

- System uses (1) Previous day's high '**H'** (2) Previous day's low '**L'** (3). Previous day's close along '**C'** with (4) 2 support levels '**S'** and (5) 2 resistance levels '**R'**.

$$R2 = P + (H - L) = P + (R1 - S1)$$
$$R1 = (P \times 2) - L$$
$$P = (H + L + C) / 3$$
$$S1 = (P \times 2) - H$$
$$S2 = P - (H - L) = P - (R1 - S1)$$

Pivot Points

Pivot Points in use – 14th February 2018 – WTI Oil 10 Min Chart

Pivot Points How to use them

- Trend Detections – Using pivots as a reference point you may be able to establish market trend e.g. Trading above pivot may indicate bullish sentiment.

- Entry Identification – One may use the support and resistance lines to execute trades in line with their directional bias.

- Technical Confirmation – Traders can use the combination of pivot points and ‘natural support and resistance line’ to identify high probability trades.

Pivot Points: Example in Action

Breaking News: Friday 7th June 13:30 Non-Farm Payrolls comes in worse than expected. 70K (185K expected)

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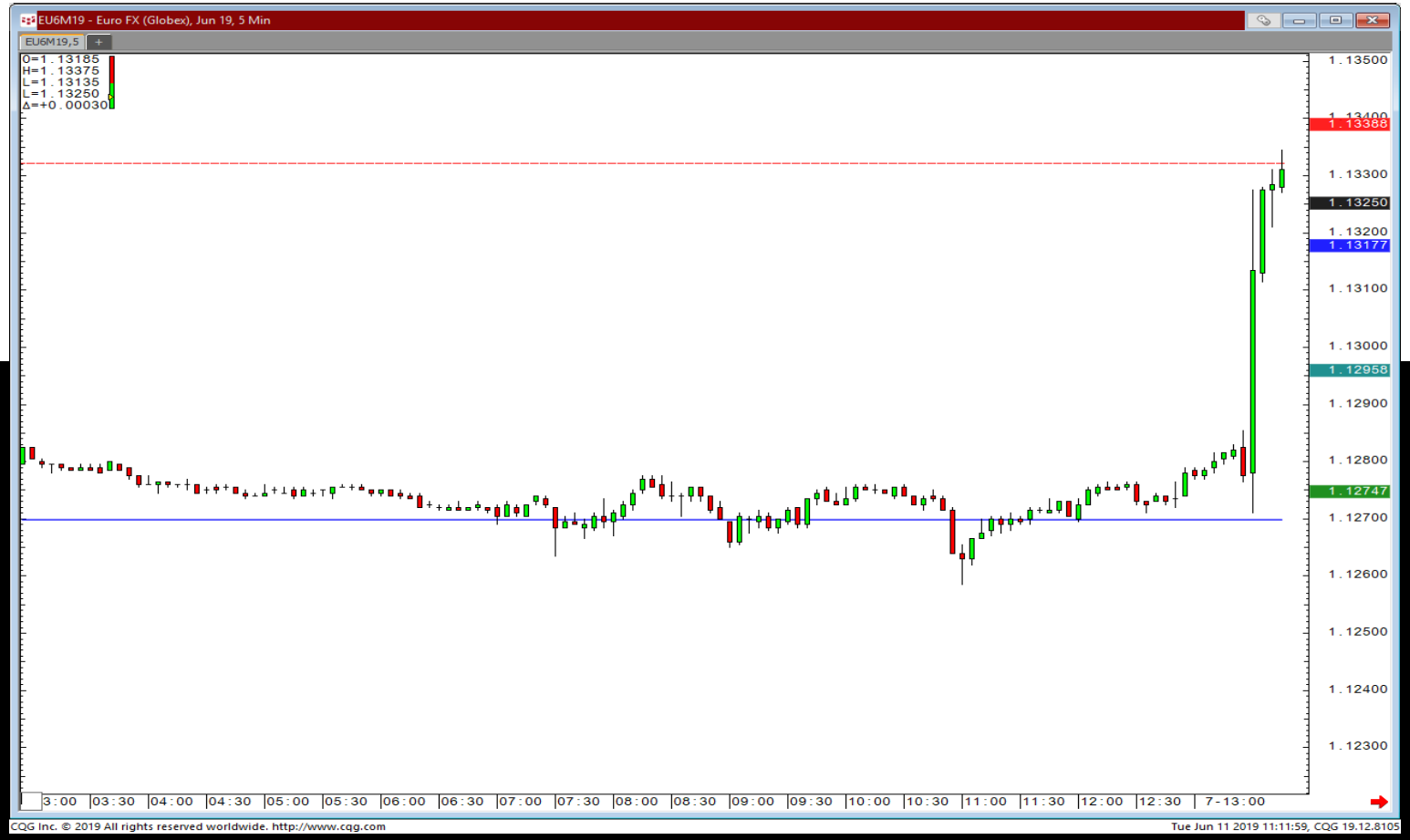

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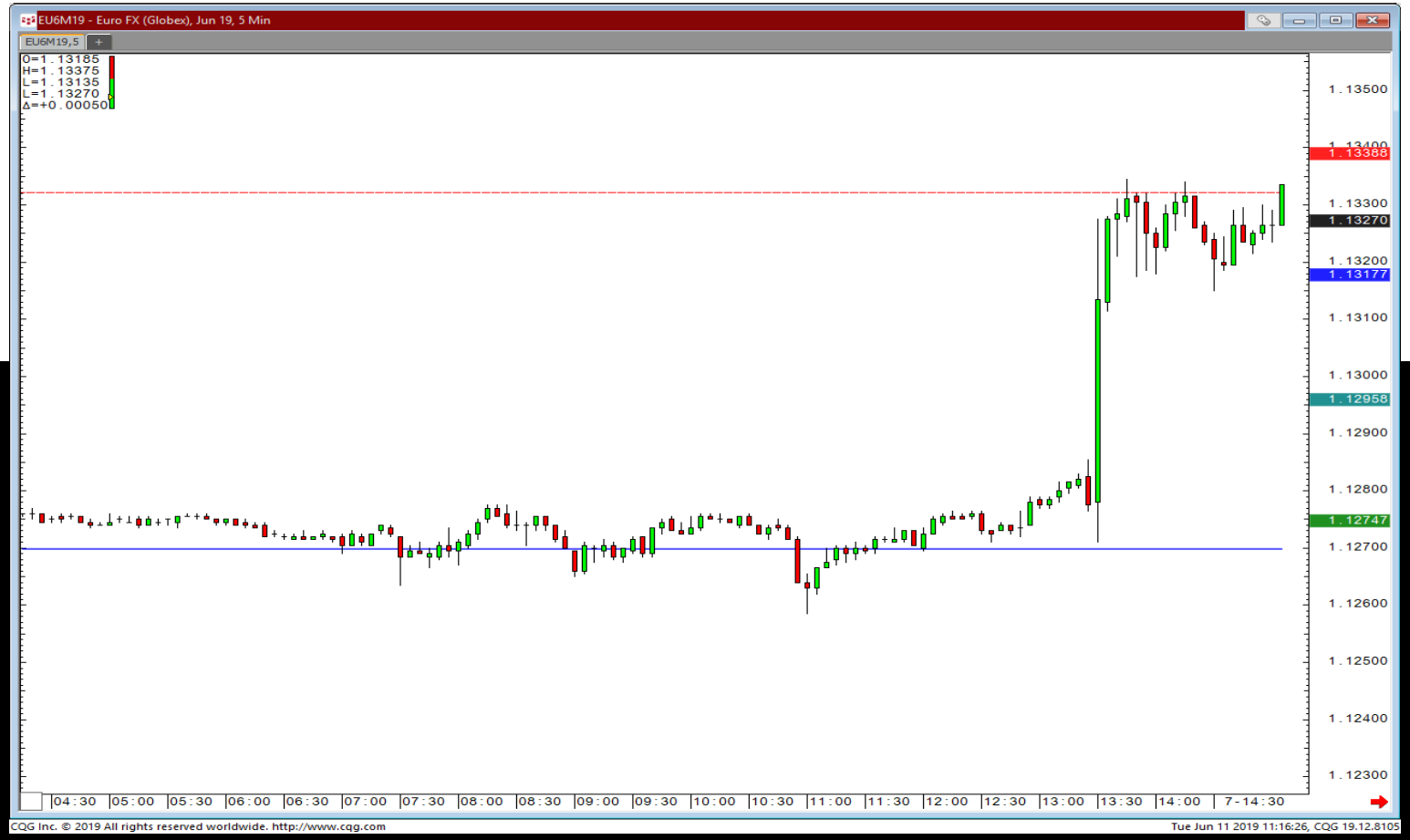

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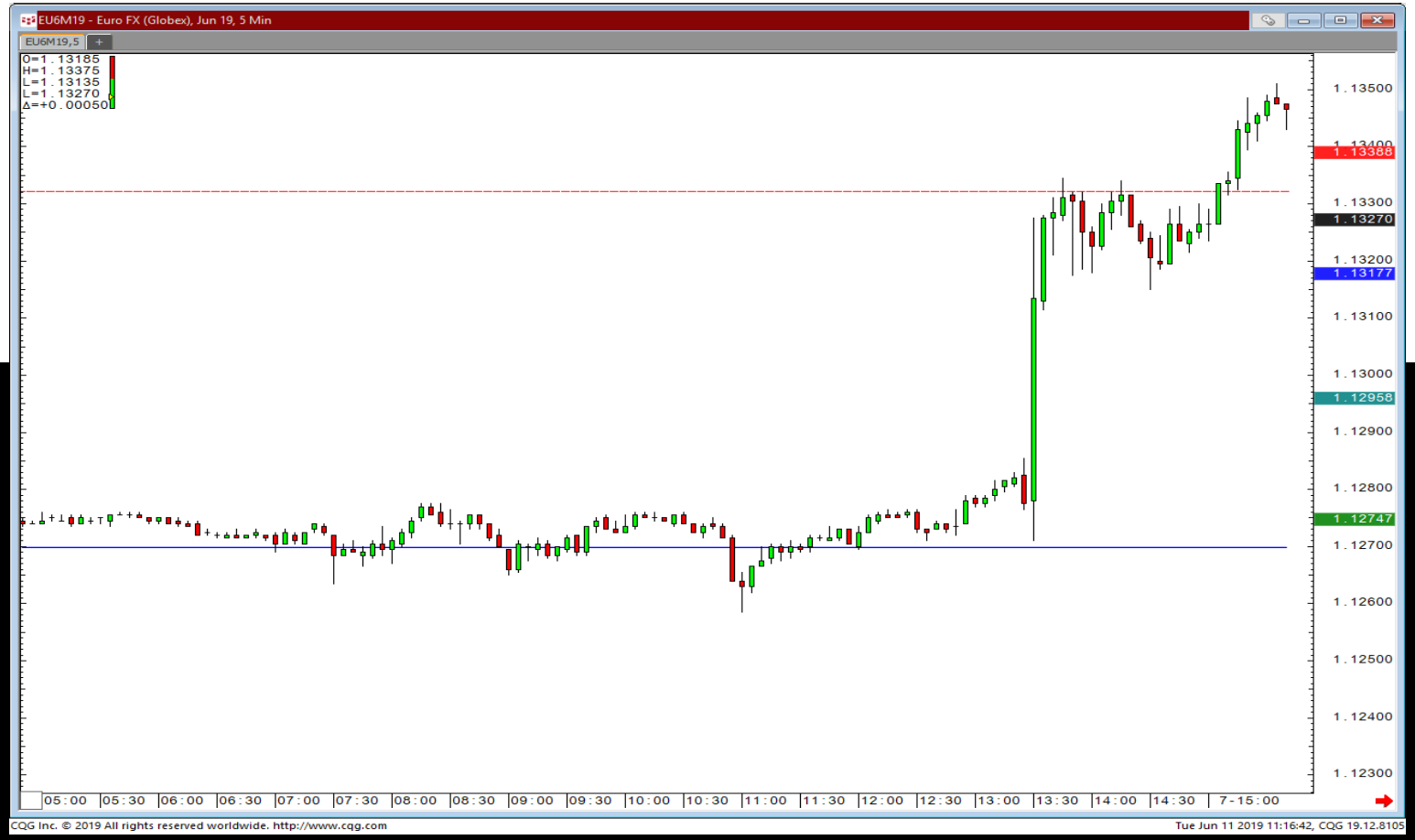

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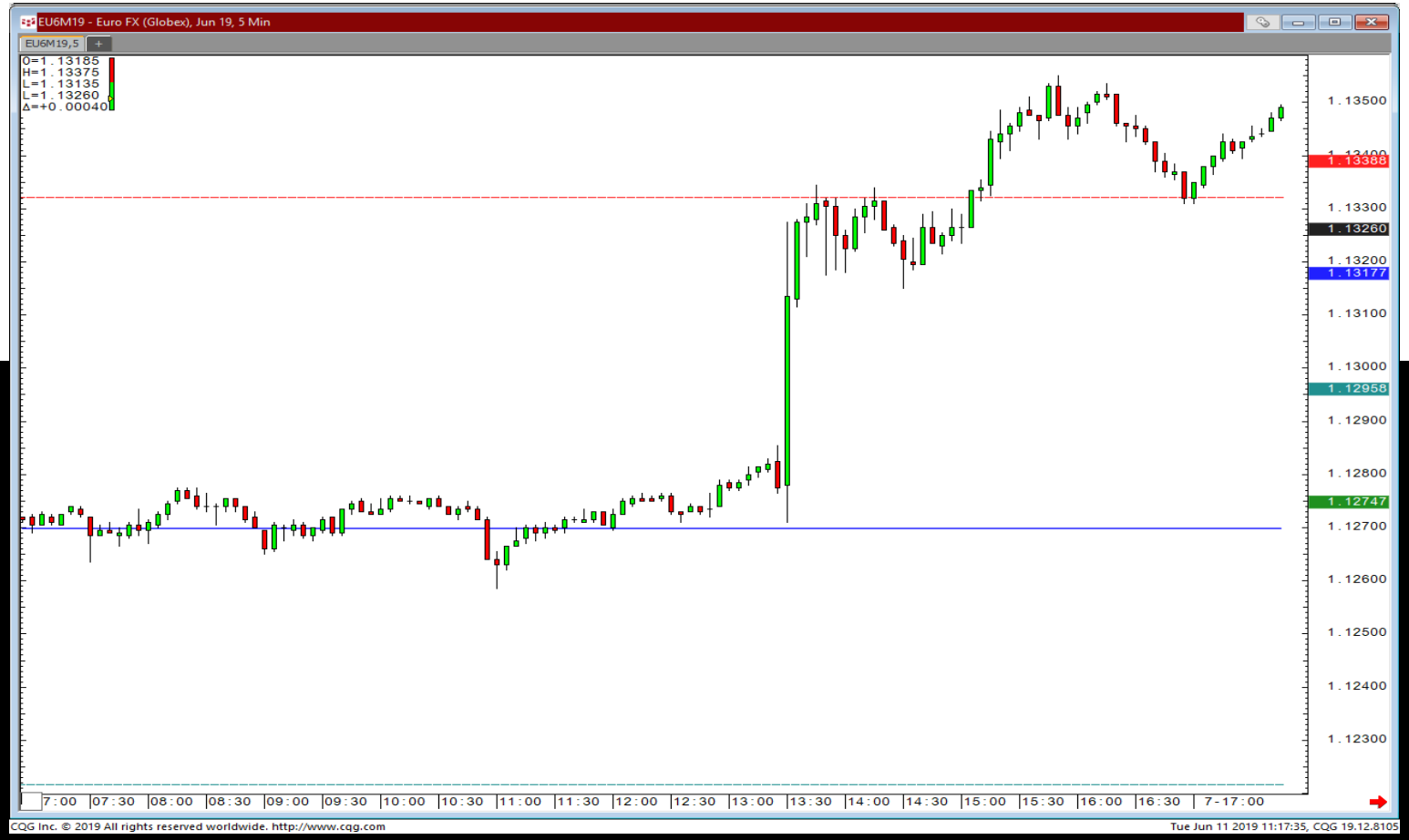


Pivot Point Points of Caution

Pivot Points project previous days volatility on to the next day

- If there has been an exceptionally volatile day in the market the day before the following days pivot point will be particularly wide.
- The market often consolidates following periods of volatility and the intra day ranges can be subdued
- Managing expectations and considering percentage moves can help traders plan effective exit strategies.

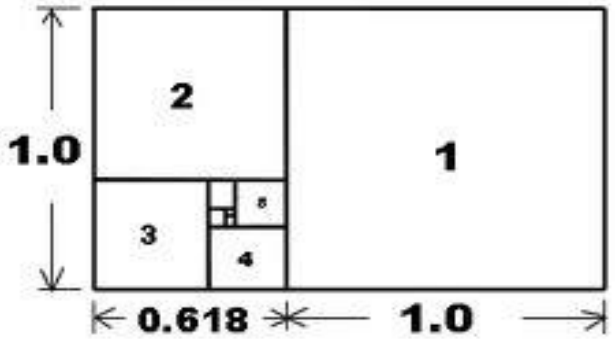
Pivot Point Conclusion

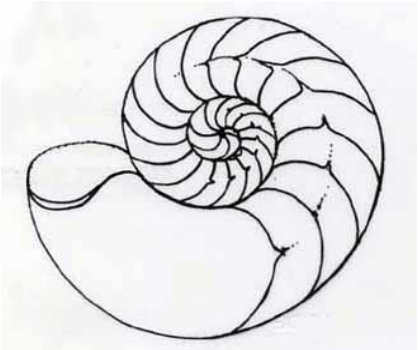
Conclusion

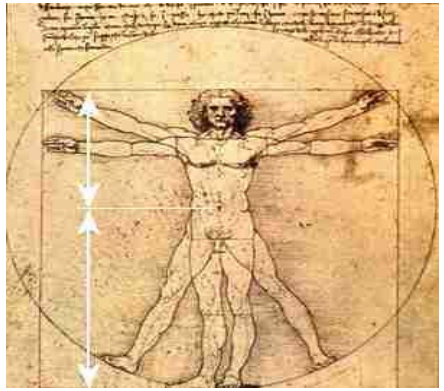
- Simple tool which traders can apply.
- Limited subjectivity in placement – all traders view the same pivot points.
- Levels are re-calculated each day and project previous days volatility on to the next day
- Mainly used by intra-day traders
- Can be used for entry, risk management, exit strategy or trend detection.

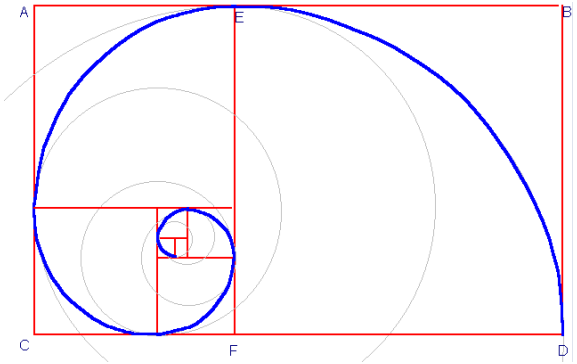
Fibonacci Retracement

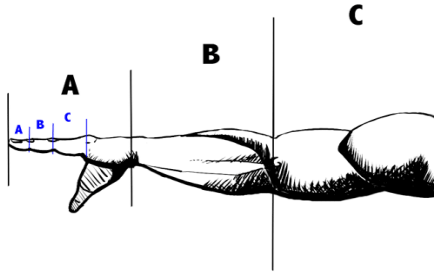
A Golden Rectangle – A tiling with squares whose side lengths are successive Fibonacci numbers. Coined also as the Golden Ratio by Luca Paccioli. He taught mathematics to Leonardo da Vinci.











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Fibonacci Retracement: Introduction

A very popular tool amongst technical traders. Analysis tool is based on a ratio identified by Leonardo Fibonacci, a mathematician in the 13th century.

<u>A brief history!</u>

- Fibonacci sequence : 0,1,1,2,3,5,8,13,21,34,55,89,144 etc…

  Each subsequent number is the sum of the previous two numbers. From this series key Fibonacci ratios can be found e.g. 'The Golden ratio' which is found by dividing a number in the sequence by the next in the series

  13 / 21 = 0.619 ~ when a large sample is taken the 'Golden Ratio' is around 0.618 or 61.8%

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Fibonacci Retracement: Relevance

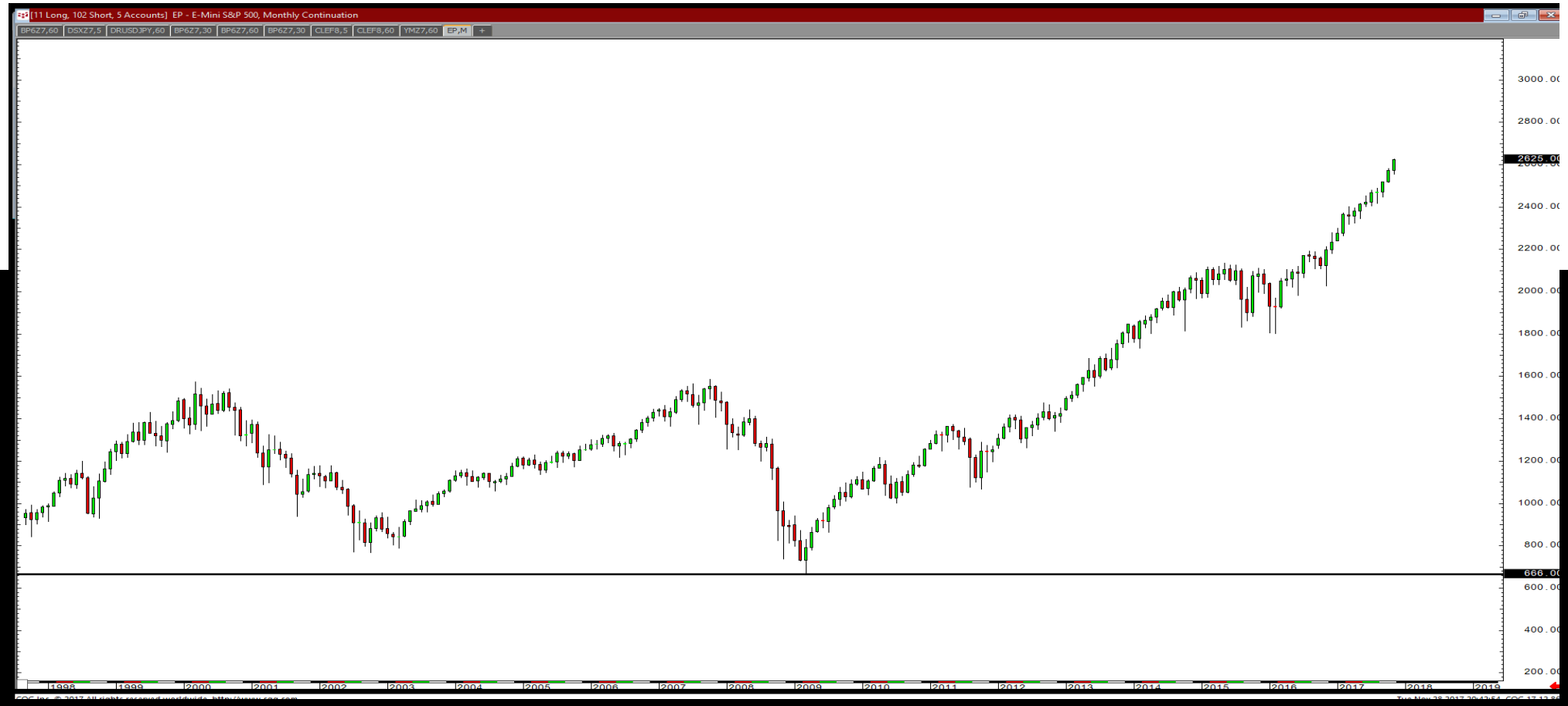
What is the relevance of the Fibonacci Sequence in the financial markets?

- This technical analysis tool gained in popularity which resulted in other trades looking at similar technical price points which means it became self prophesying

- In the wake of the financial crisis, the S&P 500 sold off heavily, falling over 67% from its 2007 peak – Where do you think the market find support?

- *Hint the number lies between 500-1000*

S&P 500: Human Decision Making or Micro Economics?



Fibonacci Retracement: How to use

- The basis is as follows ‘ the direction of the prior trend if likely to continue once it has retraced a certain proportion of its move and then continue its directional trend’

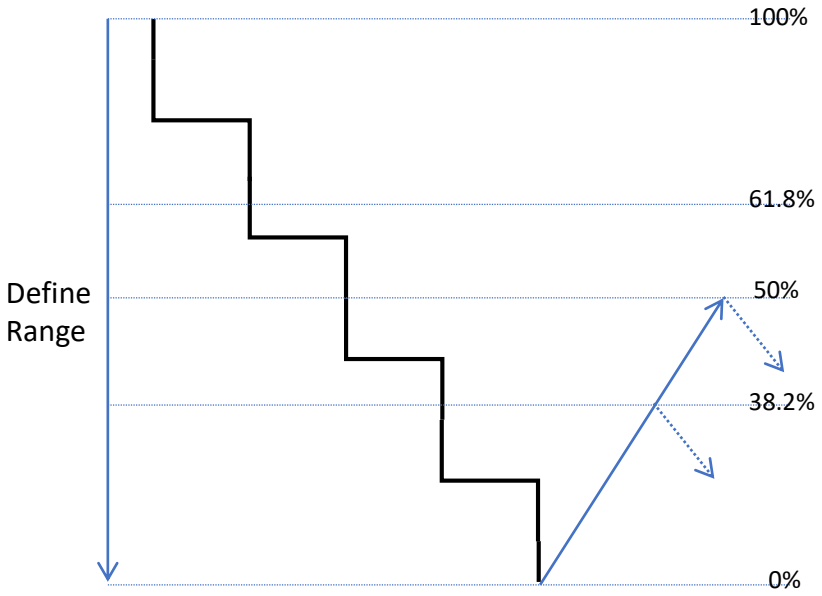
- When a Fibonacci retracement is drawn on a notable move in the market lines are presented on the following segments – 0.00% (Start of the move), 23.6%, 38.2%, 50%, 61.8%, 76.4% and 100% (A full retracement)

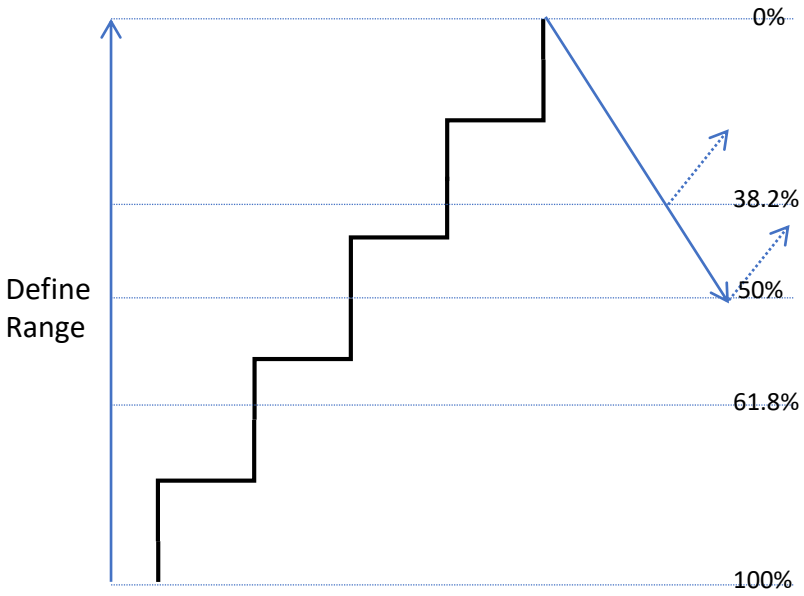
- Therefore to begin to use the this technical analysis tool it is important to identify a Notable move in the market. The more obvious the swing/move the higher probability other traders are applying the same levels and hence the greater chance of success

Fibonacci Retracement: How to use

HOW THE TOOL IS USED

- Identify a notable market move
- Upon retracement of the move start a Fibonacci retracement from the start to the end of the move. This will allow you to identify potential support and resistance.





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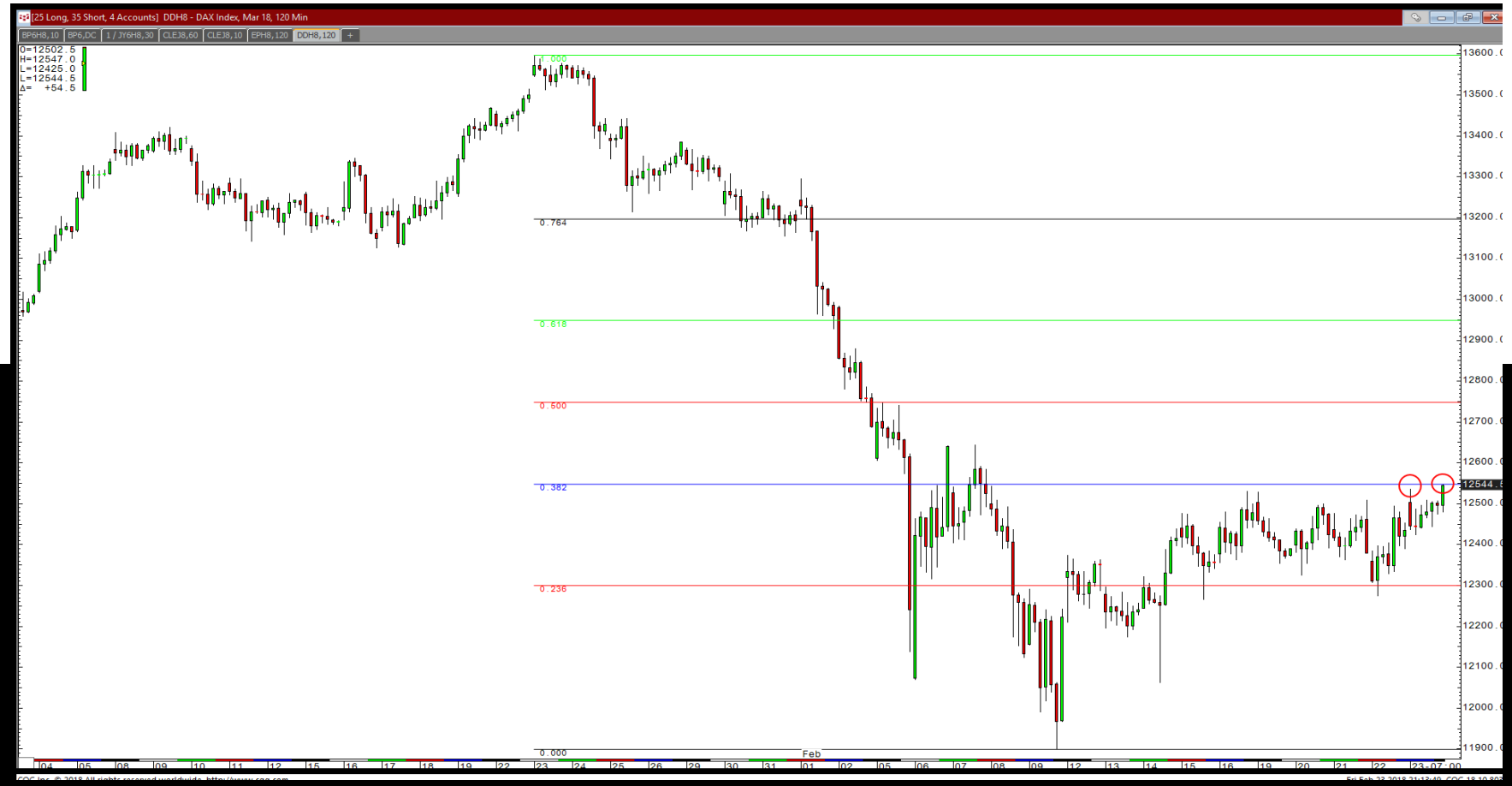
Fibonacci Analysis: Cable Weekly Chart

Brexit Lows to Inflation fear highs.

Fibonacci Analysis: Dax 120 Min Chart

MEDIUM TERM FIBONACCI ANALYSIS: DAX CHART 120 MINUTE CHART – PULL BACK FROM ALL TIME HIGHS



Fibonacci Analysis: USDCAD 1 Min Chart

SHORT TERM (DATA RELEASE): 23/11/2017 CANADIAN RETAIL SALES 0.1% M/M VS EXPECTED 0.9%.

Fibonacci Retracement: Pitfalls

- Highly subjective tool to use when trading.
- Look for the most obvious market moves, do not force your view on the market
- The larger the time frame the more traders who will be to be looking at it
- Ideally should be traded in trending markets with no big shift in market fundamentals.

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Moving Averages (MA's)

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Moving Averages: Introduction

- Popular, versatile and simple to use makes if a popular amongst traders
- Used to follow and detect trends in the movement of a financial product
- MAs act to smooth out short term volatility hence making it easier to identify overall trend/direction of a market
- Can be used to identify trends, entry and exit points.
- MAs are ‘lagging indicators’ as it is based on past price action.

Moving Averages: Simple Moving Averages (SMA)

- Moving averages can be taken over different time periods e.g. 10 days or 100 days

- A 20 day moving average uses the last 20 days of market closing prices to calculate an average, this then reflect the current value of the Moving Average.

- As the Moving average is based on previous price action it will always lag, the larger the time period the larger the lag.

- Can be used in isolation or combined with averages of different time periods.

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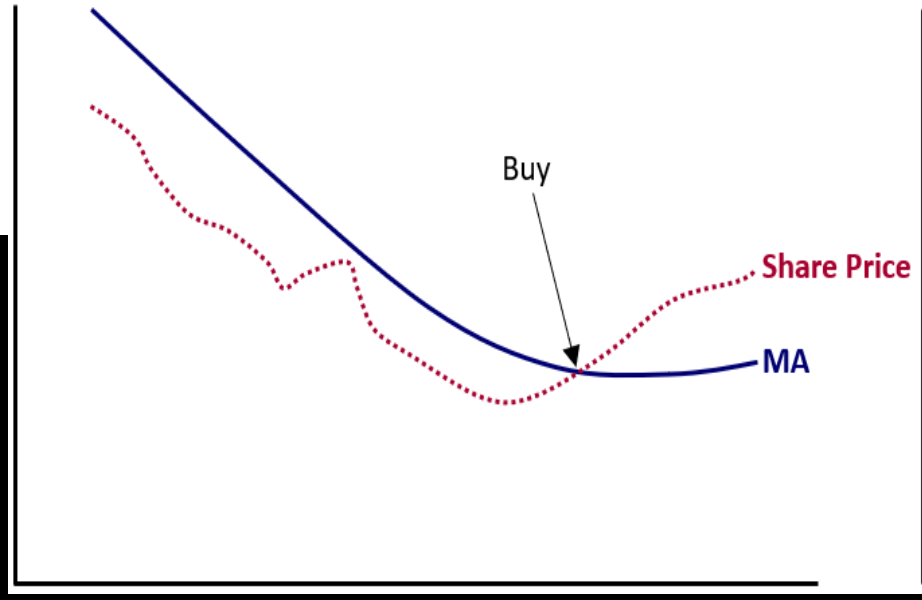
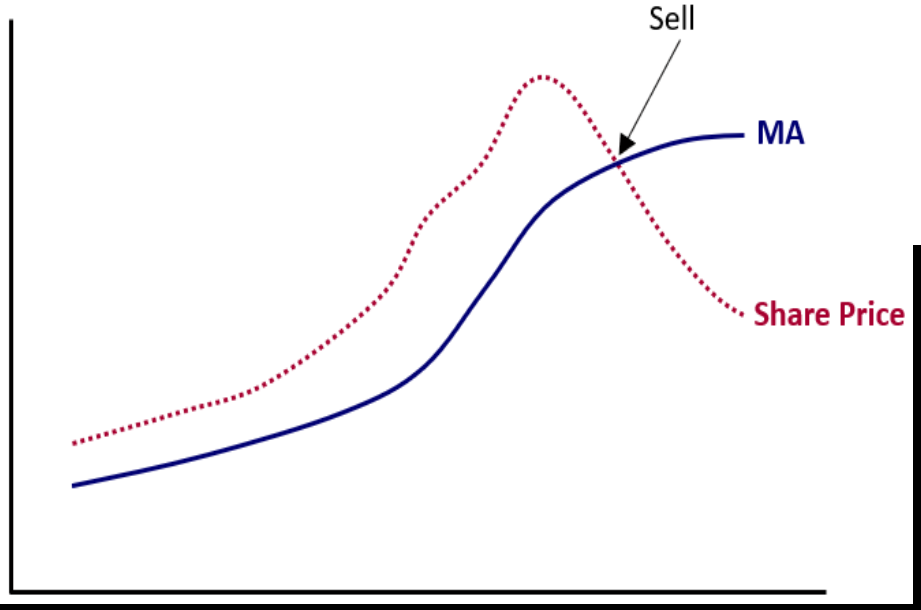
Simple Moving Averages

Buy Signal



Sell Signal



Moving Averages: Swing Trade (20 & 50 SMA's)

Simple Moving Average Cross – 20 & 50 Day Moving Average

- The shorter moving average will reflect most recent price action faster than longer Moving Averages, as there is less 'lag'
- Therefore, we will see a change in fundamentals affect the 20 MA before the 50 MA
- This can Indicate a forthcoming swing in the market.

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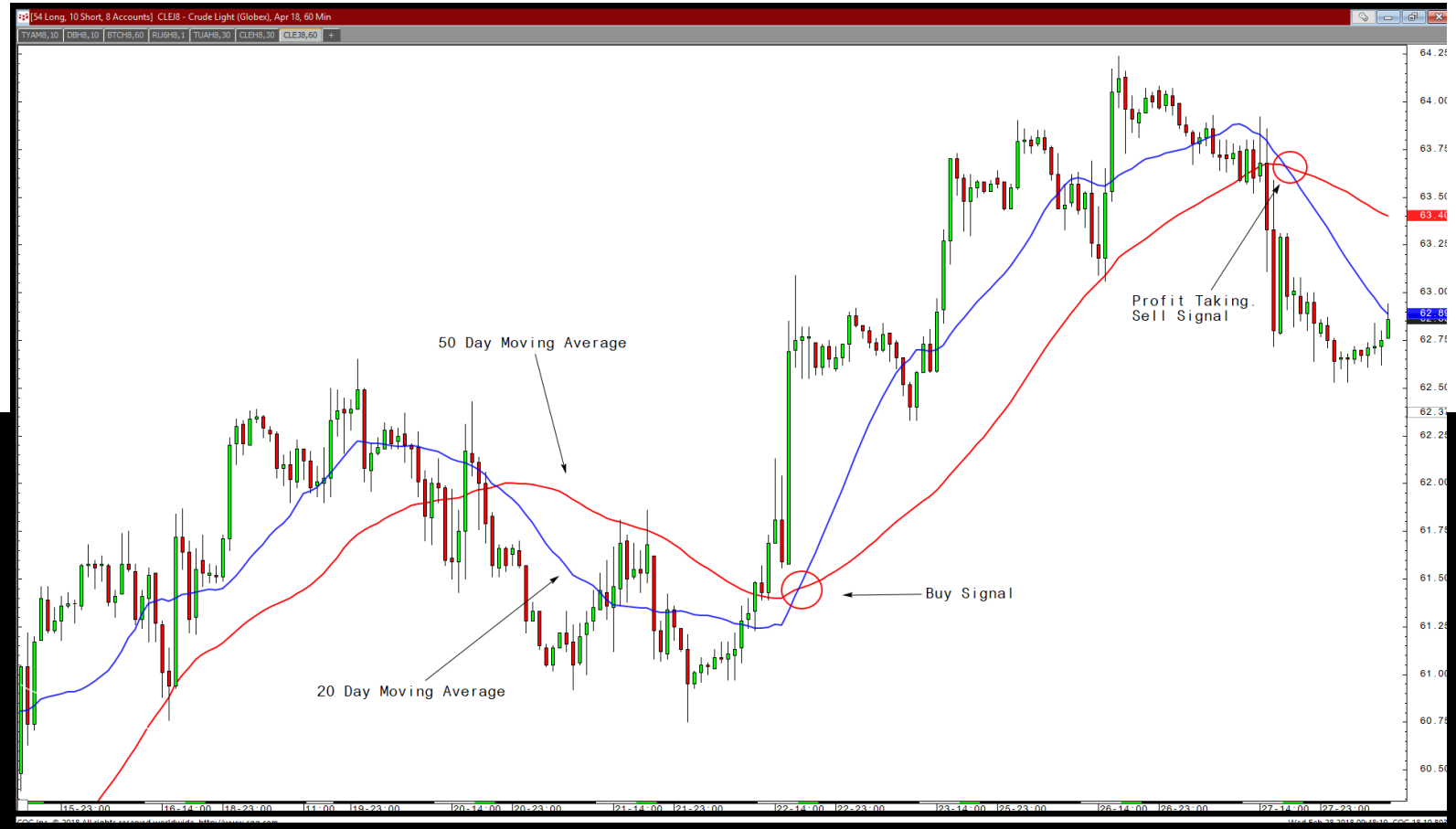
Simple Moving Averages

Swing Trade: 50 and 20 period SMA's

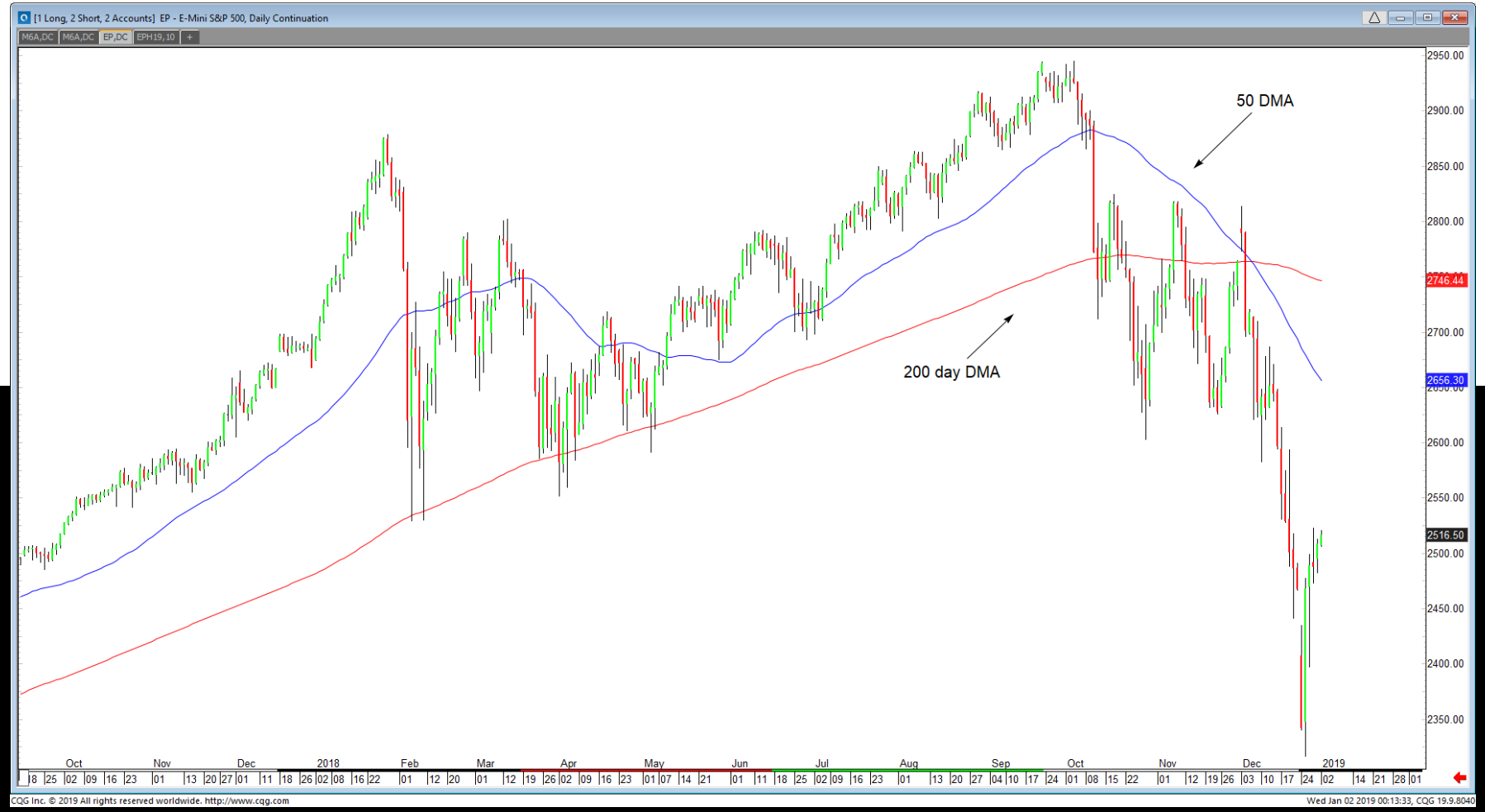


Death Cross And Golden Cross Performance

- As you can see below, the death cross (when the 50 dips below the 200 DMA) - albeit late - has protected investors from much more severe declines in 2000 and 2007. There were some false alarms, but the damage of the misfires were miniscule compared to the benefit of the warnings which is reflected in the 19.7% average gain of a winning trade (7.6% average loss for a losing trade).

Signal	Date	S&P Level	Gain/Loss	Return on $10,000 (running balance)
Sell	10-30-2000	1,399		$10,000
Buy	05-14-2003	939	+32.88%	$13,268
Sell	08-17-2004	1,082	+15.23%	$15,312
Buy	11-05-2004	1,166	-7.76%	$14,124
Sell	07-18-2006	1,237	+6.09%	$14,984
Buy	09-12-2006	1,313	-6.14%	$14,064
Sell	12-20-2007	1,460	+11.20%	$15,639
Buy	06-25-2009	895	+38.70%	$21,691
Sell	07-02-2010	1,023	+14.30%	$24,792
Buy	10-22-2010	1,183	-15.64%	$20,914
Sell (projected)	08-11-2011	1,173	-0.8%	$20,746
Average Return on all Trades			+8.8%	
Average Winning Trade			+19.7%	
Average Losing Trade			-7.6%	
Percentage Winning Trades			60%	
Percentage Losing Trades			40%	

Death Cross S&P 500



Moving Averages: Conclusion

CONCLUSION

- Simple to apply and versatile, therefore, popular amongst traders and investors
- Inherently a lagging indicator
- Best used in trending markets and avoided in ranging markets

Relative Strength Index (RSI): Introduction

- RSI is a Momentum Oscillator which measures the velocity and magnitude of a directional price movement
- The indicator ranges between 0 and 100 and readings below 30 and above 70 indicate the market is oversold and overbought respectively
- When the market is overbought this would indicate a short signal and vice versa
- Highly effective in RANGING MARKETS to be avoided in trending markets
- RSI is a lead indicator – the signal occurs before the asset changed direction

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Relative Strength Index (RSI) Leading Indicator – Example in Ranging Eurostoxx 50

Relative Strength Index (RSI)

False indicator in trending market (US equity Market 2017)

Relative Strength Index (RSI): Divergence

RSI Divergence – Indication of a trend reversal

- **Divergence** – An indication of impending reversals by identifying a change in buying or selling momentum. Bearish divergence occurs when the market is making new highs and the RSI fails to surpass its previous high – Upward trend momentum beginning to fade. Bullish divergence visa versa

  - *Velocity* – The *speed* of ‘something’ in a *given direction*

    - *As the speed to the move dissipates the RSI will start to reverse before sellers coming in after a bullish move to push the asset lower*

Relative Strength Index (RSI)

RSI divergence – Indicating a trend reversal

Relative Strength Index (RSI): Conclusion

- A great indicator in ranging markets
- To be used in along with other Technical analysis tools to increase probability e.g. Pivots.
- Understanding of underlying fundamentals can help traders forecast an upcoming range.
- Adaptations can be made – Use 25 & 75 as limits that indicate overbought and oversold values. Decreases opportunities but increases probabilities.

Technical Analysis: Conclusion

- The use of technical analysis and their effectiveness lies solely on the shoulder of the trader using them.
- A traders ability to use a combination of Technical Analysis and Fundamental Analysis will allow him them to take on positions with high probability and good risk reward
- Fundamentals will always trump technical analysis in driving price action but cannot be used in isolation when intra-day trading
- Find Technical Analysis tools that suit your trading style whilst experimenting with others.
- Take your time to understand the tool prior to taking trading decisions with it

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