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Elliott Wave, MACD & Fibonacci

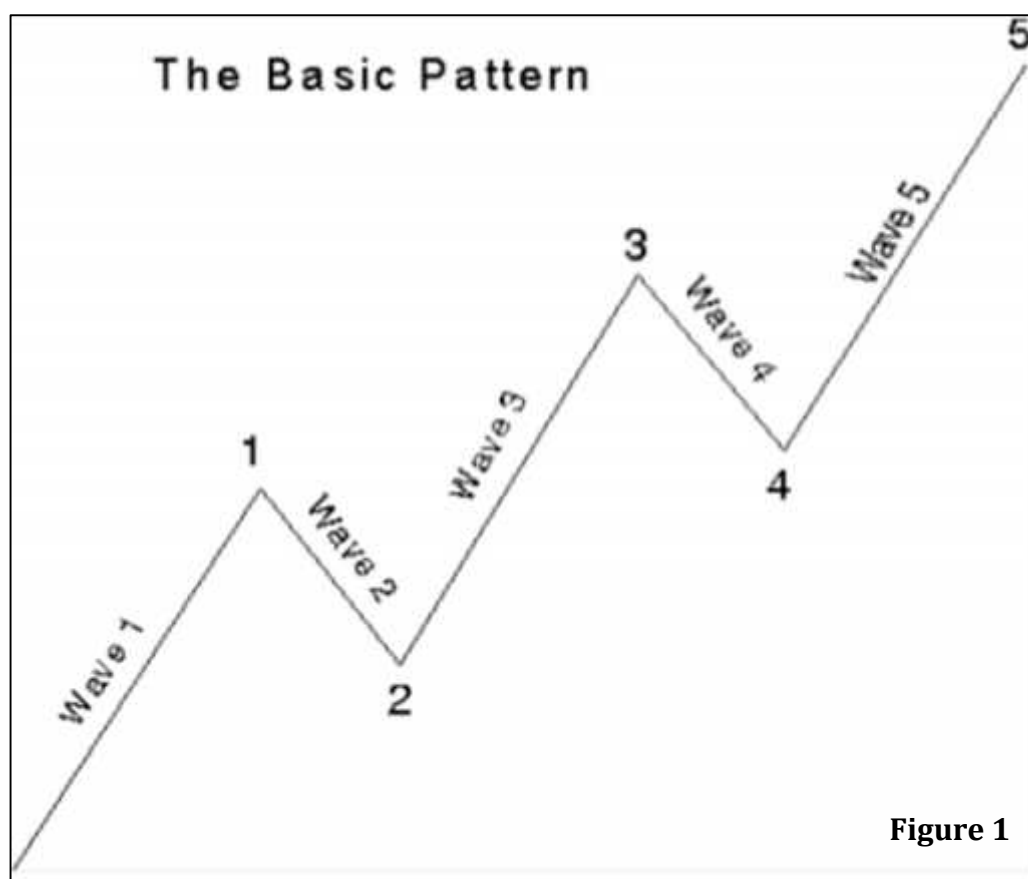
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Elliot Wave, MACD & Fibonacci Setups

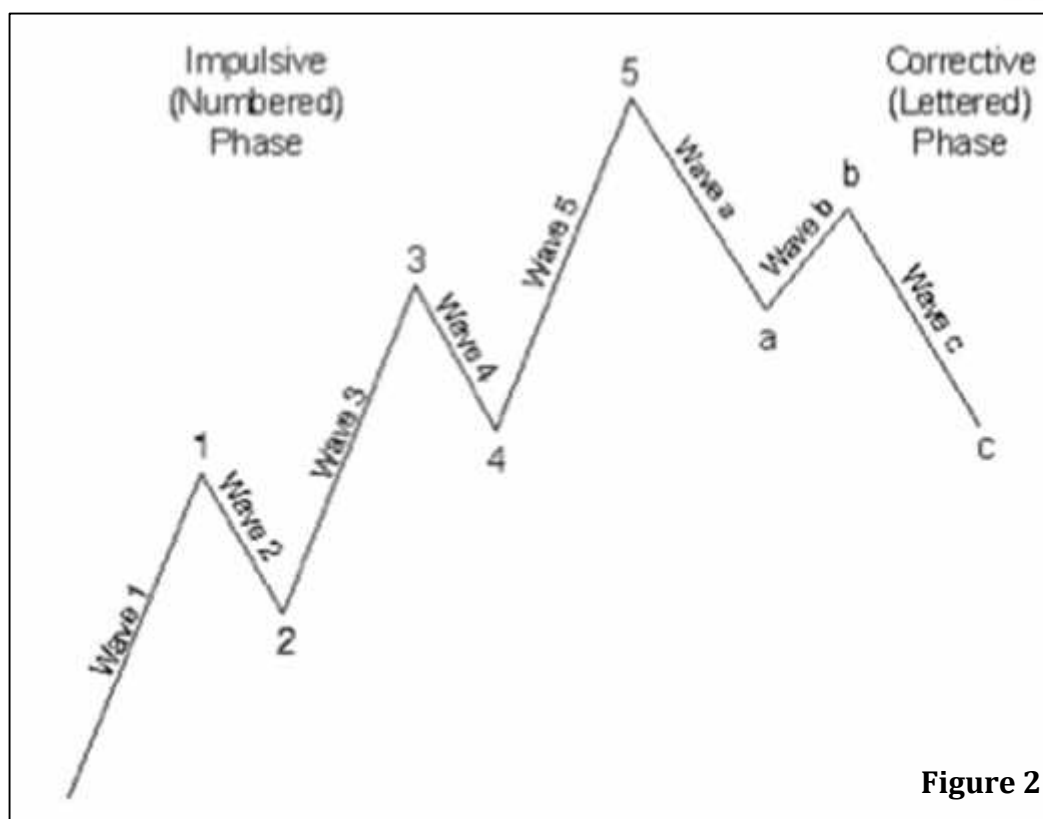
The Wave Principle describes market patterns that are caused by chain reactions of investors' behaviors through each transaction. The 5-wave basic pattern, as shown in Figure 1, depicts the directional movement of the market. Waves 1,3 and 5 advances the trend in the direction of the market while waves 2 and 4 are counter trend in nature. Waves 2 and 4 reflect a short term selling pressure as traders close off their positions from the prior rally, and this opens trading opportunities for a new wave of traders.



In this article, we will first introduce the basic wave theory and underlying principles that are inherent in it. Moving on, we will begin exploring different ways to identify wave counts. Finally, various Fibonacci setups will be introduced to aid the analysis of the wave principle.

Impulse Waves & Corrective Waves

In this section, the concept of impulse waves and corrective waves will be introduced. Impulse and corrective waves are merely identifies in a wave principle. Figure 2 shows the distinction between the two.



Impulse Waves

As in Figure 2, Impulse waves are numbered from 1 to 5. These are waves that are in the direction of the trend in the market. While numbering of waves in this figure seems relatively straightforward, it is not as clear when we try to identify waves in actual price charts. Often, there are short-term fluctuations that can mislead your analysis of wave counts. As a result, there are three principles that should be followed while identifying wave counts in an impulsive phase:

1. Wave 2 can never retrace below the start of Wave 1
2. Wave 4 can never retrace below the end of Wave 1
3. Wave 3 can never be the shortest among Waves 1, 3 and 5.

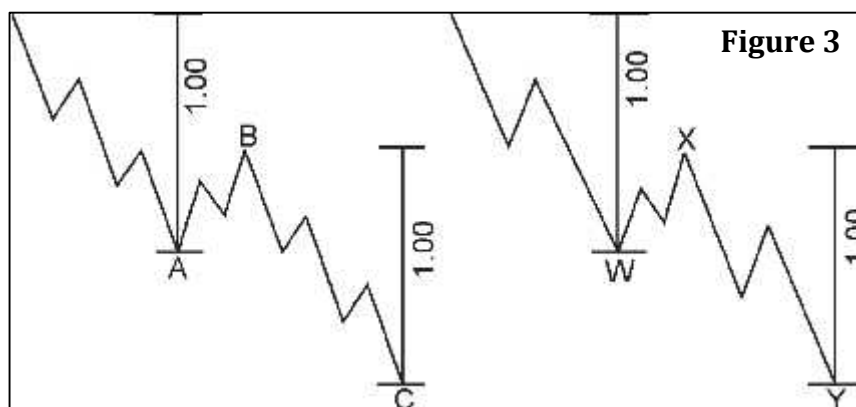
These three wave principles are important to avoid confusion in identifying wave counts.

Corrective Waves

From Figure 2, the corrective waves are numbered from A to C. Corrective waves opposes the trend of the impulsive waves. At the end of wave C, an entirely new wave will start but the direction will be unclear until a first wave of the impulsive wave is formed.

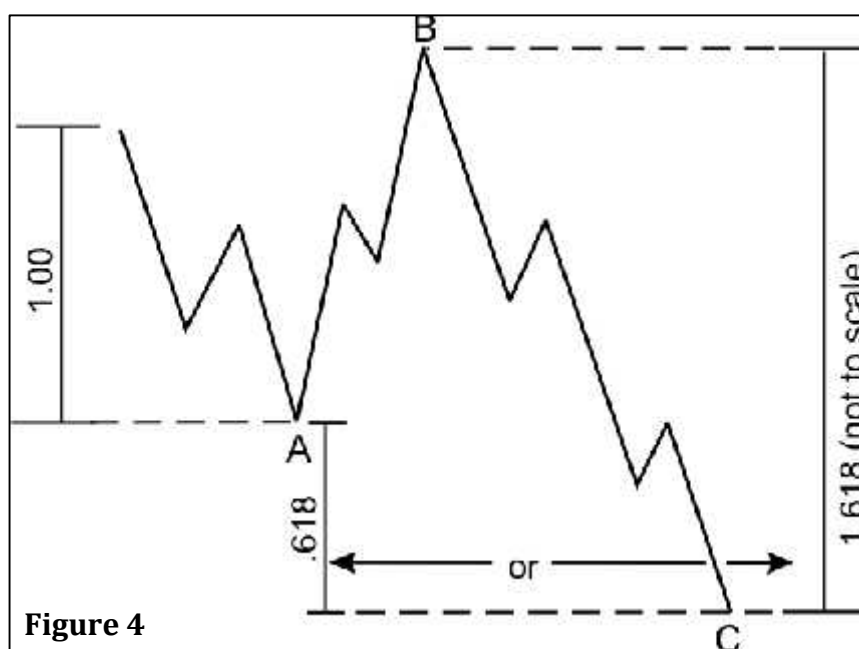
Similar to the analysis of impulse waves, identifying corrective waves in actual price charts may be less clear as the one shown in Figure 2. Some examples of corrective waves are Zig-Zag and Flat Corrections.

Zig-Zag Corrective Waves have a 5-3-5 characteristic in their A-B-C waves respectively. As example of a Zig-Zag corrective wave is shown in Figure 3.



In a Zig-Zag corrective wave, there are five smaller waves in wave A, 3 waves in wave b and 5 waves in wave C. Normally, Wave C will move as much as Wave A, but there are also cases where Wave C will move 0.618x, 1.382x or 1.618x of Wave A from Wave B. The numbers mentioned are Fibonacci numbers, which will be explained in the Fibonacci Setups section.

Flat corrections are another type of corrective wave. In contrast to the Zig-Zag corrective wave, flat corrections have a 3-3-5 characteristic in their A-B-C waves respectively. An example of Flat corrections is shown in Figure 4 below.



In the Figure above, Wave C moved 1.618x of Wave A from the start of Wave B, which is not surprising as it is just another Fibonacci number.

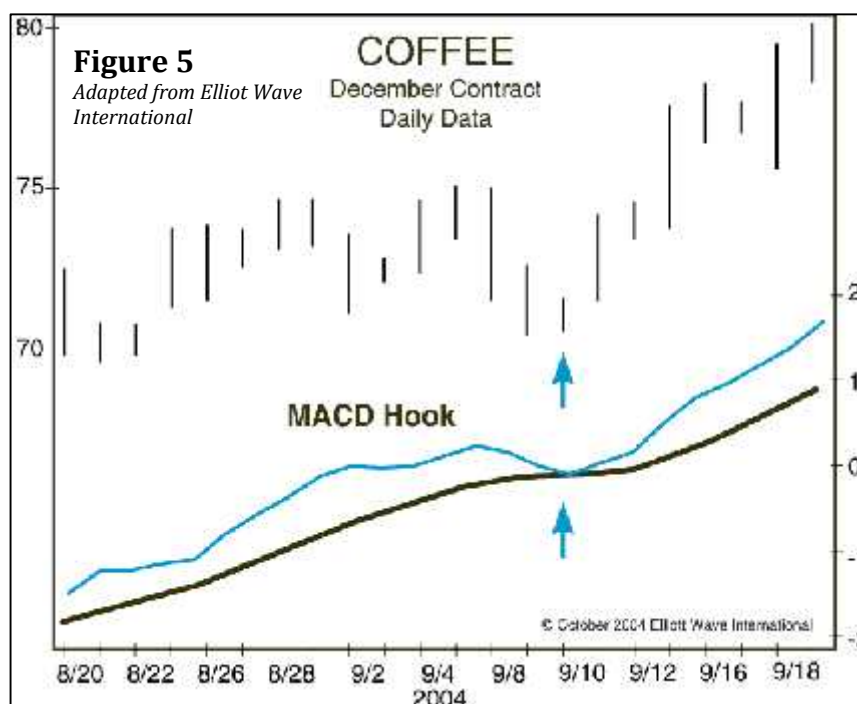
Identifying Wave Counts with MACD

MACD is a technical indicator commonly used to identify trade setups. Traditionally, it is a bullish signal when the MACD crosses the signal line from below, vice versa. From an article written by Elliot Wave International, I learnt the use of MACD to identify wave counts. Similarly, I have learnt the use of MACD to identify wave 3 of an impulsive wave.

MACD Signal Line Hooks

From the Figures above, we can conclude that it is common to see intermittent peaks and troughs in the wave principle. For example, the end of wave 1 is a peak, the end of wave 2 is a trough, so on and so forth. One good way of identifying a start of a new wave and filter out the short term fluctuations is the use of MACD Signal Line Hooks.

MACD Signal Line Hooks occur in two ways. The first way is when the MACD line attempts to cross, but eventually rebounds from the Signal Line. An example of such is shown in Figure 5.



The second way is when the MACD line shows a rebound near/from the 'zero' level. It is similar to the case mentioned below but instead; it is a rebound from the 'zero' line. An example of such is shown in Figure 6 with a USD/JPY H4 chart.



Figure 6

These hooks give us a good signal to build on our wave analysis and it also provides us with a measure to start our wave counts.

Wave 3 & 5 on MACD

While it is not always the case, Wave 3 is often the longest wave among the impulsive phase of the wave principle. At the same time, the MACD will often show an extreme reading at the end of Wave 3. The existence of Wave 3 can be further confirmed after Wave 5 is formed and the MACD reading at the end of wave 5 should be lower than the reading at the end of wave 3. An example is shown in figure 7, taken from the USD/JPY H4 Chart.



Figure 7

In Figure 7, the red arrows show the Waves 1 to 5 in an impulsive phase. The two blue arrows point down to the MACD reading at the end of wave 3 and wave 5. As we see, the price at the end of wave 5 is higher than at the end of wave 3, but the MACD reading is, in fact, lower. This analysis aligns with the explanation mentioned earlier, that extreme MACD reading often marks the process of forming Wave 3.

Fibonacci Setups – Retracement, Expansion and Timeline

In this section, we are going to explore the use of Fibonacci Retracement, Expansion and Timeline.

Fibonacci Retracement

The Fibonacci retracement is commonly used to identify highly probabilistic support or resistance levels that act as price targets as we develop our trades. Waves 2 and 4 are retracements from Wave 1 and 3 respectively. This is where Fibonacci Retracement tools may play a role in identifying points of reversal. An example is shown in Figure 8, the chart taken from EUR/USD H4 Chart.



Figure 8

In this chart, I plotted a Fibonacci Retracement from the start of the red arrow, to the end of the red arrow. I identified this as Wave 1 and the retracement is set up to identify the highly probabilistic level where Wave 2 will end. In that red circle, it is actually where wave 2 ended, which was at the 0.618 level of Wave 1. From this example, we can understand the importance of Fibonacci numbers and their context in financial chart patterns. Fibonacci Retracement does not pinpoint the exact price at which the wave will end, however, it gives traders an indication of the possible price levels to target.

Fibonacci Expansion

Fibonacci Expansion is a tool that can be played around to identify possible price targets of future waves. Fibonacci Expansion makes use of previous waves that you have chosen, as a benchmark to project the Fibonacci levels for future waves. Figure 9 below shows the use of Fibonacci Expansion in USD/JPY H4 Chart.



Previously in Figure 7, I have showed that the USD/JPY approached Wave 5, and following we should expect a corrective wave of a-b-c. In this setup, we see that Wave A and B has already taken place as in the first 2 red arrows. Our next step is to predict where Wave c will probably end.

The Fibonacci Expansion levels, in Figure 9 are in light green, which is projected from the end of Wave B, using Wave a as a reference. To further clarify, if prices touches the FE61.8 level from the end of Wave B, it means that prices had moved 0.618x of Wave A, using the end of Wave B as a starting reference. In Figure 9, we see that wave C ended at 0.618x of Wave A, which is consistent in our analysis that Fibonacci levels tend to act as key support/resistance levels. To add on, if prices were to break the FE 61.8 level, it is highly probable that prices will test the next level as well.

To conclude this section, the Fibonacci retracement and expansion are fun tools to use in technical analysis. There is no one definite way in marking the start and end points of your Fibonacci tools, but this is where you can experiment different ways to use them.

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