

and those who follow them in good deeds until the Day of God, the Most Gracious, the Most Merciful in the most noble of all creation, his family and companions,

In the  
name of religion

God willing, we will begin our educational journey into wave theory, during which we will learn about the discoverer of the theory and what...

Depends.

Our schedule during the trip will be as follows:

1. General introduction.
2. Dow Theory.
3. Introduction to the principle of waves and their discoverer.
4. Types of waves (motivational and corrective).
5. Rules and guidelines.
6. Fibonacci relationships and wave targets.
7. Technical models and linking them to wave analysis.
8. Indicators.
9. How to trade using waves.

My job will be to transfer knowledge to you and follow up on the application. Disclaimer for its scientific integrity. The topic has been collected from more than one source, God willing.

We ask you to pray for me and all Muslims for success and prosperity.....

We begin with God's blessing

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The most beautiful thing about it is its connection to a number . Elliot waves are a big, beautiful, and very enjoyable science for those who master it and practice it from among the very powerful theories in the world of technical analysis, such as Dow theory (the godfather of Elliot wave analysis) and the Fibonacci ratios... and its connection to other analysis methods such as the classical, the harmonic, and others.

Wave science is a method Technical analysis has more importance than others, but it is distinguished by the analyst's ability to anticipate events and his ability to see the market more clearly.

### Theory Dow:

The Dow theory received a lot of attention at the time in the early last century. Dow himself was one of the founders of Wall Street and the owner of the famous index of American companies, the Dow Jones.

### What are the basics of Dow Theory?

#### 1-Basic market trend:

The first is the movement of the basic trend of the market. According to the theory, the market has three main movements

The movement of the basic direction of the market can either be an upward movement (Bulish), a bullish rally, or it may be a bearish movement (Burch), a bearish rally.

The movement of the basic direction of the market (depending on those days) takes a year or several years.

#### 2- Secondary market trend (corrective):

What about the secondary move? We talked about the first move of the market being the basic trend.

A secondary trend movement is a corrective reaction against the direction of the primary market movement.

The movement of the secondary trend in the market takes approximately one to three months and its range ranges from one-third to two-thirds of the range of the previous movement.

#### -3 Small market movements:

These are small price movements that last from one day to 3 weeks in several directions.

It is the main component of major and secondary movements.

Dow talked about it, but completely ignored it in his analyses.

#### 4-Using averages to confirm market direction:

It is one of the most important principles of Dow, as he said that without the two averages confirming each other, its direction is irrelevant.

It is worth noting here that the Dow averages are completely different from our averages, but rather relied on the averages of factories and means of transportation to determine the direction of the market as a whole (note that the Dow Jones index is a corporate index).

#### 5- Trading volume as another confirmation of market direction:

It is not as important as the averages and is not very significant.

#### 6- The trend remains correct until the price reversal sign appears clearly:

The clear trend (say, a bullish rally for example) is that the highest price of the previous candle and the lowest price of the current candle is greater than the highest price of the previous candle and the current candle is greater than the lowest price. The price reversal sign appears by reversing the previous signals (above). The current price is lower than the previous one, and so on.

I only mentioned it because Daw's theory is considered primitive compared to what we have achieved in terms of the multiple tools of technical analysis today. It is the origin of the idea of Elliott waves, and many consider it the godfather of these waves.

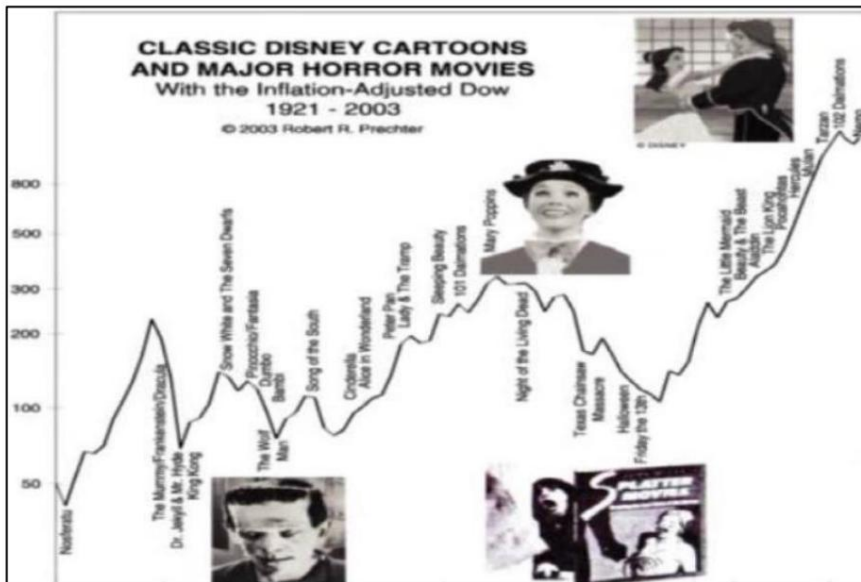
#### Elliott Wave Principle

Elliott wave analysis is a form of technical and behavioral analysis, It is a detailed description of how the financial markets behave and the economy attempts to predict the direction of the market by identifying the details of the investor's psychology that oscillates between optimism and pessimism. Fear and greed create the peaks and bottoms of the markets.

It is named after its founder, Ralph Nelson Elliott (1871–1948), an accountant who developed the theory in the 1930s. It has been suggested that market prices unfold in specific, constantly repeating patterns (patterns), which practitioners today call Elliott Waves. Elliott published his views on market behavior in the book "The Wave Principle."

He completed his main work, "Principle Wave The" (in 1938, 1938, and in a series of articles in the magazine "World Financial" in 1939, 1946).

Elliott said that humans themselves have a special rhythm, so their activities and decision-making can be predicted in rhythms as well.



The figure shows the impact of the types of films produced with the change in the movement of the Dow Index.

With the decline in the index, horror films became popular, which reflected the pessimism occurring at that time.

As the index rose, cartoon films were prevalent and reflected optimism.

Before we begin our lesson on the principles of Elliott Waves, I would like to point out that they require constant review and reading more than once,

like studying, and asking any question that comes to your mind, no matter how trivial it may seem to you, so that you complete the lessons with full

knowledge and understanding. Now the principle of waves is not as easy as you think, but it requires high concentration and

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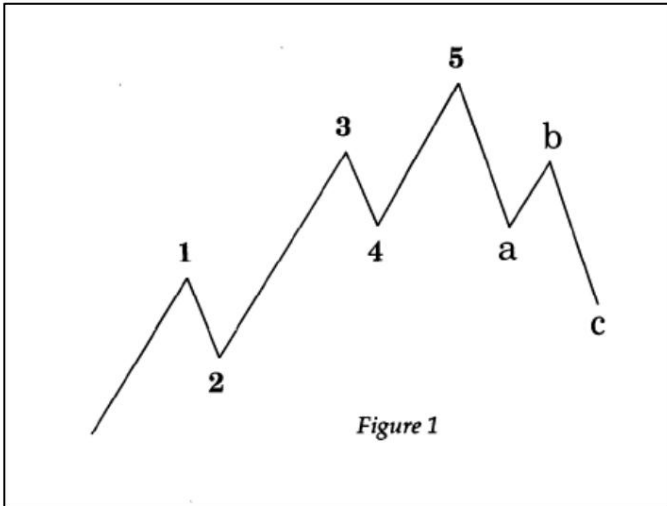
**Full course:**

Elliott defined the complete cycle of price movement as 8 waves, which are separated as follows:

1) Five rising waves numbered 5-4-3-2-1 indicate the general direction (trend) and are called the motivational wave.

correction and are called corrective waves.

2) Three bearish waves, numbered CBA, indicate a



**Note:** Any five-point wave is motivational and any three-point wave is corrective.

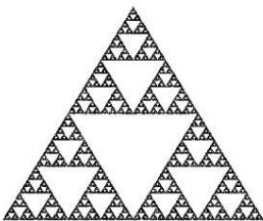
**Note:** Waves 2 and 4 in the upward direction and wave B in the downward direction go against the trend because they are internal corrective waves.

**The figure shows the complete movement of the price cycle**

The principle of waves depends on a principle of nature known as repetition (fractals), meaning the smallest unit of form is an image... The images below illustrate

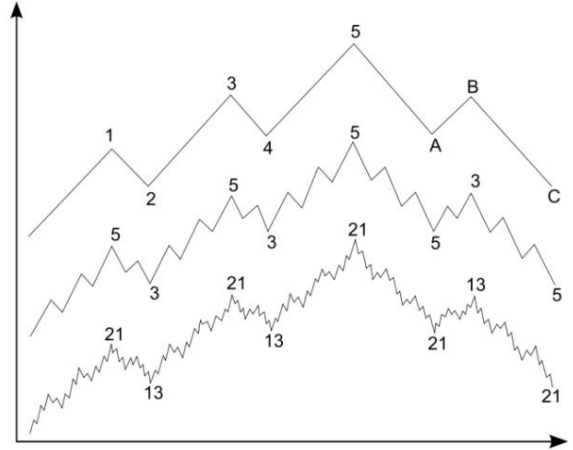
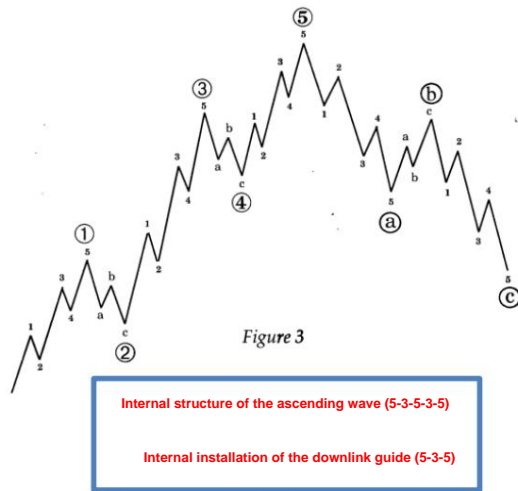
this principle

Identical to the largest unit of the same shape



and its translation into price models, including what Elliot was able to discover with all his genius, is known today as The currency market is subject to this principle

the wave principle: see the figure below.



Note: The number of major waves in the complete cycle = 8, the waves in the smaller cycle have a degree = 34, and waves of the smallest degree = 144.....and so they are all numbers of the Fibonacci sequence, the importance of which we will discuss in the principle of waves later.

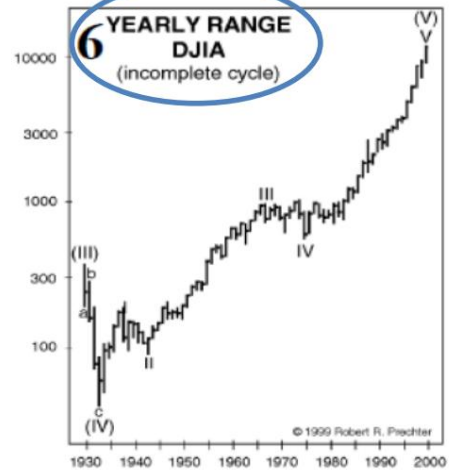
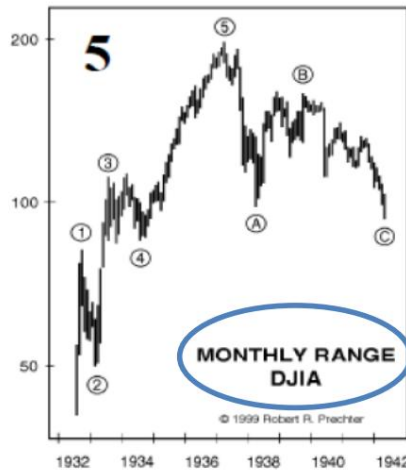
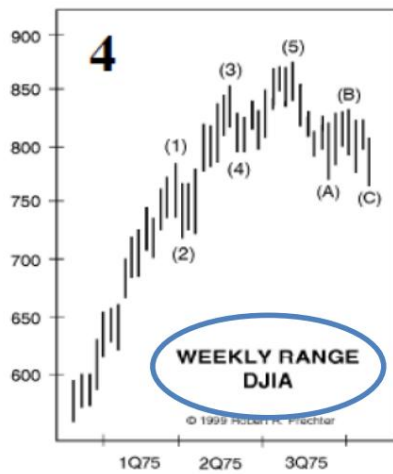
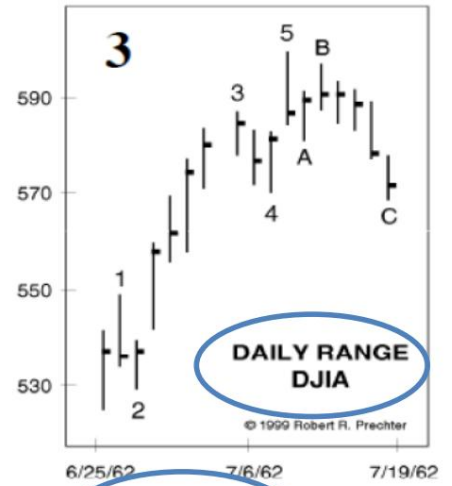
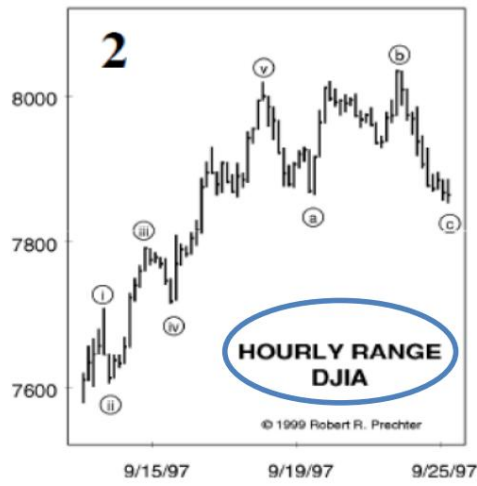
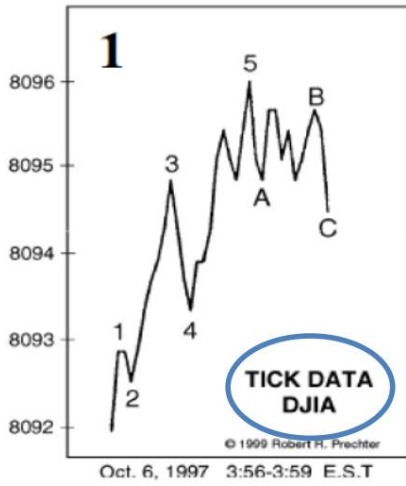
### Time frame of waves (wave pitch):

So every wave is composed of smaller waves, and smaller waves are composed of finer waves, and so on. Eliot and those after him classified waves in terms of their size or time periods into specific categories, as in the following table:

The numbers between [ ] indicate a larger degree than the ones between ( ), and the Greek numbers are larger than the Arabic numbers, and so on.....

0) Submicro	المجهرية - الفرعية	من دقائق الى ساعات لا تزيد عن 48 ساعة	i ii iii iv v a b c
1) Micro	المجهرية	من ساعات الى أيام لا تقل عن ساعتين ولا تزيد عن اسبوعين	i) ii) iii) iv) v) a) b) c)
2) Subminuette	الذرية - الفرعية	لا تقل عن يومين ولا تزيد عن شهرين	(i) (ii) (iii) (iv) (v) (a) (b) (c)
3) Minuette	الذرية	لا تقل عن يومين ولا تزيد عن 6 شهور (ربيعين)	[i] [ii] [iii] [iv] [v] [a] [b] [c]
4) Minute	الدقيقة	من أسابيع الى أشهر لا تقل عن اسبوعين ولا تزيد عن 6 شهور	1 2 3 4 5 a b c
5) Minor	الثانوية	لا تقل عن اسبوعين ولا تزيد عن عامين	1) 2) 3) 4) 5) a) b) c)
6) Intermediate	المتوسطة	لا تقل عن شهرين ولا تزيد عن عامين	(1) (2) (3) (4) (5) (a) (b) (c)
7) Primary	الاساسية	لا تقل عن شهرين ولا تزيد عن 20 عام	[1] [2] [3] [4] [5] [a] [b] [c]
8) Cycle	الدورية	لا تقل عن 6 شهور ولا تزيد عن 20 عام	I II III IV V A B C
9) Supercycle	الدورية الاعلى	لا تقل عن عامين ولا تزيد عن 20 عام	(I) (II) (III) (IV) (V) (A) (B) (C)
10) Grand Supercycle	الدورية العظمى	اكثر من 20 عام	[I] [II] [III] [IV] [V] [A] [B] [C]

Based on the above, we can apply the principle of waves to any time frame, as in the following examples:



Here the theoretical section ends and we will begin the practical section in the next lesson, God willing

# Wave Motive:

It is a five-wave formation that moves in the direction of the original trend.

Its internal structure is (5-3-5-3-5)

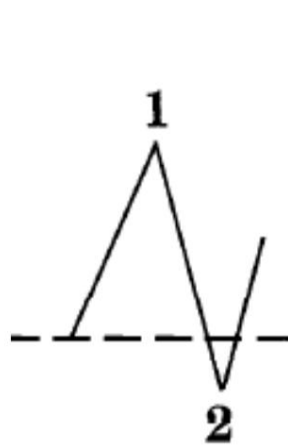
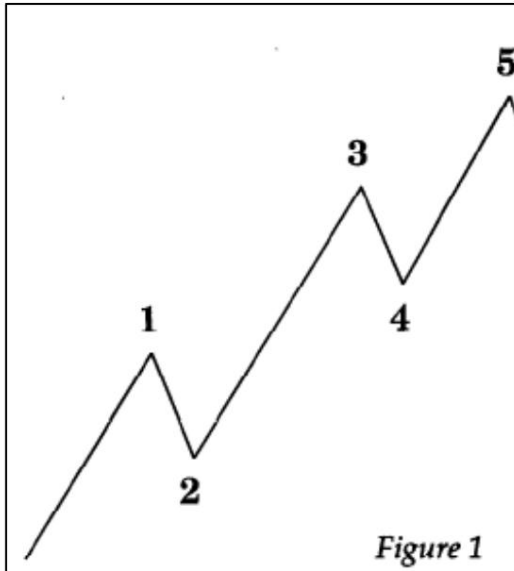
## Motivational wave rules:

The incentive vector has 3 third-party rules, but one of the most common errors seen in punctuation is failure to respect these three rules, which are:

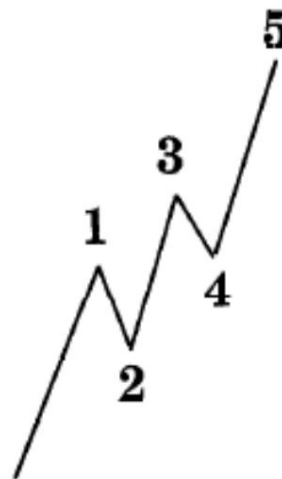
- 1) Wave No. 2 does not correct more than 100% of wave No. 1
- 2) Wave No. 3 cannot be the shortest among the three waves in the direction of the trend (1-3-5). It may be shorter than one of them, but not shorter than both of them.
- 3) Wave 3 must exceed the top of wave 1

These are simply the rules for incentive routes, so if one of them is not met,

reconsider the numbering of the router.....



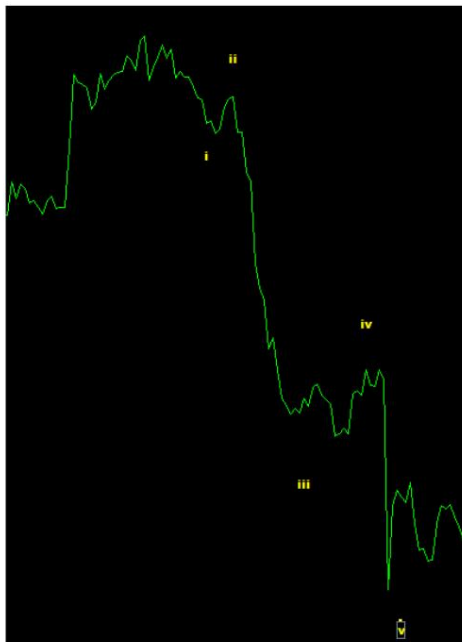
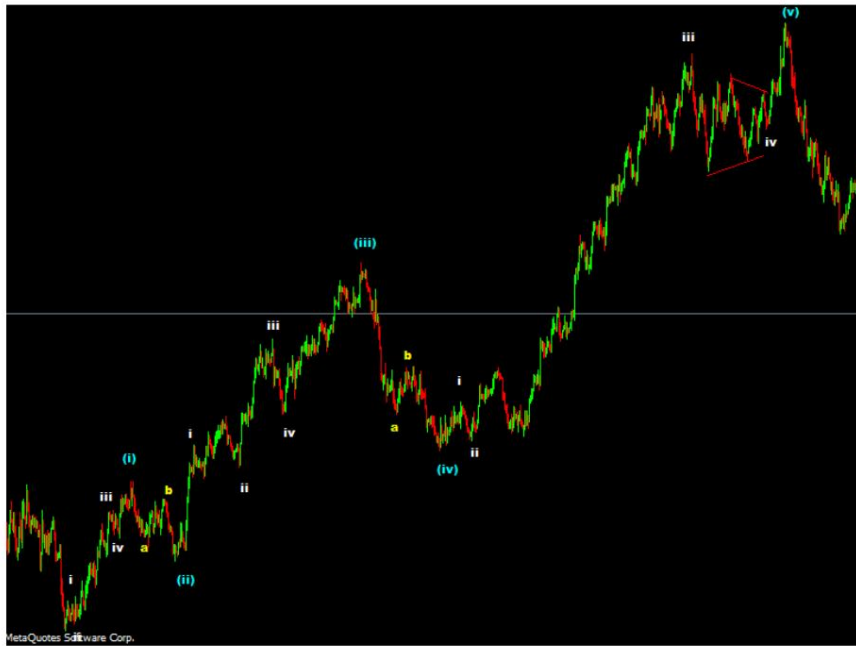
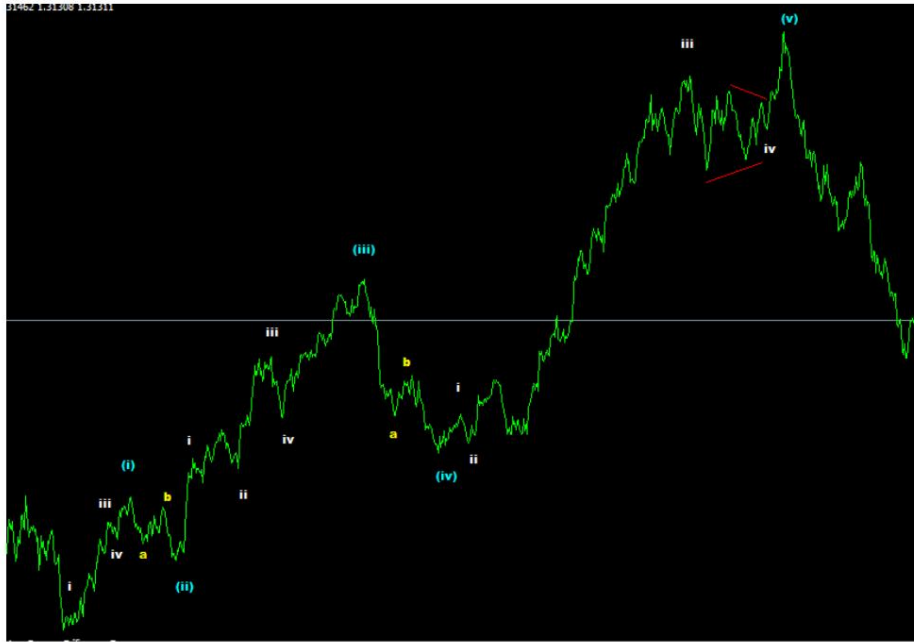
Wave number 2  
It is not possible to  
correct more than  
100% of Wave 1



Wave number 3  
It could be the  
shortest

Figure 4

Figure 5



**Types of impulse waves (3 types):**

3. Backward diagonal wave.

2. Front diagonal wave.

1. Motivation vector

**Remember:** All types of impulse waves share the three rules mentioned above, but each of them has additional rules.

**a. Impulse wave:**

**Additional rules:**

1) Wave 4 cannot overlap with wave 1. 2)

Internal wave 3 must also be impulsive.

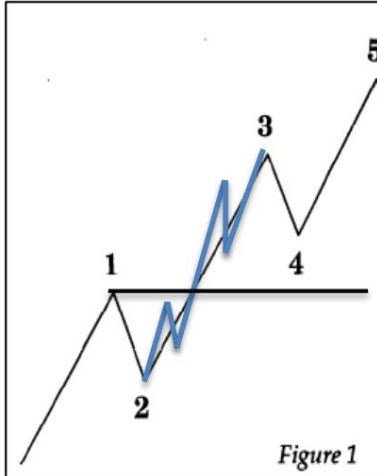
**Its locations:**

1) Waves (5-3-1) from an impulse wave of greater magnitude. 2)

Waves (5-3-1) from the front diagonal (we will learn about them later) of greater magnitude.

Larger. 3) Wave C from any ABC

correction. 4) Wave A from the zigzag correction (we will learn about it later).





Impulse wave characteristics:

a. Extension:

• The extension feature occurs in the driving waves that form in the main trend, which results in reaching further areas and price targets. Therefore, the driving wave intends to divide itself into more sub-waves in order to be able to reach the price targets.

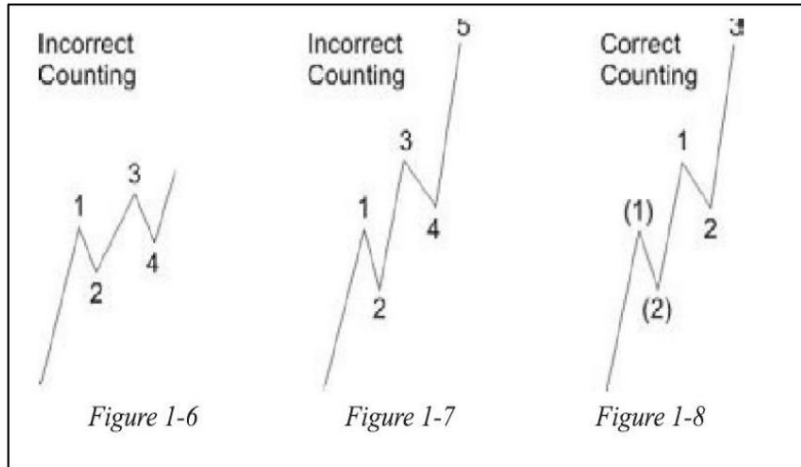
• The extension occurs in one of the waves (1 - 3 - 5), and we can know the extension by the formation of internal waves

The extended wave is very clear and its lengths are close to the lengths of the main waves on the same interval used for numbering the main wave. (It is rare for an extension to occur in two waves, but it is possible.)

• In the currency market, it usually occurs in the third (remember that the third is the shortest, as it is more likely to extend) and occurs as a result of hope.

Traders want the price to go higher, especially after wave 2 was unable to break the bottom of wave 1

• But in commodity markets, the fifth wave is the one that extends mostly because the commodity market is supplies that a person needs on a daily basis, such as sugar and corn.... Most traders want to buy goods at a cheaper price in order to sell them to the public at a price, and the fourth wave is in a sideways price zone. It produces a reasonable result, but at the end of the third wave, traders decrease in fear an increase in prices, so they begin to buy at cheaper prices, resulting in an increase in demand and a supply, so prices rise strongly and an extension occurs.



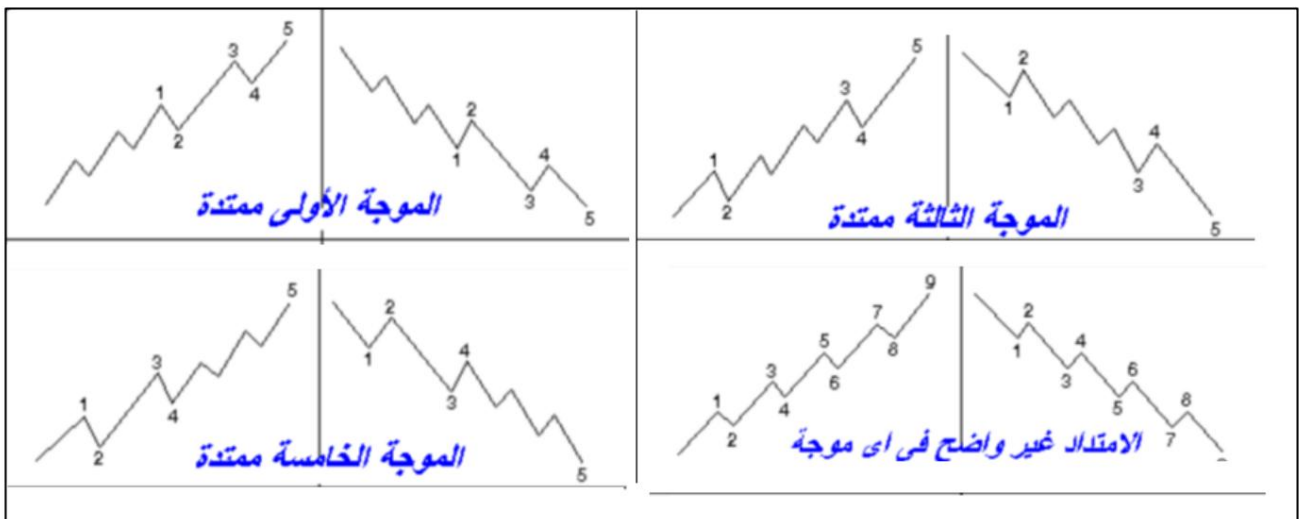
Note: If wave 3 does not reach 161% of the length of wave 1, it is not considered 3, and it is better to number it as the first wave of the extension, as shown in the adjacent figure

Extension is evidence to suggest many possibilities, for example:

- 1) If the first and third waves are equal in length, then the fifth wave is extended.
- 2) If the third wave extends, it is possible that the fifth wave will be a backward diagonal wave.

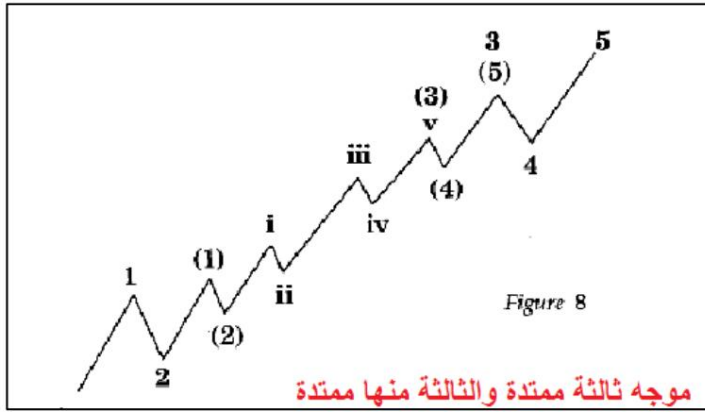
• The extension helps us determine correction targets, which we will discuss later (3) as well

Extension forms:

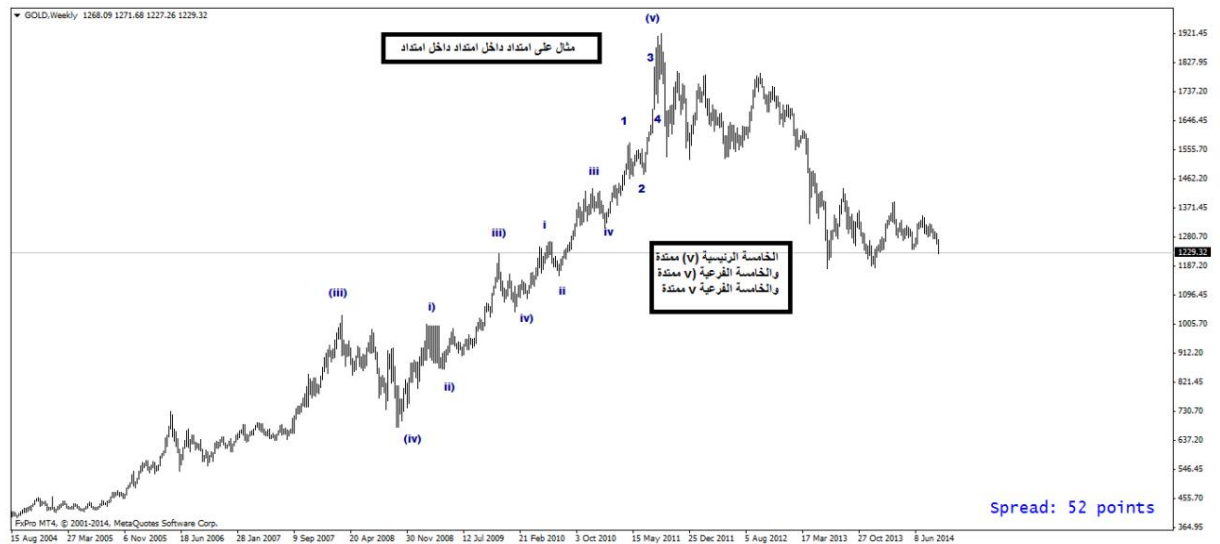


**Note:** Since the wave as a whole consists of 5 waves, in the case of an extension, it will be 4 + 5 (additional waves) = 9

Sometimes the same extended wave extends its internal waves, so the result becomes  $4+9 = 13$   $4 + 13 = 17$  .....



**Examples of extension:**

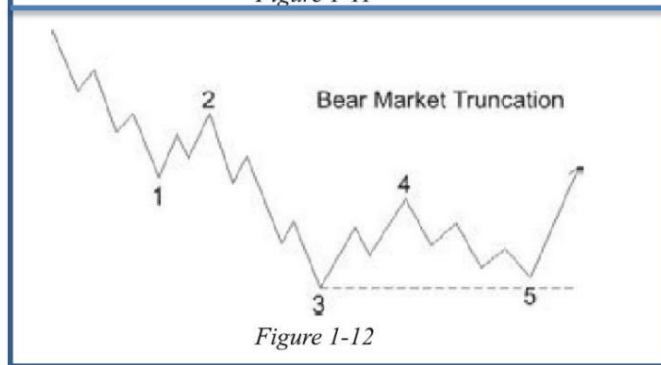
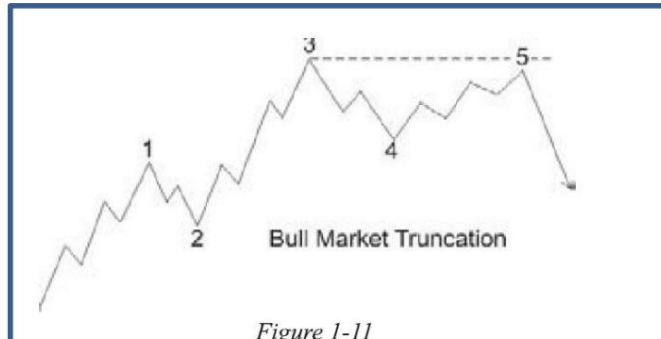


## B. Truncation phenomenon:

that contained a wave.

1) It only occurs in the fifth wave. 2) That is, the fifth wave cannot exceed the top of the third wave, and it often occurs after a strong trend

Extended.



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## 2- The front diagonal wave or the front diagonal triangle (LD – Diagonal Leading):

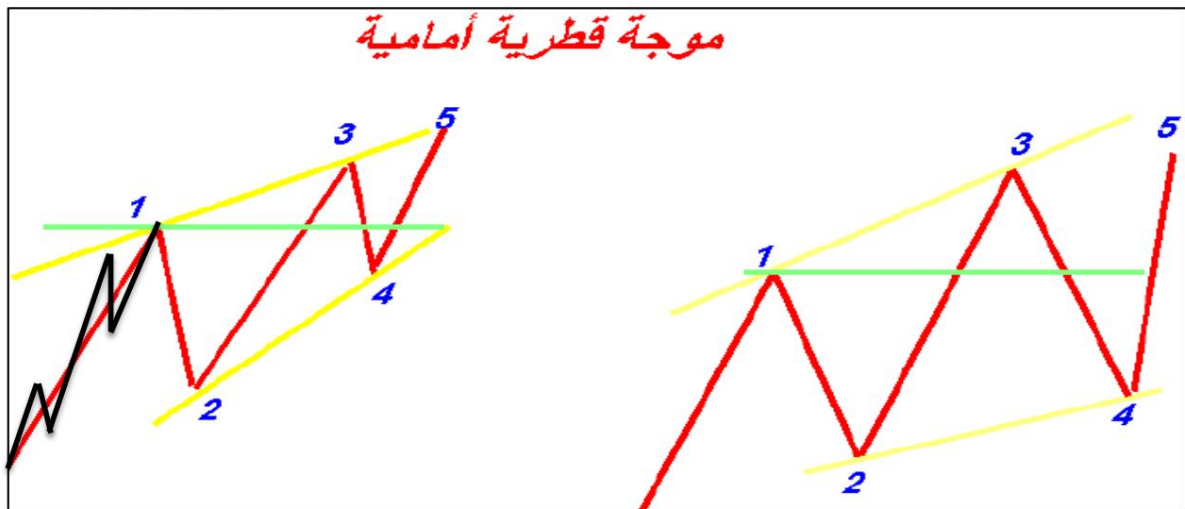
- From its name, a forward diagonal means it comes at the beginning of the trend only, meaning it comes in wave 1 of (5-4-3-2-1) or wave (ABC) of A - Its

internal structure is (5-3-5-3-5). - It has motive vector conditions.

### Additional rules:

1) There must be an overlap between wave 1 and 4. 2) It is required that the channel in which the model travels is a converging or diverging triangle.

The front diagonal wave has two types, either divergent or convergent:



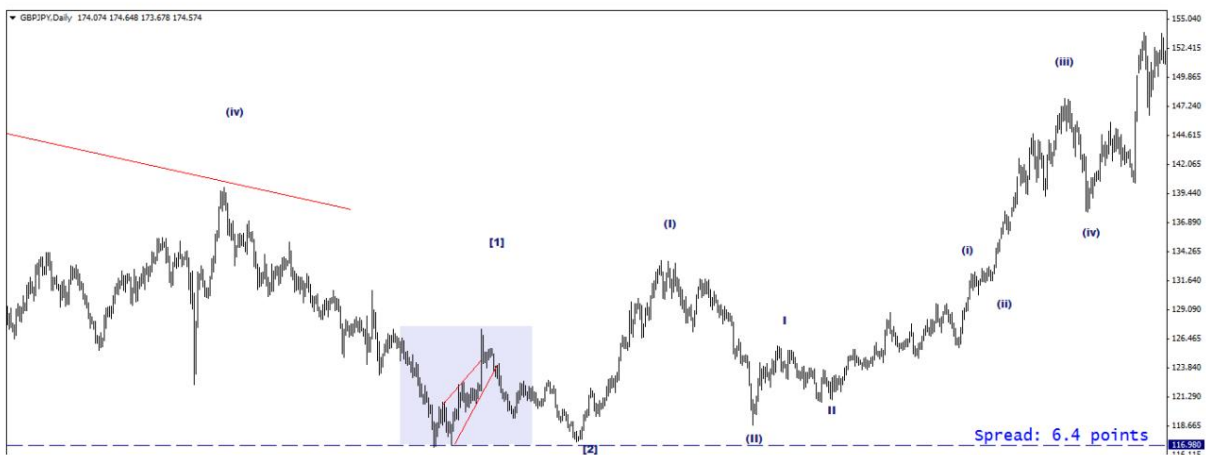
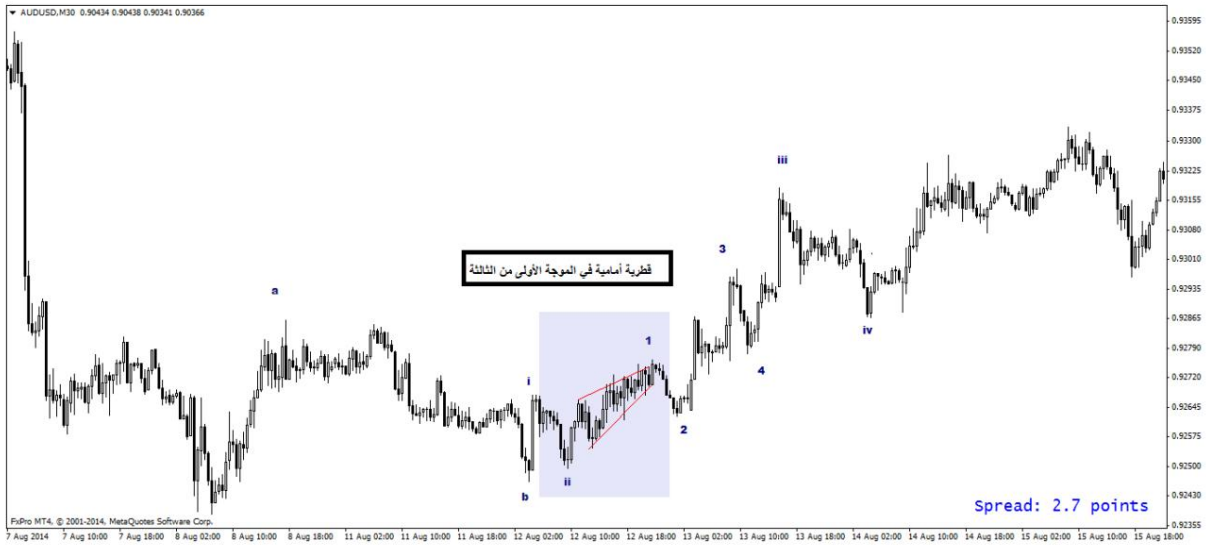
### Notes:

- The end of the front diagonal wave, after which a deep correction results.

- Classical is the wedge model.

### additional information:

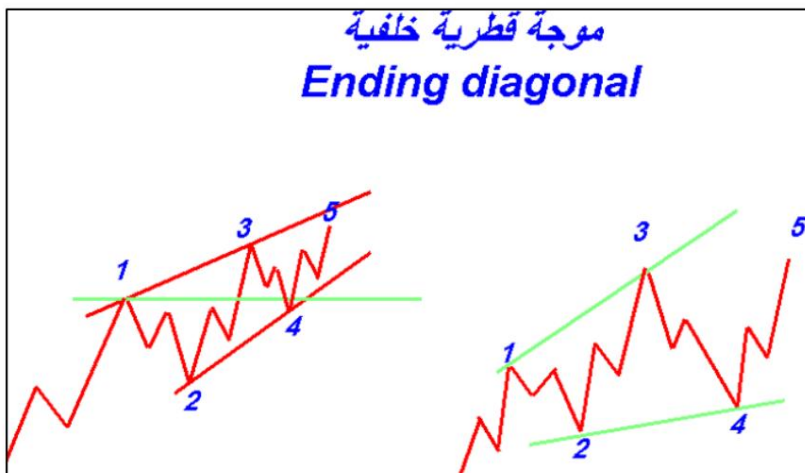
1) The front diagonal patterns were not discovered by Eliot, but it was Robert Prechter who discovered them due to their frequent repetition and added them to the basic models. 2) Robert Prechter noticed the front diagonal pattern with an internal configuration of 3-3-3-3-3, but it is very rare and does not occur. He takes it.



**-3 The back diagonal wave or the back diagonal triangle (ED – Diagonal Ending):**

It comes at the end of the trend only, meaning in wave 5 of (5-4-3-2-1) or wave C of (CBA).

**Additional rules:**



- 1) Its internal composition is 3-3-3-3-3  
In a corrective sense, waves 1, 3, and 5 must be from the zigzag correction or its family (details will come in the corrective waves).
- 2) There must be interference between wave 1 and wave 4
- 3) It is required that the channel in which the model travels is a converging or diverging triangle.

**Notes:**

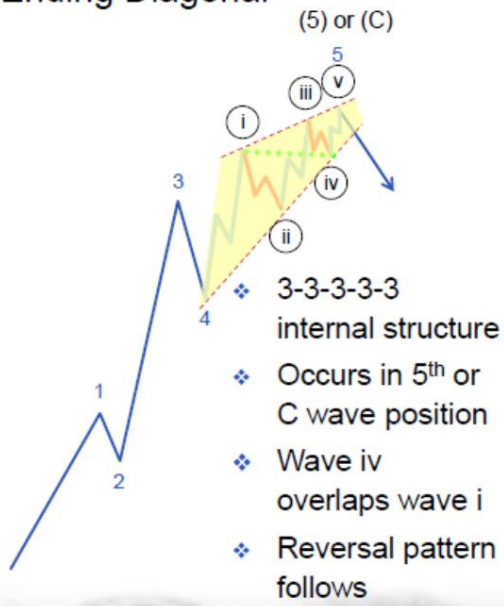
- 1) The end of the back diagonal is followed by a trend reversal.
- 2) - Classically, it is a wedge pattern.

**Examples:**

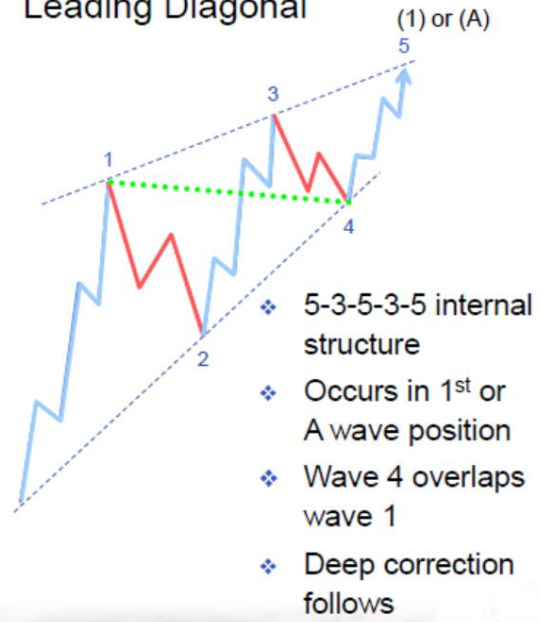


Summary of diagonal waves:

### Ending Diagonal



### Leading Diagonal



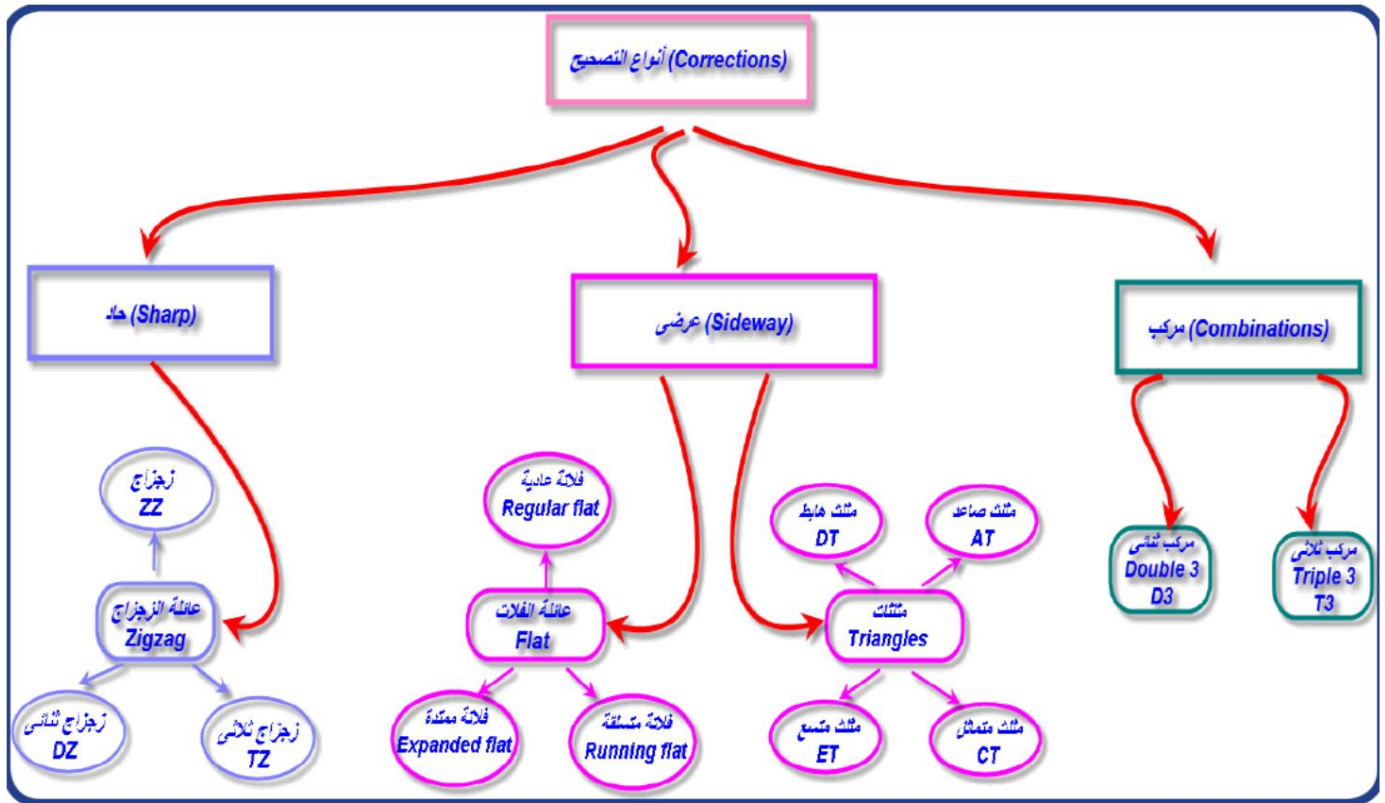
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Corrective waves:

Corrective waves are of 3 types: sharp, incidental or compound.

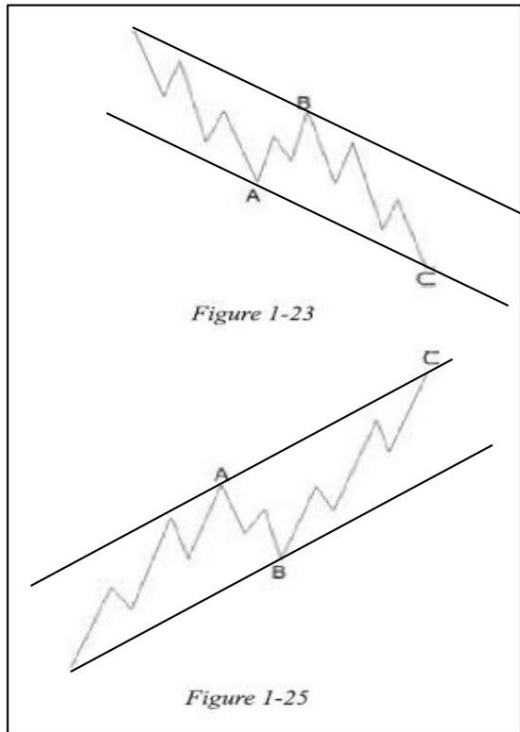


Important points in corrections:

1) Corrective waves are numbered in letters, not numbers, as follows:

The numbering types will be (ABCDE) (or) WXY-XX-Z) or (WXY) or (ABC) and will be explained in detail in this part.

The last word in the triangle. 2) Wave C is always an incentive wave and is not suitable for being something triangular, and in the case of a compound correction or a double or triple zigzag, 4 is added. 3) The correction is always on the 3 waves of the correction, so the result is....., 4+4+3, and so on.



**Severe corrections:**

**ZIGZAG family:**

**1. ZIGZAG:**

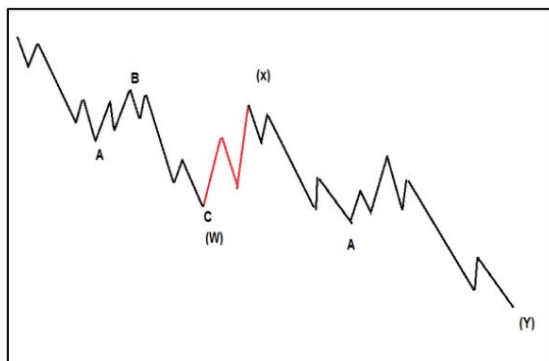
Its internal structure is (5-3-5) and its number is (CBA).

**Its rules:**

- 1) Wave B never goes beyond the beginning of Wave A.
- 2) Wave C must exceed the top of wave A.

**Note:**

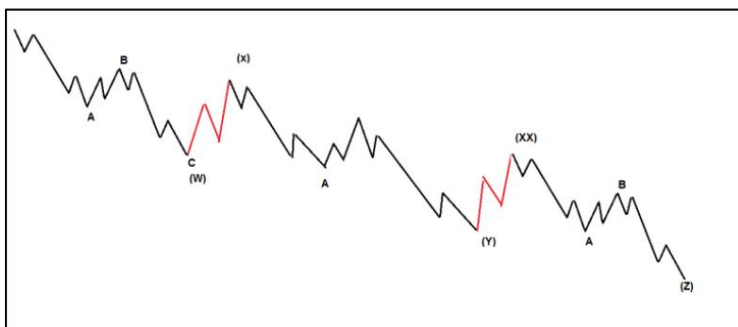
end of B We set a line if we draw a parallel trend line from the bottom of A to the  
At the end of A, the C wave often ends in trend touching areas.



**2. ZIGZAG DOUBLE:**

- Sometimes correcting the zigzag is not sufficient for the process of making profits, and it results in a repetition of the zigzag formed, which is called double zigzag.

- 1) The process of connecting the first and second zigzags is carried out with a triple wave numbered (X). The first zigzag is numbered (W) and the second (Y).
- 2) The wave (Y) must break the peak (W).



**3. ZIGZAG Triple:**

- 1) The zigzag is repeated for the third time and the linking vector is a triple numbered (XX). The third zigzag is numbered (Z).
- 2) The Z wave must break the Y peak.

**Note:** In all types of corrections, the correction must not be repeated more than three times. After the third iteration, the wave ends.



Side corrections:

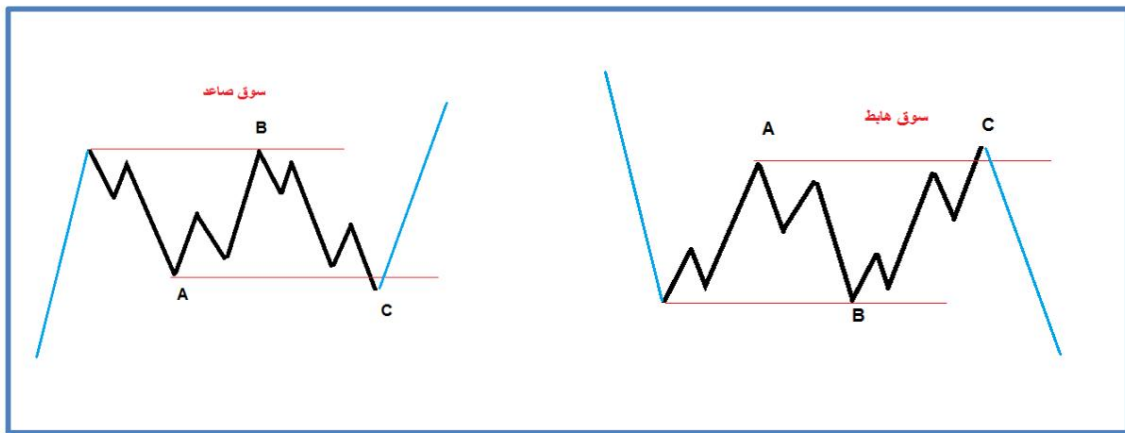
Its internal structure is (5-3-3) and is numbered (CBA) and is characterized by its flat shape. a. Flat family:

Types of filters (3 types):

**1. Flat Regular:**

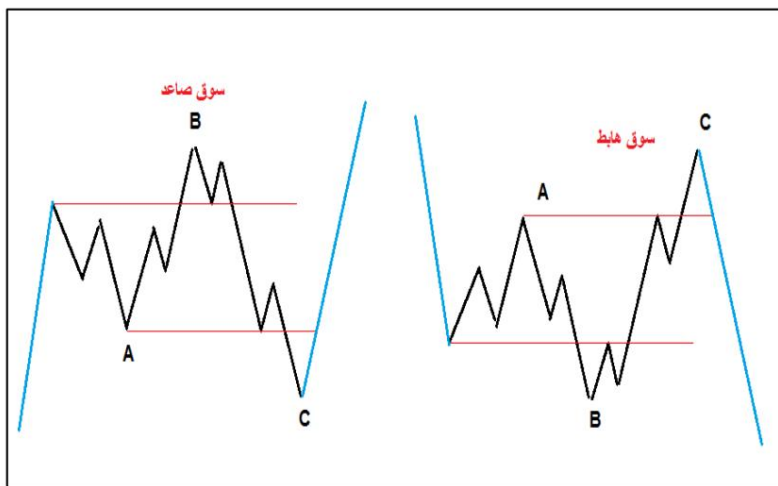
- 1) Wave B is approximately equal to wave A.
- 2) Wave C corrects the entire wave B and ends shortly after the top of A.

**Note: In the currency market, wave C ends shortly after the end of wave A.**



**2. Flat Expanded:**

Imagine that the regular flat was grabbed by the end of guide B and guide C and pulled each in its own direction. This action will result in the extended flat.



1. Wave B breaks the bottom of wave A.
2. Wave C must go beyond the end of the wave A.
3. Phases are considered extended if they exceed wave B 105% of the length of A.

Information:

This model is one of the dangerous models in trading because by breaking the bottom of A, traders believe that the correction is over and begin selling (in the case of the main downtrend). They are surprised that wave C returns and breaks the top of A, so they begin to

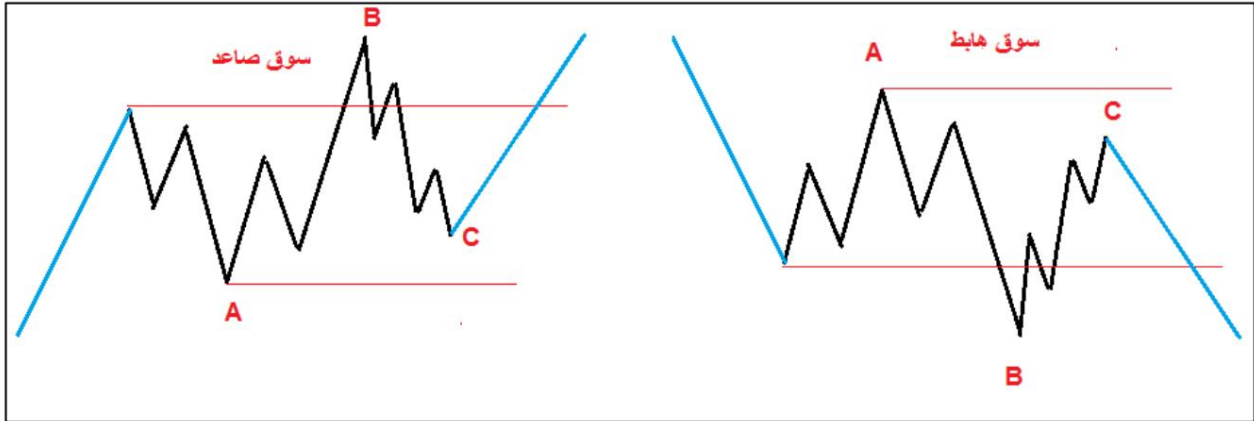
buy, believing that the trend has ended and begun to reverse. The price returns to break the bottom of C to complete its main trend

\* Eliot called it Flat Irregular.

### 3. Flat Running:

A rare pattern, and it is characterized by being similar to an extended waltz, in which wave B breaks the bottom of A, but wave C cannot exceed the top of A, but must end within the borders of wave A.

C Reaching higher but directed price areas It is called a climbing flat because it climbs on the original trend in attempts that fail in doing so.



1. We notice that wave C shares the same price zones with wave A, and this is a basic condition for the model to be correct.
2. Once the pattern is completed, it is followed by a violent price movement in the direction of the original trend, which may continue for years.

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### Triangle family: B-

Its internal structure consists of at least five waves (3-3-3-3-3) and is numbered (edcba).

- 1) The triangle and its family differ from the diagonal triangle waves, and the difference is that the diagonal waves come inside the waves. Impulsive triangles come within a correction.
- 2) In addition, the diagonal waves whose internal waves (1,3,5) come from the zigzag family only, while the internal triangle waves It comes in any corrective form.
- 3) A triangle always takes the transverse shape and is therefore sometimes called (Triangle Horizontal). They come in the form of compound corrections, so the number of triangle waves becomes 7
- 4) Router C is often complex

Triangles are one of the best and strongest patterns, and they come in the wave preceding the last wave in the trend, meaning

they only come in the following waves:

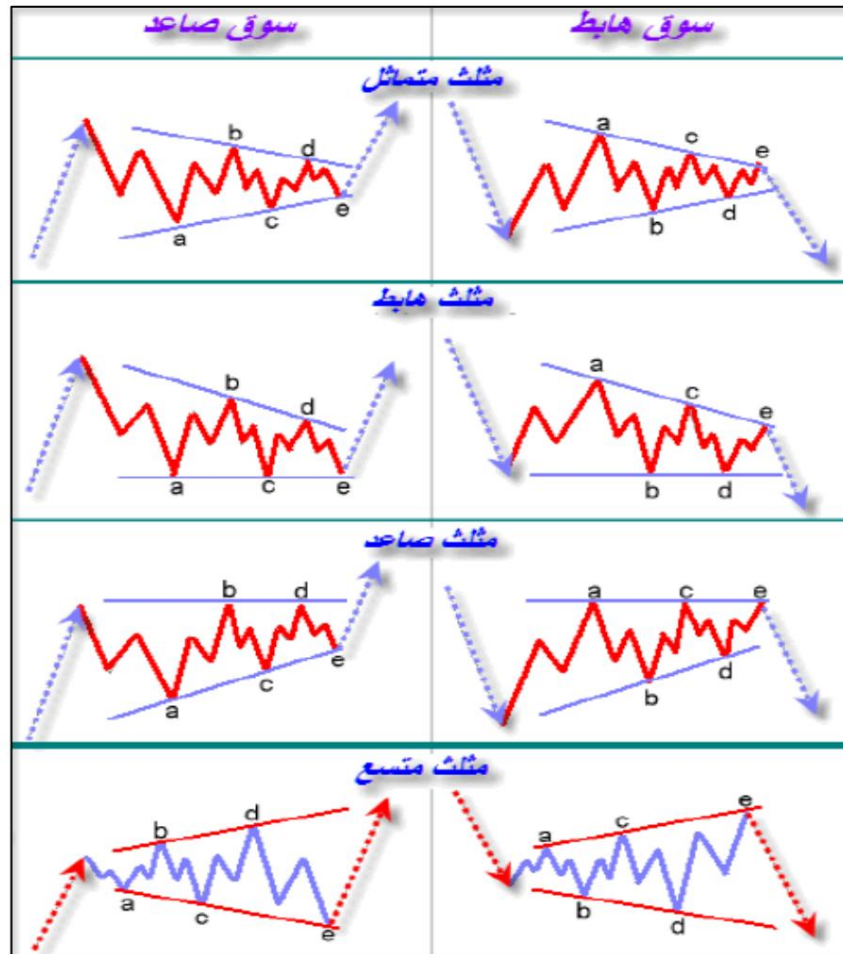
- 1) The fourth wave of the motive wave (impulse or diagonal).
- 2) The Y wave of WXY of any correction.
- 3) The Z wave of WYXXZ of any correction.
- 4) The B wave - only if ABC is a zigzag correction.
- 5) The X wave - Only if WXY is a double zigzag.
- 6) Wave XX - only if WYXXY is a triple zigzag.
- 7) Wave E is from a triangle, so the number of waves of the triangle becomes 9 instead of 5.

Types of triangles: 3 types:

The expanding triangle: its sides are far apart. 1) The contracting triangle: its sides are close together and it is called a symmetrical triangle. 2) The barrier triangle: the upper or lower side is a straight line forming a barrier in front of the price

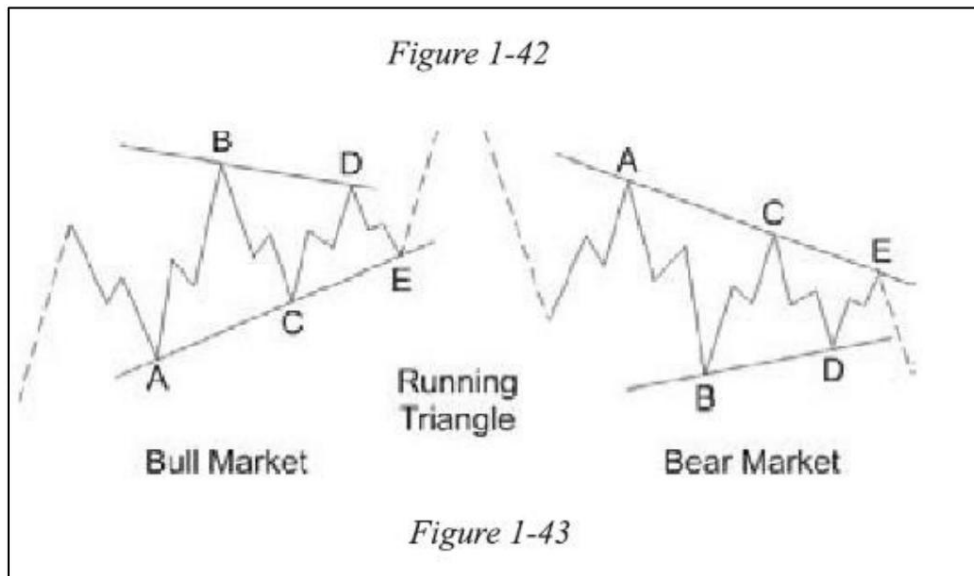
The other side is rising toward the barrier or descending from it.

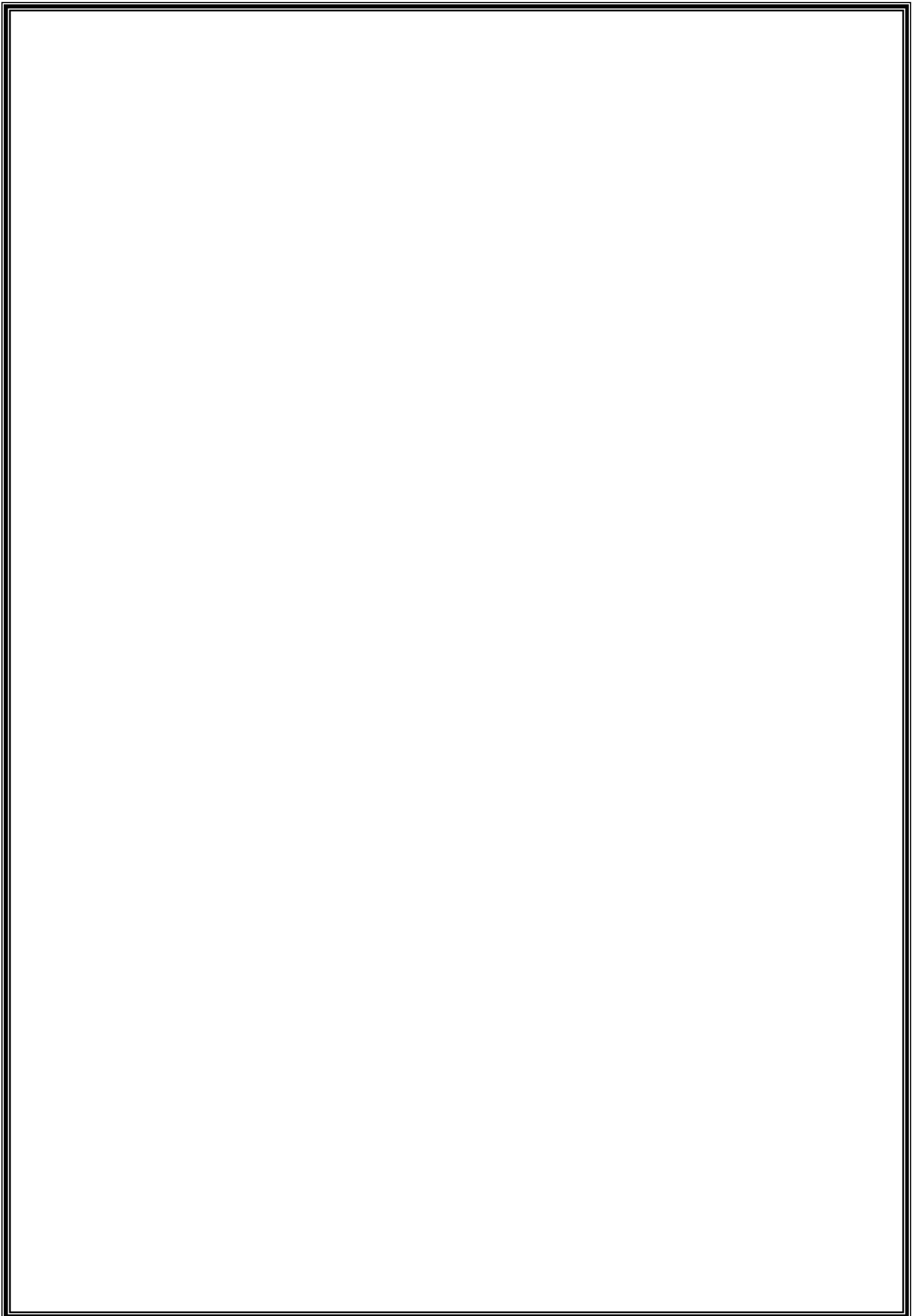
1. Descending triangle.
2. Ascending triangle.

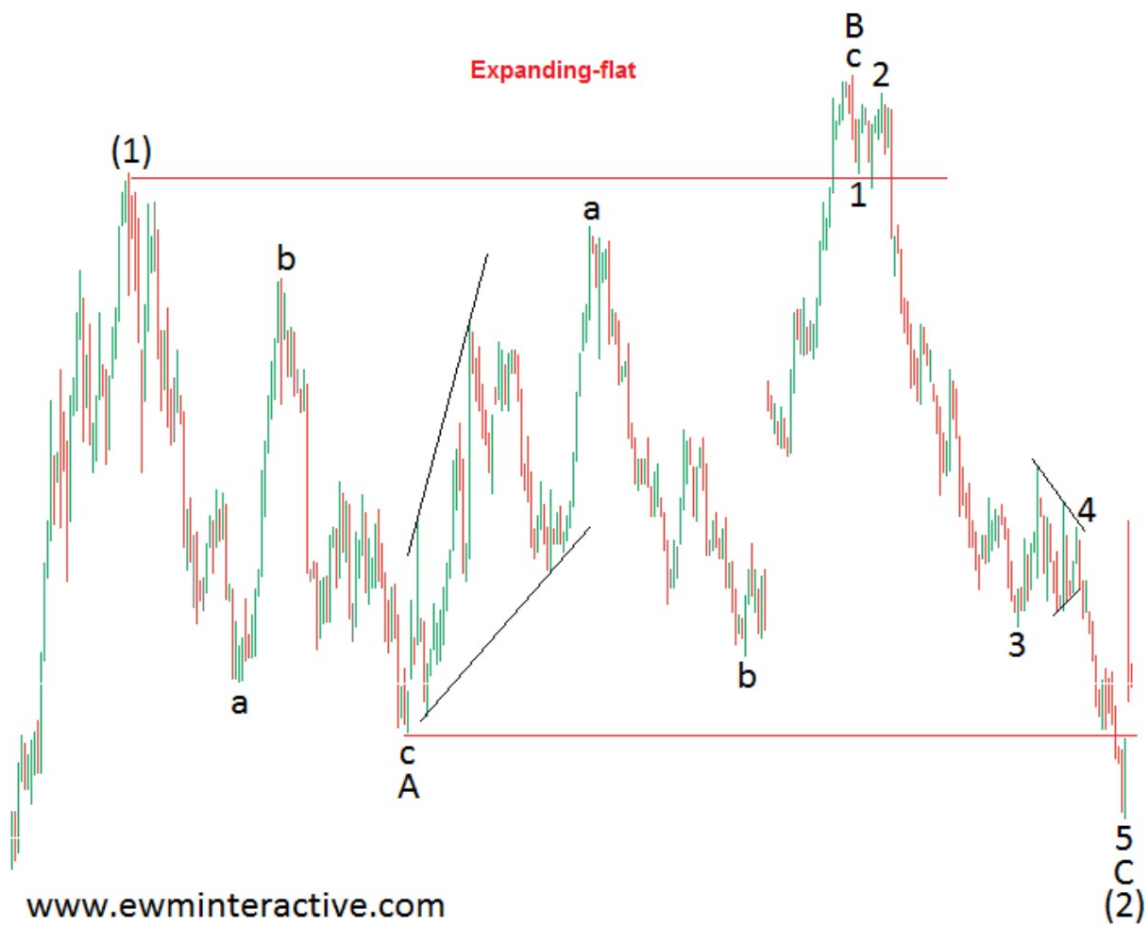


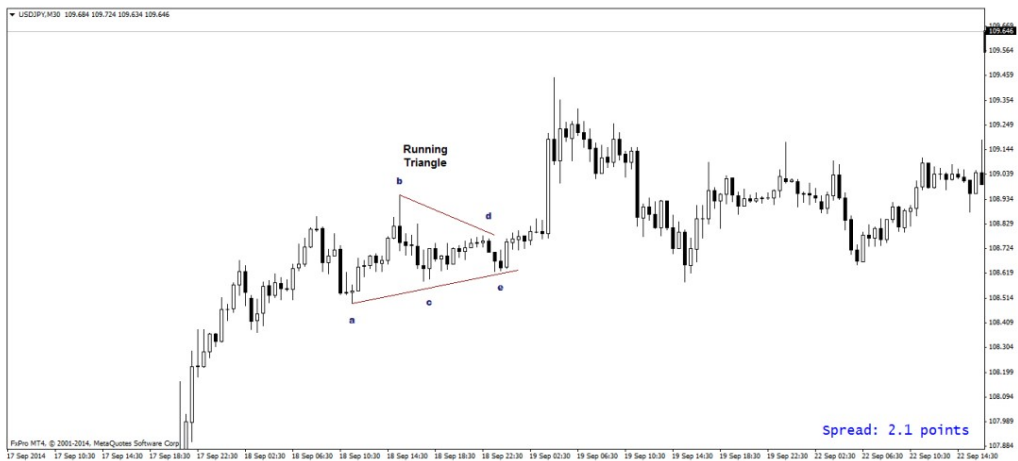
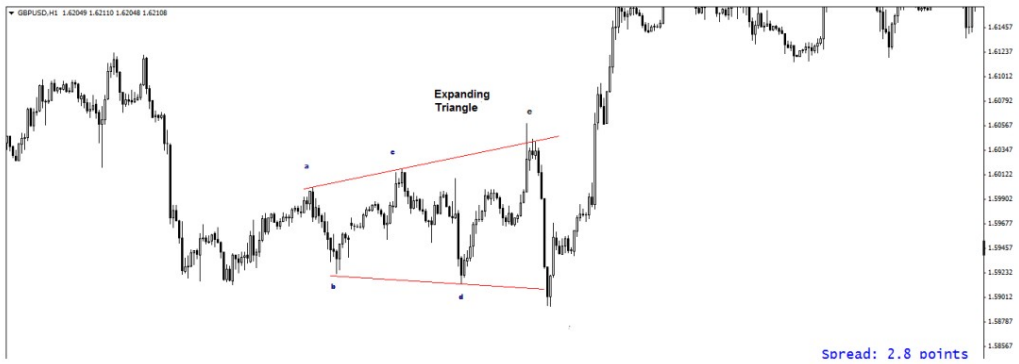
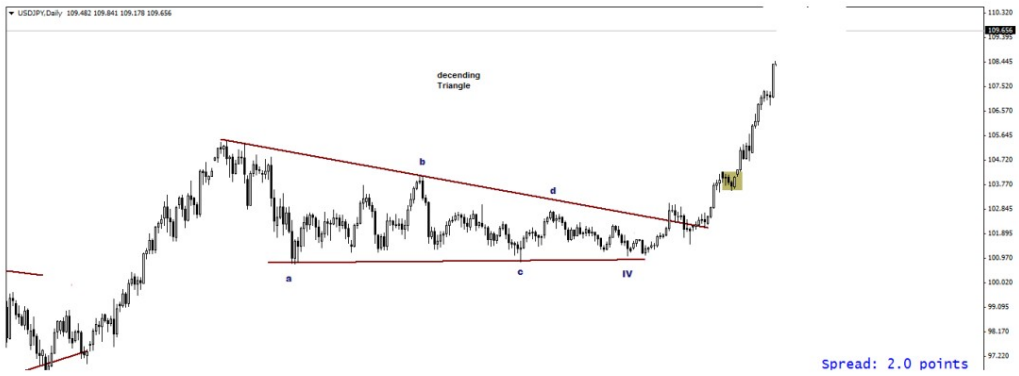
**Note:** In most cases, the sides of the triangle correct 61% of the previous side.

There is one last type left, called the running triangle: where side B breaks the beginning of side A, but the rest of the sides cannot break the beginning of B.









C- Compound corrections:

It is called compound because it includes more than one corrective pattern in the wave as a whole, and it is of two types:

1) THREE DOUBLE (symbol 3D) . 2) THREE TRIPLE (symbol 3T).

- By linking each model to the other, a triple bond vector (X) in the binary correction, and the numbering becomes Y – X – W.

- And the vector (XX) in the tertiary correction, and the numbering becomes Z–XX–Y–X–W

- As we mentioned previously, the wave ends if the correction is repeated 3 times.

1.THREE DOUBLE:

In most cases, the double compound correction begins with a vault correction, but there is something that prevents it from starting with a zigzag.

**Reason:** Zigzag correction, if repeated, aims to reach new price areas farther than the areas reached by the first zigzag. However, in the compound correction, the price target has been achieved, but the goal of repeating the correction is to gain more time through sideways correction, either to reach the end of the channel in the motivational wave (which will be explained later) or to wait for the completion of a correction in a larger wave degree.

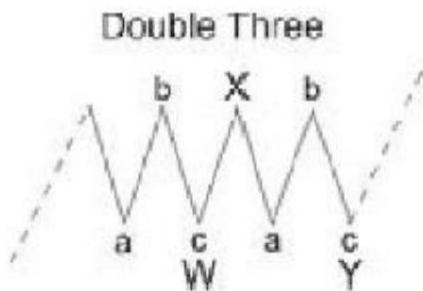


Figure 1-45

Forms of binary compound

correction: 1) Flat

- Flat 2) Flat -

Triangle 3) Flat -

Zigzag 4) Zigzag - Triangle ( not repeated

continuously) 5) Zigzag - Flat (not repeated continuously)

Each model is connected to the other by a triple link vector (X).

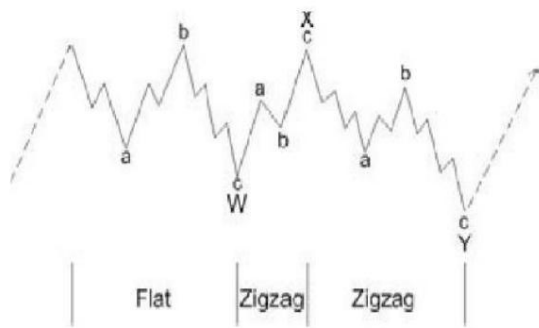


Figure 1-48

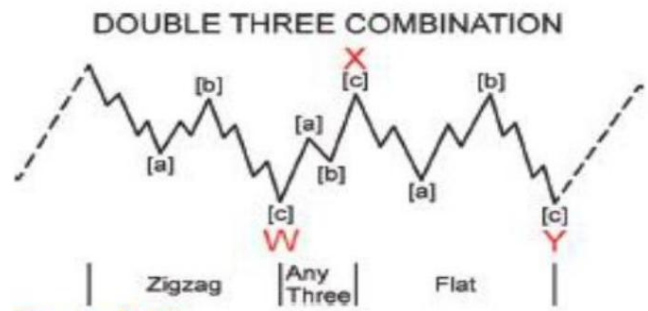


Figure A.18  
Source: Elliott Wave Principle.

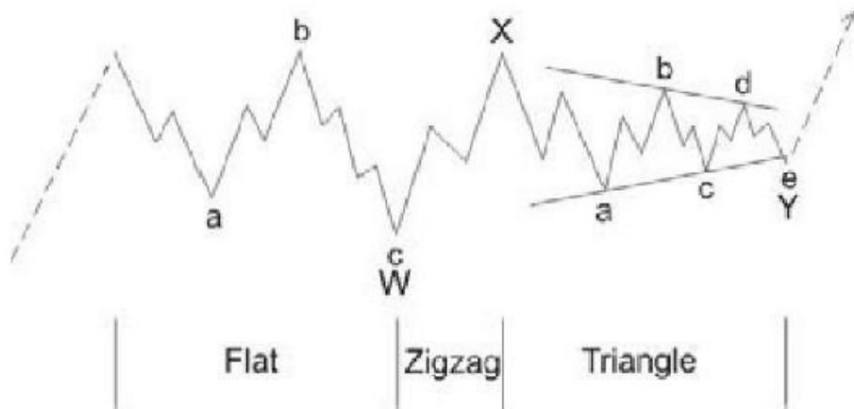
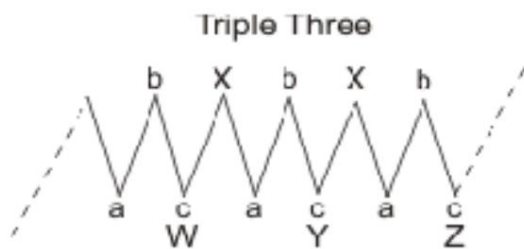


Figure 1-47

## 2. THREE TRIPLE:

### Forms of tertiary compound correction:



1. Flat - Flat - Flat

2. Flat - Flat - Triangle

3. Flat - Flat - Zigzag

4. Flat - Zigzag - Flat

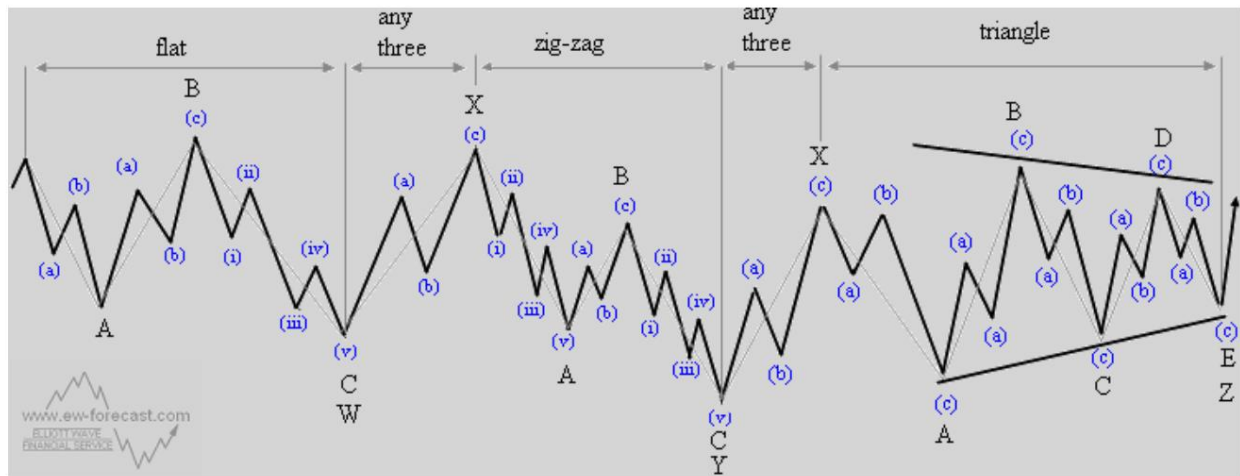
5. Flat - Zigzag - Triangle

6. Zigzag - Flat - Triangle (do not repeat

continuously) 7. Zigzag - Flat - Flat (do not repeat continuously)

Double and triple three are considered a type of cross correction, so it is usually (correction sideways) in the form of a horizontal or in a price channel with a weak inclination angle, unlike double and triple zigzag, which belong to the

zigzag family, so the inclination angle is sharp and strong.



**Note for compound corrections, whether double or triple:**

- i. Zigzag only occurs once within a compound patch.
- ii. The triangle only occurs once within the compound patch and only in the last phase, meaning either in the Y vector of the binary patch or Z in the triple patch.
- iii. It is very rare for double and triple three to start with a zigzag, but there is nothing to prevent this.

**Corrective Waves Summary**

	A	B	C	D	E	Shape
Zigzag	5	3	5			Sharp
Flat	3	3	5			Sideways
Triangle	3	3	3	3	3	Sideways
Combination		X wave				Sideways

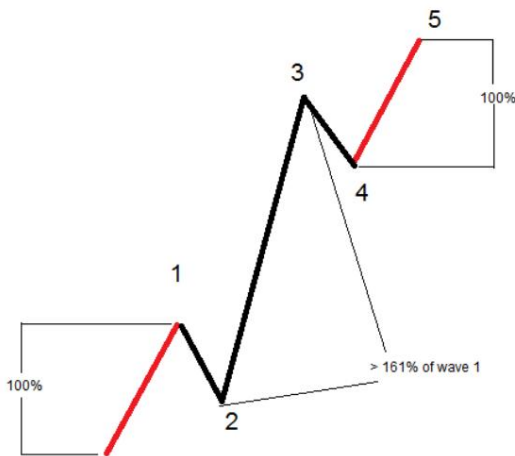
**End of the practical section on models.**

**Next lesson, we will learn about the guidelines for waves in terms of wave lengths, and we will learn about the Fibonacci relationship with these waves.**

## Guidelines:

Rules differ from their guidelines, meaning that rules are conditions that cannot be violated, otherwise observations that are repeated the numbering will be wrong. As for guidelines, they are frequently to the point of being close to being a rule, but they are not, and it is possible for the directed to adhere to them.

All of the above are the basic rules for waves or patterns. Below we will explain the instructions for each wave or pattern, which will help us determine the price targets for the waves or predict the next pattern.



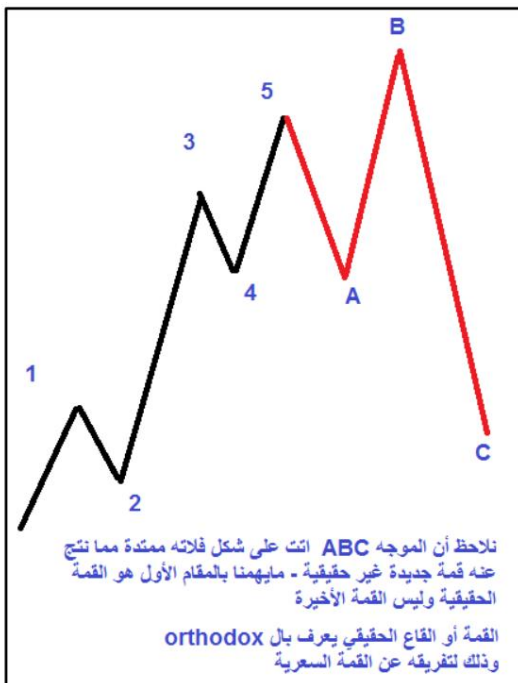
### 1. Equality:

One of the most important guidelines for impulse waves is that usually two waves of (5-3-1) tend to be equal in price and time, and this is considered as the third wave extends.

• This guidance is considered stronger if the extended wave is a wave

3 In most cases, 1 and .5 are equal here

• The third wave is considered extended if its length exceeds 161% of the wave length.1



### 2. Exchange:

Before going into the details of the exchange, you must differentiate between the real bottom or top of the pattern and the bottom or top of the price. The figure shows the difference between them.

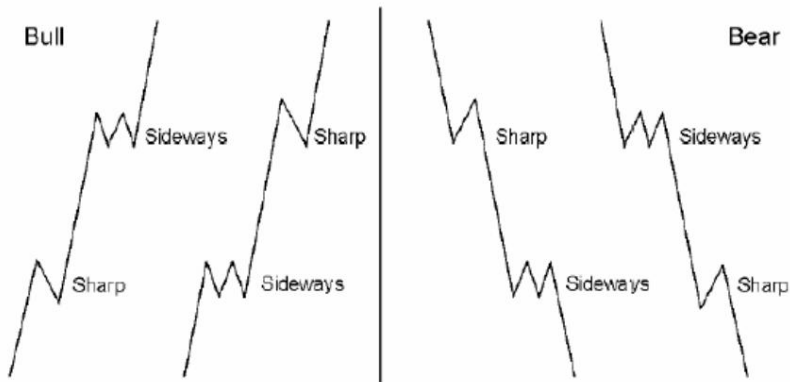
• The exchange occurs when a sharp pattern comes in one wave and an occasional pattern comes in another wave.

Remember the types of corrections:

Sharp = Zigzag family

Occasional = family of phalanxes, triangles, or compound corrections.

### Alternation within Impulse Waves



#### a. The exchange between waves 2 and 4

ÿ In impulse waves, exchange occurs between wave 2 and wave 4

Wave 2 is often a sharp correction, while wave 4 is a horizontal wave.

**Note:** The exchange between 2 and 4 only occurs in impulse waves only, meaning it is not required in both types of diagonal waves.

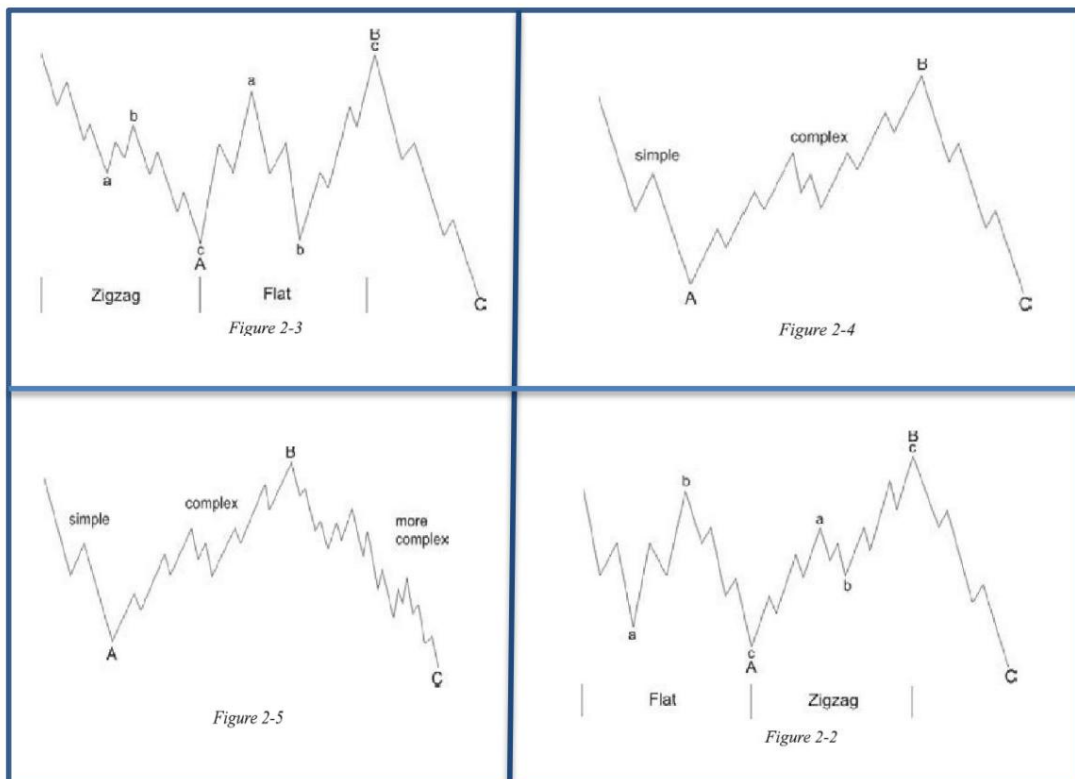
#### B. Exchange between waves 1, 3 and 5:

The exchange occurs by extending one of the waves, so that the details of the extended wave are clear

The extension occurs in only one of the three waves.

#### C. Exchange within corrective waves:

The exchange occurs in corrective waves by exchanging corrective patterns within the original pattern. Below are some examples:

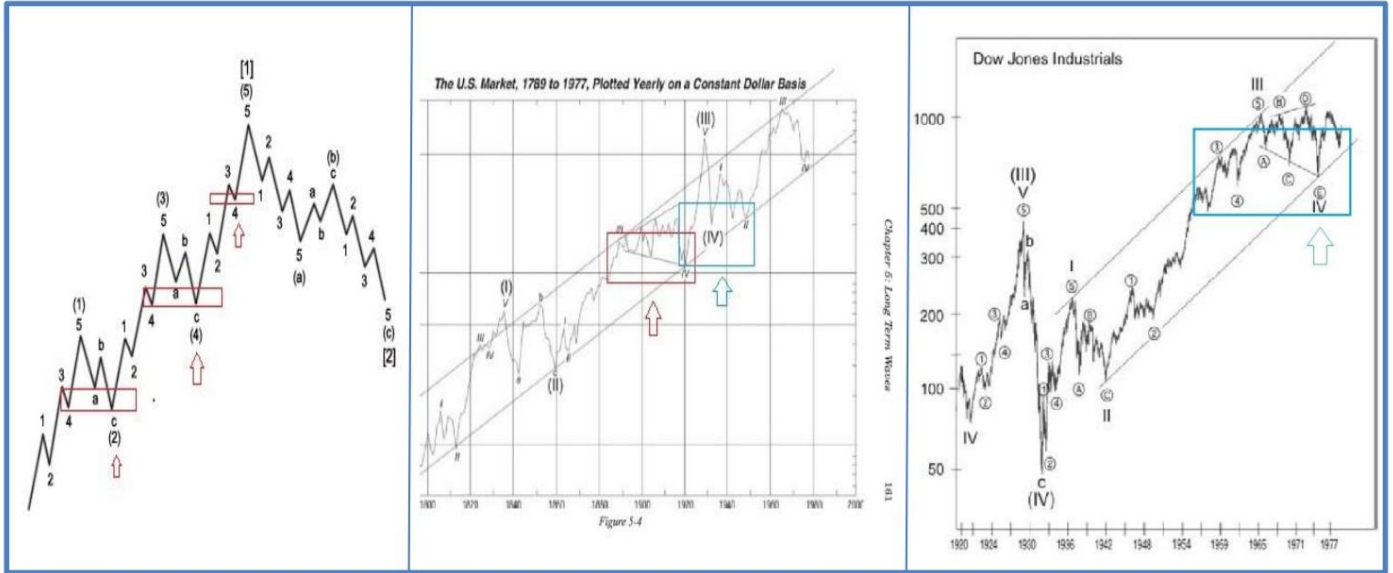


**3. Depth:**

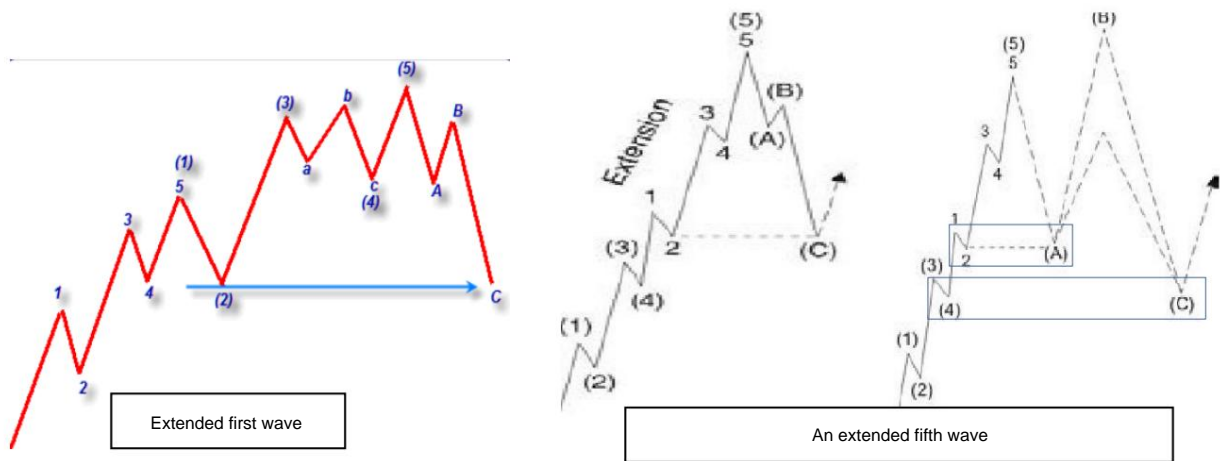
Depth is an important guideline for determining targets for corrective waves, as it occurs after the end of the motivational waves.

Usually, the target of corrective waves is the fourth wave area of a lower degree.

Wave 4 is the wave to which the principle of depth applies, as the lowest low (in the case of a bullish market) or the highest peak (in the case of a bearish market) of wave 4 is in the areas of the fourth wave of a lower degree.



and its target is if the second wave, because it usually comes sharp, often exceeds the area of the fourth wave of a lower degree, the first or fifth wave is extended, as shown in the figure. Second wave areas of lower degree especially



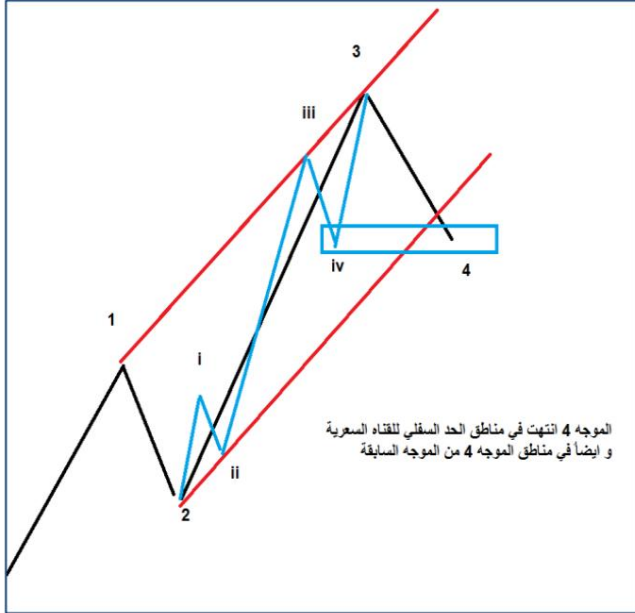
If we are in a very strong trend, it must be taken into account that the principle of depth is a guideline, not a law, and it may not happen in particular trend, the fourth wave will find it difficult to reach the previous fourth wave.

In general, in all cases, the fourth wave area preceding the correction usually forms the first support, and breaking it is targeted. The second Al-Wefa area.

## 4. Price channels:

Motivational waves and zigzag waves often tend to move in price channels. Price channels are useful in determining the wave targets.

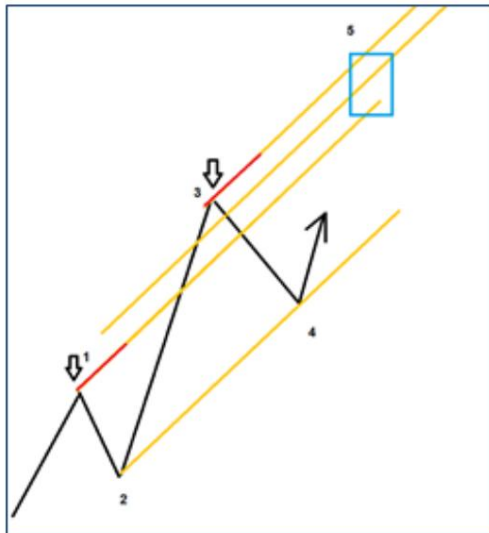
### Drawing the price channel for the impulse wave:



After wave 3 is completed, we draw a line connecting wave 1 and it is produced parallel to it from the bottom of the wave. We take line 2 and In wave 3 we have a channel in the direction of the trend.

### End of the fourth wave:

- 1) Lower channel border.
- 2) In addition to the areas of wave 4 of the previous wave that were explained previously.
- 3) By calculating Fibonacci ratios, which will be explained later

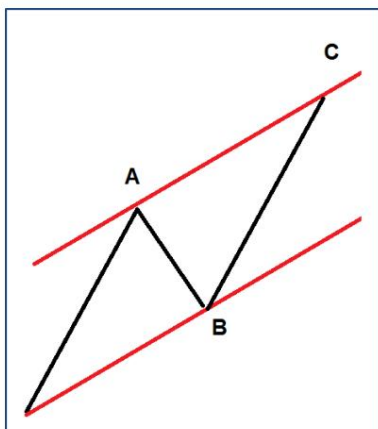


Line that trend line and - after the completion of the fourth wave, we redraw it with a drawing Connecting the bottom of wave 2 to the bottom of wave 4, then taking a line parallel to it, another line in another line at the top of 3, and placing it on the top of 1 and the middle between 1 and 3.

### End of the fifth wave:

- 1) The line of the channel connecting from the crest of a wave.1
- 2) The channel line connecting the crest of a wave.5
- 3) The channel line in the middle.
- 4) By calculating Fibonacci ratios, which will be explained later

### Drawing the price channel for ZigZag:



A line connecting the bottom of A with the top of B, and then after the end of the corrective wave B, we draw a parallel line on the top of A.

### End of wave C:

- 1) The channel line extending from the top of A.
- 2) Vonacci ratios will be explained later

**5. (Throw over or Throw under) imaginary penetration**

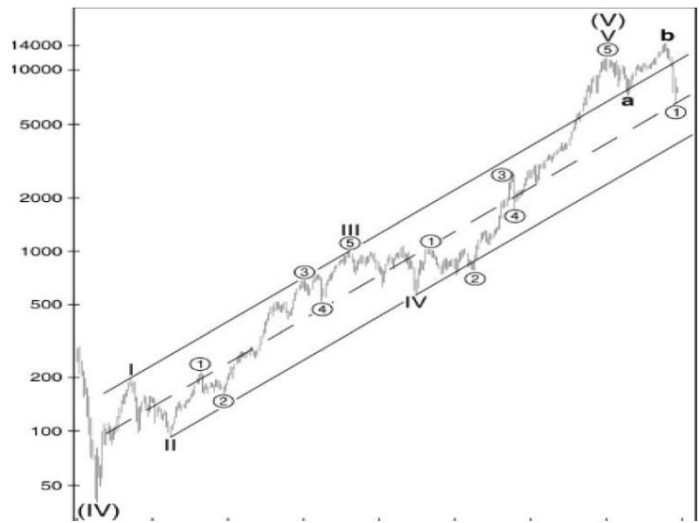
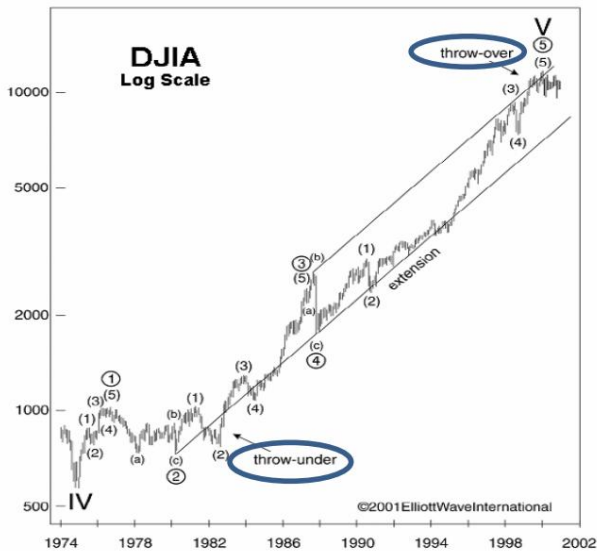
One of the important guidelines that helps in determining the end of the fifth wave when approaching the upper limit of the price channel or the limit.

The upper part of the diagonal triangle if the wave is diagonal, which Elliot called over throw.

The breakthrough is usually preceded by a lateral correction of the fourth internal wave of the main fifth wave, which indicates readiness and is also accompanied by an "under throw" (which is that the wave (Volume) Increase in trading volume The market is at a break, and the lower one is also accompanied by an imaginary break, so that it continues its path to the upper limit and breaks it as an imaginary break. The second inner or fourth inner break breaks the limit.

With a gradual decrease in volume, it usually ends at the upper limit of the price channel When the fifth filament moves below it (penetration does not occur).

channel again. The end of the wave is completely confirmed by quickly returning and entering the And y

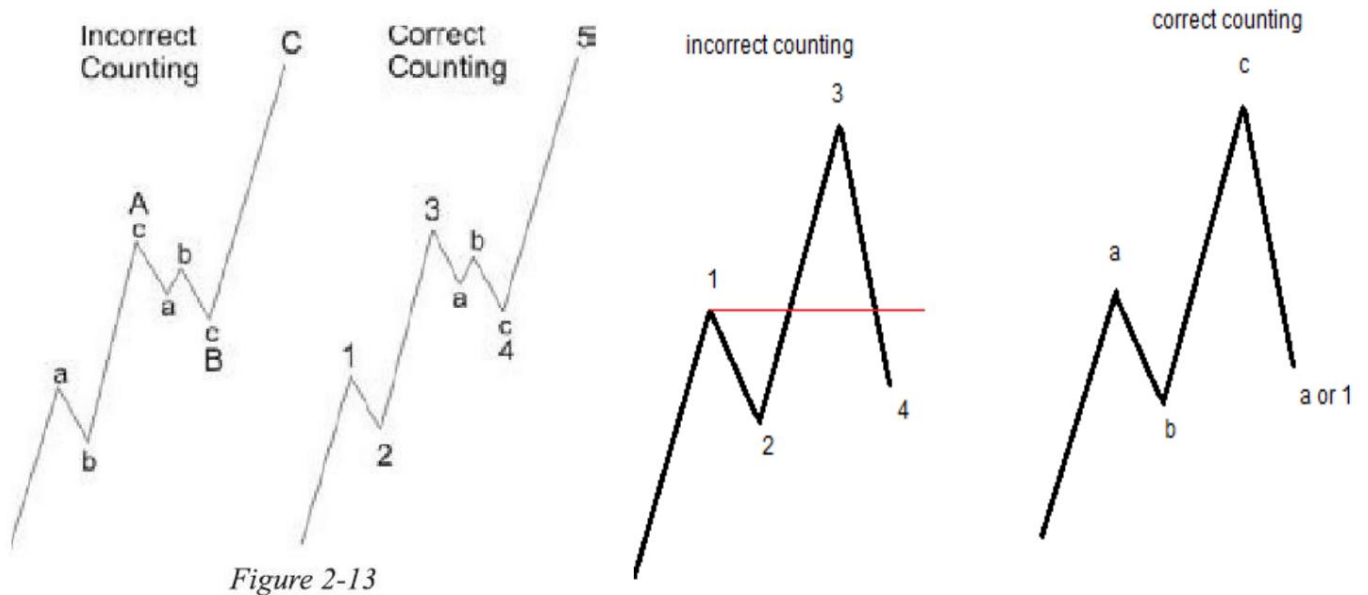


6. The correct look or preferring the correct punctuation "Look Right The":

It is known that the motivational waves consist of five waves, and if we take the first part of them, I mean the first three waves, it is possible that it is an ABC zigzag pattern, and here comes the role of the wave analyst in determining what is more correct depending on the location of the wave and on the ratios of its corrections, as the second wave of the motivational wave often It is characterized by a deeper correction of wave B of the zigzag because the zigzag is one of the sharp corrections that tends to correct quickly to maintain its shape.

Also, the correction of the fourth wave, if it remains above the level of the first wave, then the numbering is that it is a driving wave, because assuming that the first three waves were wave A from ABC or that they were a complete correction ABC, it is assumed that the next wave will be either B, which must end close to the beginning of A) the pattern as a whole. It breaks (or breaks the bottom of A because the correction is over.

*Chapter 2: Guidelines of Wave Formation*



## Fibonacci:

It is no secret to any of you the importance of sports relations in various areas of life. Astronomy, physics, medicine, and others have precise mathematical calculations.

The currency market is subject to these mathematical relationships, and Elliot combined his interpretation of the movement of currencies, which was pessimism, optimism, greed, and fear, with mathematics and the Fibonacci successive ratios built on the basis of cycles of

## What is the Fibonacci sequence and where did it come from?

The Fibonacci sequence is named after Leonardo Albesi, known as Fibonacci.

## Fibonacci numbers or the Fibonacci

**sequence:** The Fibonacci numbers are extracted by adding the first two numbers ( $1+0=1$ ) and then adding the result to the second number ( $1+1=2$ ) and repeating the process ( $1+2=3$ ,  $2+3=5$ ). .....(We have the Fibonacci sequence:

0, 1, 1, 2, 3, 5, 8, 13, 21, 34, 55, 89, 144, ....

## Fibonacci ratios:

Fibonacci ratios are extracted by dividing Fibonacci numbers in more than one way, and we will not discuss here the method of extracting them, as the Internet is full of details of these ratios, and what interests us is to focus on the ratios used in wave analysis, which are:

23% ÷ 38%

÷ ÷ 50% (it

is not a Fibonacci ratio, but it has importance in the currency market) 61% ÷ 78% ÷ 138%

÷

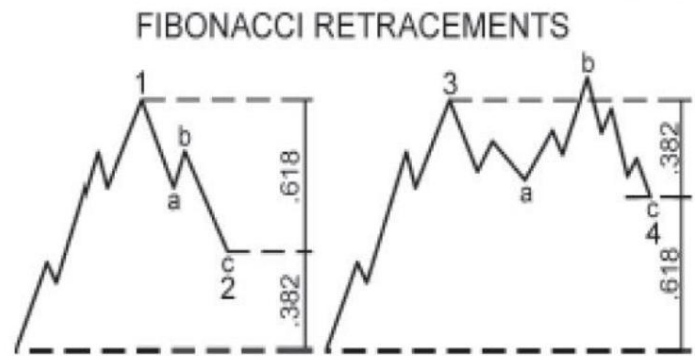
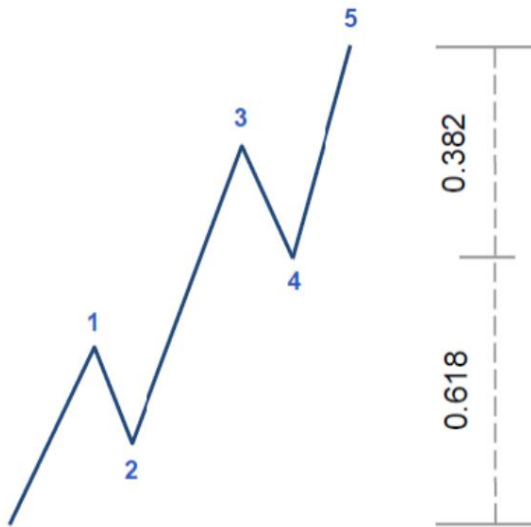
(The golden Ratio [phi ÷]) %161 ÷ %200 ÷ %261 ÷ %300 ÷ %400 ÷ %423 ÷

The relationship of Fibonacci ratios to Elliott waves:

• Fibonacci ratios appear in the wavelengths, and from them we can determine the waves' targets and ending places

Correction.

• The figure shows the division of the wave length according to the Fibonacci ratios.



**Figure A.20**  
Source: *Elliott Wave Principle*.

Now we will talk about wave targets and identifying them using Fibonacci ratios using one of the following tools:

- 1) The Retracement Fibonacci tool, which we will symbolize as FR.
- 2) The Expansion Fibonacci tool, which we will symbolize as FE.

Both tools are available in the MetaTrader software in the Tools menu.

Wave objectives:

Note: All of the objectives explained below are explained in detail, and at the end of the chapter there will be a summary in the form of a table to make it easy for you to review them, but you must read them in all their details first.

a. Impulse waves:

1. Objective of the first wave: (FR)

• The first wave often ends at 23% or 38% of the length of the previous corrective wave.

## 2. Objectives of the third wave: (FE)

• 100% of the length of the first wave (if the third does not extend but it does not happen very often).  
• 161% of the length of the first wave.  
• 261% of the length of the first wave.  
• 423% of the length of the first wave.

**Remember:** We previously mentioned a method for calculating the end of the third wave using channels... Connecting all the methods

together gives you strong points for the end of the waves, but in the case of an extension of wave 3, expect the channel to be broken and to reach further targets.

## 3. Objectives of the fifth wave:

We will use (FR) by measuring the length of the wave that will be mentioned below, then moving the tool to the beginning of the fifth wave and calculating the goals.

### If the fifth is not extended, then its length is: (FR)

• 100% of the length of the first wave (in the case of the third extension, which is usually repeated).  
• 61% of the length of the first wave.  
• 161% of the length of the first wave.  
• 61% of the length of the first + third wave.

### If the fifth is the extended one, its length will be: (FR)

• 100% of the length of the first + third wave.  
• 161% of the length of the first + third wave.

• **Remember:** We previously mentioned a method for calculating the end of the fifth wave using channels... Connecting all the methods together gives you strong points for the end of the waves.

**\*\* In the case of an extension of the first wave, the length of wave 5+3 is often 61%.**

## B. Diagonal waves:

• In the convergent diagonal  $1 < 3 < 5$ , the fifth wave is at least 38% (FR) of the length of wave 3. Waves 2 and 4 often correct 66% - 81% (FR).  
• In the divergent diagonal, the wave  $< 5 < 3 < 1$  and the downward trend usually ends before the trend line between 1 and 3

**But you must break the top.3**

**C. Corrective waves:**

**1. The second wave of the impulse: (FR)**

• The second wave must correct at least 38% of wave 1, and the correction is usually between 50 - 78%, but it does not prevent it from reaching a maximum of 100% of Wave 1

**2. Fourth wave of impulse: (FR)**

The fourth wave often ends at 23% or 38% of the length of the third wave, which usually corresponds to the same price area for the fourth wave from the previous wave.

• **Remember:** We previously mentioned a method for calculating the end of the fourth wave using channels... Connecting all the methods together gives you strong points for the end of the waves.

**3. Zigzag family:**

**Wave A:** Wave A often reaches 38-50% of the length of the previous wave 5. (FR) \_\_\_\_\_ I.

**Wave B:** Most of the time its correction is between 38% - 50% and rarely reaches 79% to \_\_\_\_\_ II.  
maintain its shape as a sharp correction (FR).

(FE) : **Wave C:** The \_\_\_\_\_ III.  
minimum length of wave C is 61% of the length of A, and wave C must break the top of the wave.

.A

• In most cases, there is equality in length between A and C, so the goal is 100%

• The target of wave C may reach 161% of A.

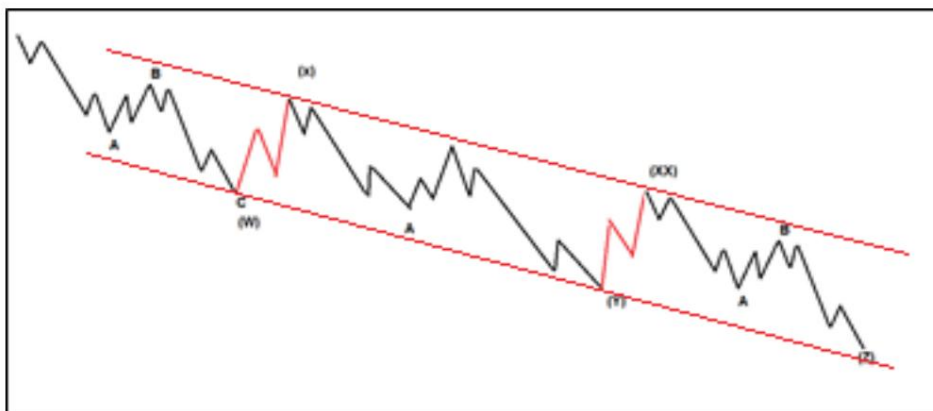
**Wave X and XX:** Wave X must be shorter than W and XX must be shorter than Y \_\_\_\_\_ IV.

to maintain the sharp correction pattern. There is a minimum correction, and it is often a quick correction

V. **Y-wave:** 61%, 100%, or 161% of W(FE). \_\_\_\_\_

(FE) Y of 100% or 61% : **Z** vector. VI \_\_\_\_\_

it is linked to the mentioned ratios. Drawing channels helps in setting price targets in particular **Note:** If



**4. Family of phases and compound corrections:**

(FR) : **Wave B :** \_\_\_\_\_ .I

Corrects at least 50% of A. ( FR )

ÿ In extended phases, the correction ranges between 138% and 161% and does not exceed 200% (FR).

(FE) : **C vector.**II \_\_\_\_\_

ÿ Most often, its length is 161% of A.

A of FR) 161% or ÿ

ÿ It does not exceed 300% of A.

**Waves X and XX:** Waves X and XX correct at least 50% of the wave before them (W & Y) \_\_\_\_\_ III.

Where X does not exceed 400% of W and XX does not exceed 400% of Y (FR).

**Waves Y and Z:** correct the entire previous wave (W&Y) except in the case of a triangle, as it is not required to exceed it. IV.

**5. Triangle family: (FR)**

**Convergent Triangle:** All internal waves usually correct 61% of the previous wave, which is also \_\_\_\_\_ I.

true. (d = 61% of b) & (e = 61% of c, and C = 61% of a) The trend is the same.

The current wave breaks the low of the previous wave.

**Expanding Triangle:** All internal waves mostly correct 161% of the previous wave. \_\_\_\_\_ II.

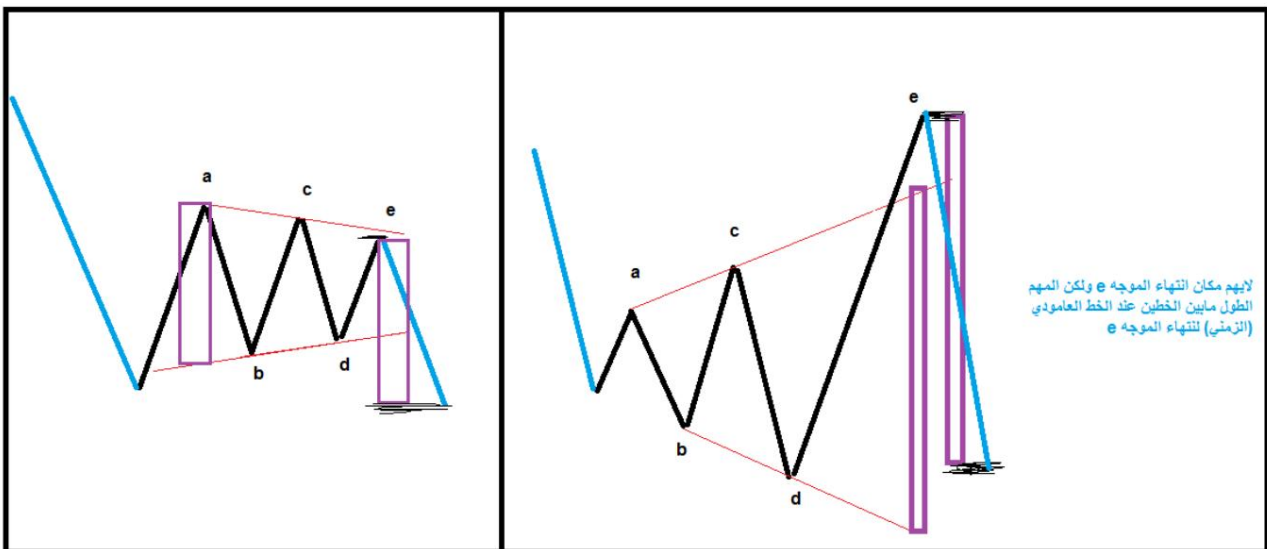
**Climbing Triangle:** Wave B must break the low of A. Then the remaining waves after B cannot break \_\_\_\_\_ III.

the bottom of the previous wave.

IV. **The goal of the triangle's breaking vector:** Whatever the type of triangle, the length of the breaking vector is the minimum length of the

triangle and at its distance between the line connecting the sides on the widest side at the beginning of wave A in the converging

In divergent.



Summarizing all instructions:

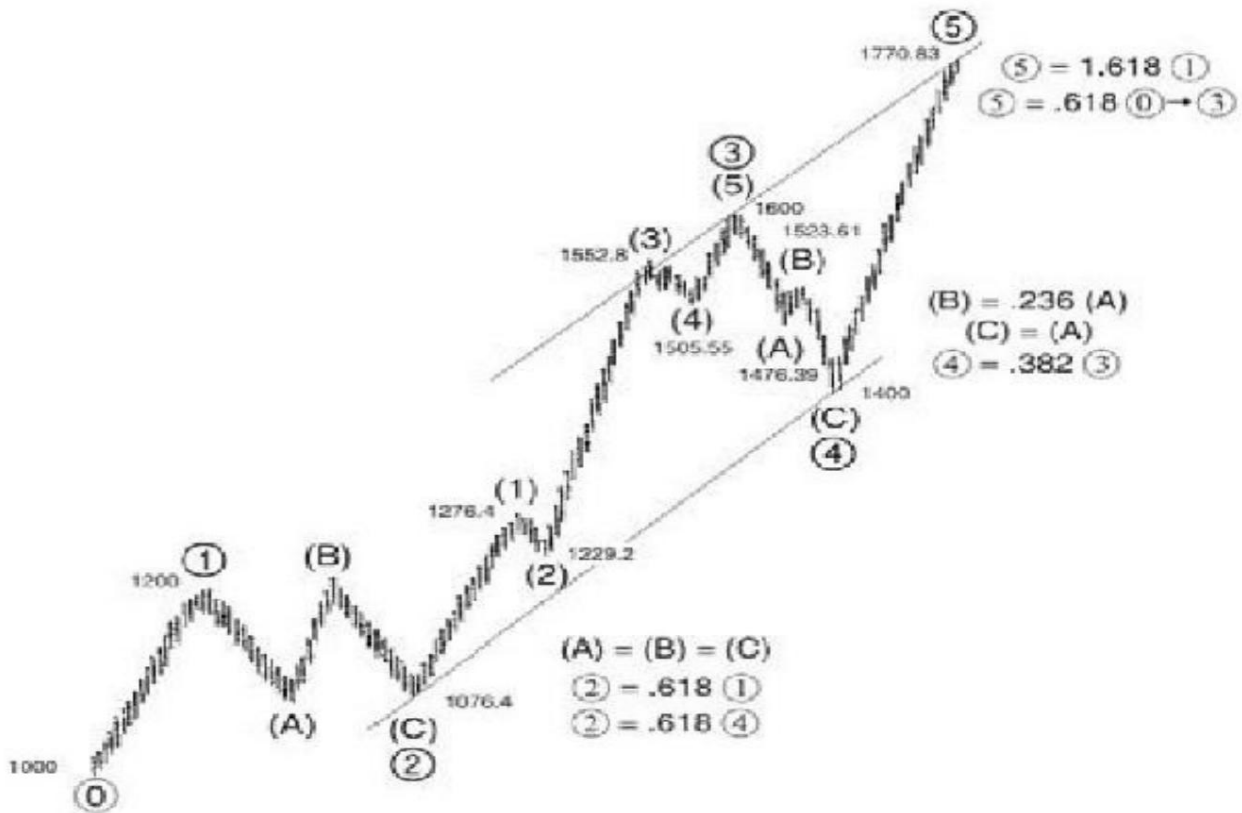


Figure 4-17

- (2) = .618 x (4);
- in (2), (A) = (B) = (C);
- in (4), (A) = (C);
- in (4), (B) = .236 x (A).

### Guidelines for Typical Retracements of Wave A by Wave B in Zigzags

Wave B	Net Retracement (%)
Zigzag	50-79
Triangle	38-50
Running Triangle	10-40
Flat	38-79
Combination	38-50

### Fibonacci Relationships

#### Single Zigzag

Wave C = Wave A

Wave C = .618 Wave A

Wave C = 1.618 Wave A

Wave C = .618 Wave A past Wave A

#### Double Zigzag

Wave Y = Wave W

Wave Y = .618 Wave W

Wave Y = 1.618 Wave W

Wave Y = .618 Wave W past Wave W

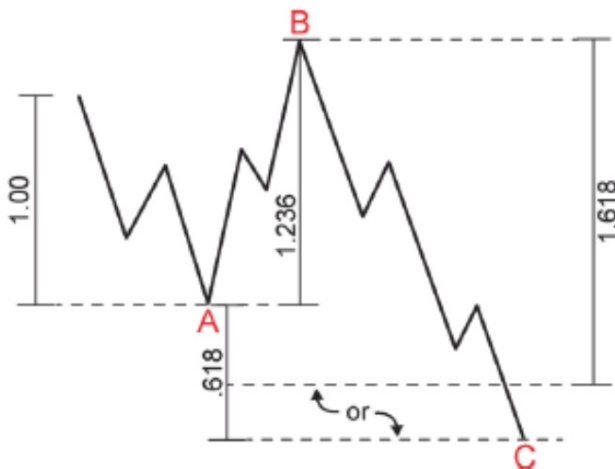
#### Triple Zigzag

Equality for W, Y, and Z

Ratio of .618, i.e., Wave Z = .618 Wave Y

Figure A.21

#### FIBONACCI MULTIPLES FOR EXPANDED FLATS

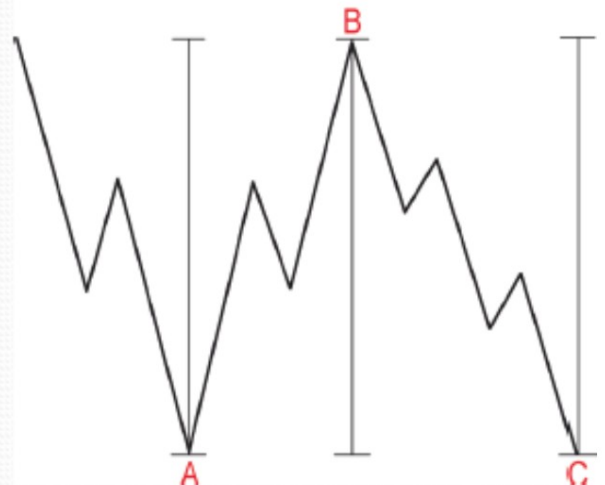


- تصحيح B اما 1.236 او 1.382 من طول A
- امتداد C المتوقع :

$$C = 1.618 * A - 1$$

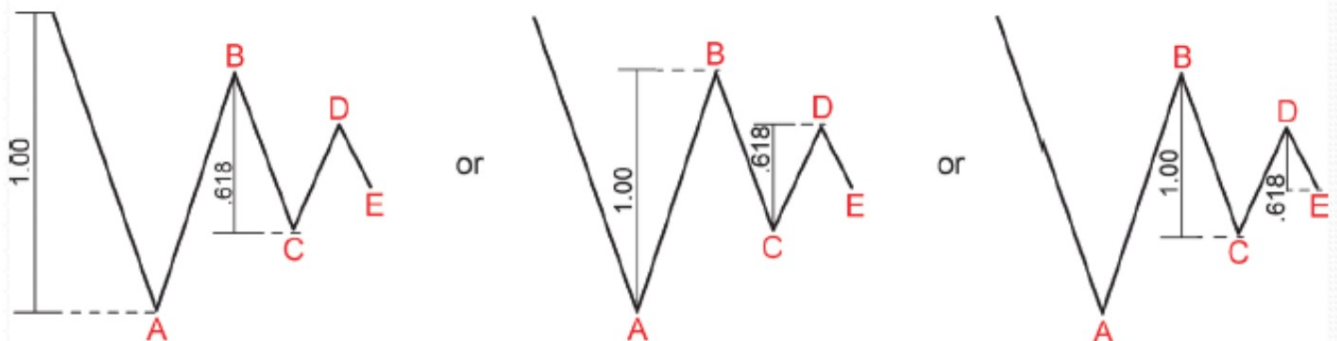
$$C = 0.618 * \text{past A} - 2$$

#### FIBONACCI MULTIPLES FOR FLATS



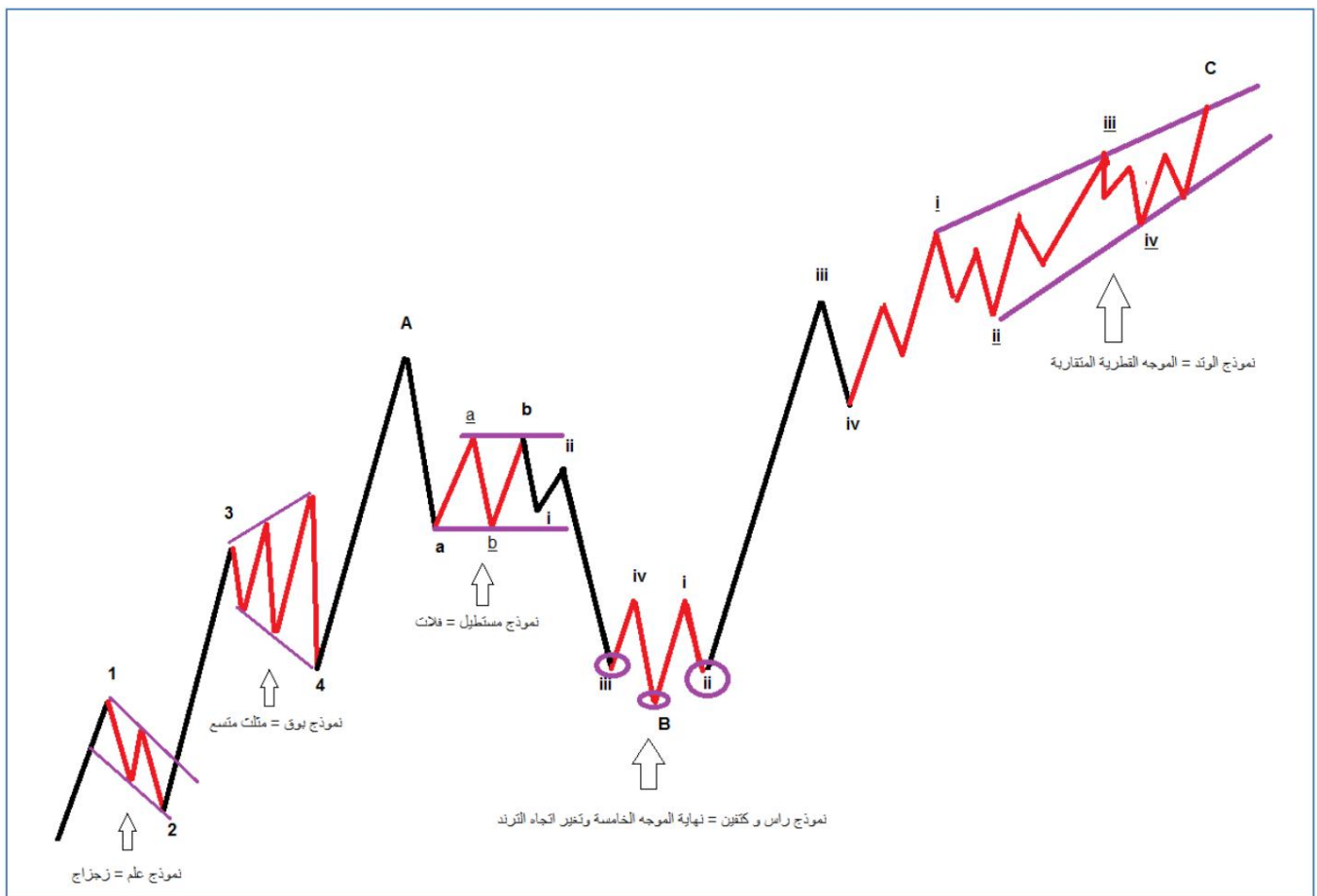
أطوال A, B, C متساوية

#### FIBONACCI MULTIPLES FOR TRIANGLES



**Technical models and linking them to wave analysis:**

Aleut model	The classic model is the
The end of the fifth wave and the trend direction changes	head and shoulders,
Zigzag	the
Converging diagonal waves	flag,
The falt	the
Expanding triangle	rectangular stake, the trumpet



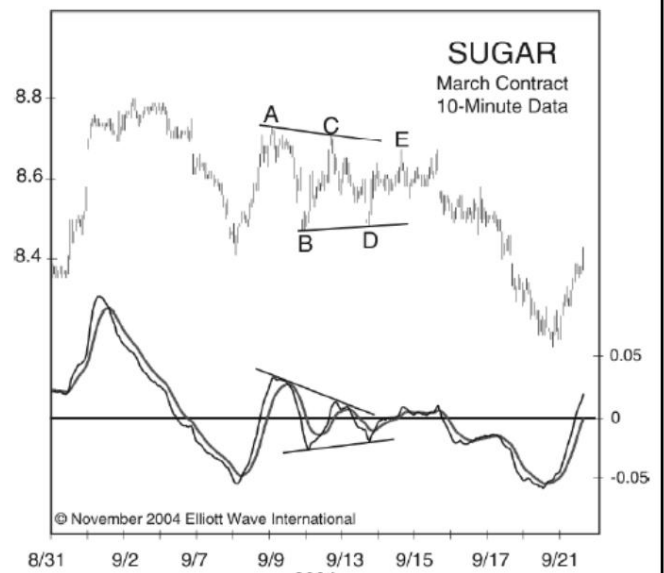
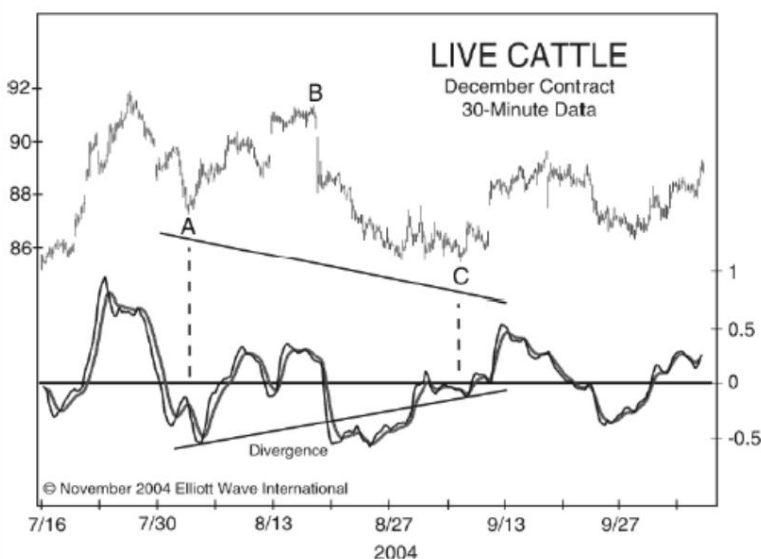
## Indicators:

In this part, we will focus on oscillator indicators, the most important of which are MACD and RSI.

Saturation indicators are useful in identifying waves to correct and confirm the count.

### What do we look for in oscillators:

- the trend occurring in it. 1. The third wave often takes the greatest momentum due to its extension and the strength of
- The beginning of this change indicates the weakness of the trend in the fifth wave <sup>And Third</sup> 2. Differences occur between the two fifth waves of the trend.
3. The momentum in the fourth wave must return to zero in the MACD and to 50% in the RSI.
- new low, while divergences form on the MACD between wave A and the C that 4. It is observed many times in corrective waves, especially zigzags, that wave C forms a
- is formed.
5. Often in the case of a triangle formation, the MACD is a triangle.



Thank God, everything a trader needs to understand analysis using wave theory has been completed, but the last question remains: How do I trade using waves..??

The mistake that traders make using waves is that they pay attention to the numbering of the waves and do not develop a plan for their trading.

Wave science gives you a road map, but you still have to place entry and exit ports, which is the key to success, God willing.

Trading waves:

previously...and ~~that~~ during the wave cycle there are waves that are with the general direction of the trend and waves that are opposite to it, as we mentioned waves. The waves that reverse the trend are the same within a trend, so we must determine which waves we should trade and which we should not trade, but rather watch until they end, to enter with the trend.

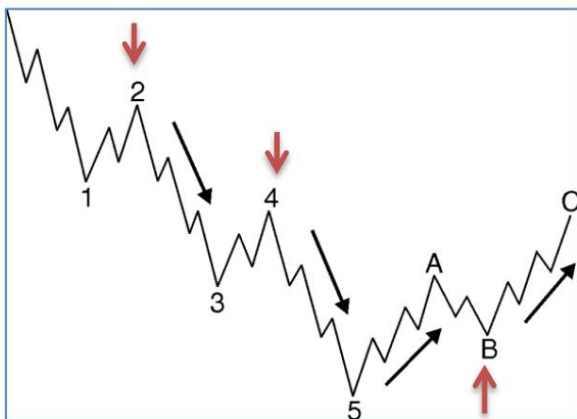
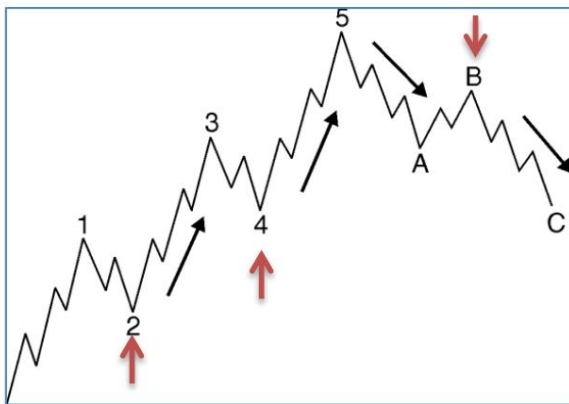
( ← Trading waves are:

- 1. Router. 3
- 2. Router.5
- 3. Router A.
- 4. Router C.

( ← Preparing waves for trading: )

- 1. Router. 2
- 2. Router.4
- 3. Router B.

- 4. Router 5 (it is a trading router and a processing router).



successful trader from 10 or 20 years ago, and successful In order to be a wave analyst can start any frame with the least time data available, and in order to succeed in that, he must have an available time frame and focus all his focus on Elliott models only. His mission lies in finding a model and numbering it correctly to determine Entry and exit points.....this is what we will discuss in this section.

How to trade using waves:

the deal. You must ask yourself several questions before entering into any deal. If they are answered, all you have to do is trust in God and enter into

1. Do I see a model?

All you want to do is choose any time frame and search for one of the following models:

- Impulse wave.
- Diagonal background.
- Zigzag.
- He fell away.
- Triangle.

Whenever you can see a model of them and it is numbered, you must ensure that the model is correct in terms of the rules and guidelines that were explained before and set alternative probabilities.

-2 What is the expected goal to be achieved after completing the model?

Setting the goal is important so that the trader does not get greedy. Once the goal is achieved, the deal must be exited.

-3 What is the level that if the price reaches, the pattern will have failed and must be renumbered?

the point of failure of the model is usually the activation of the alternative possibility. To get out with the least losses, Determining the point of loss is very important

The loss setting points will be presented in detail in the next section.

-4 Where do I enter the transaction?

The completion of the pattern is not necessarily the correct entry point, because it is very likely that the last wave, which I mentioned. Each wave has Determine the entry point , more than one target, as we mentioned previously by numbering it, has a target that is farther than I expected, especially since the new trend has begun. By achieving this, the model is 90% complete

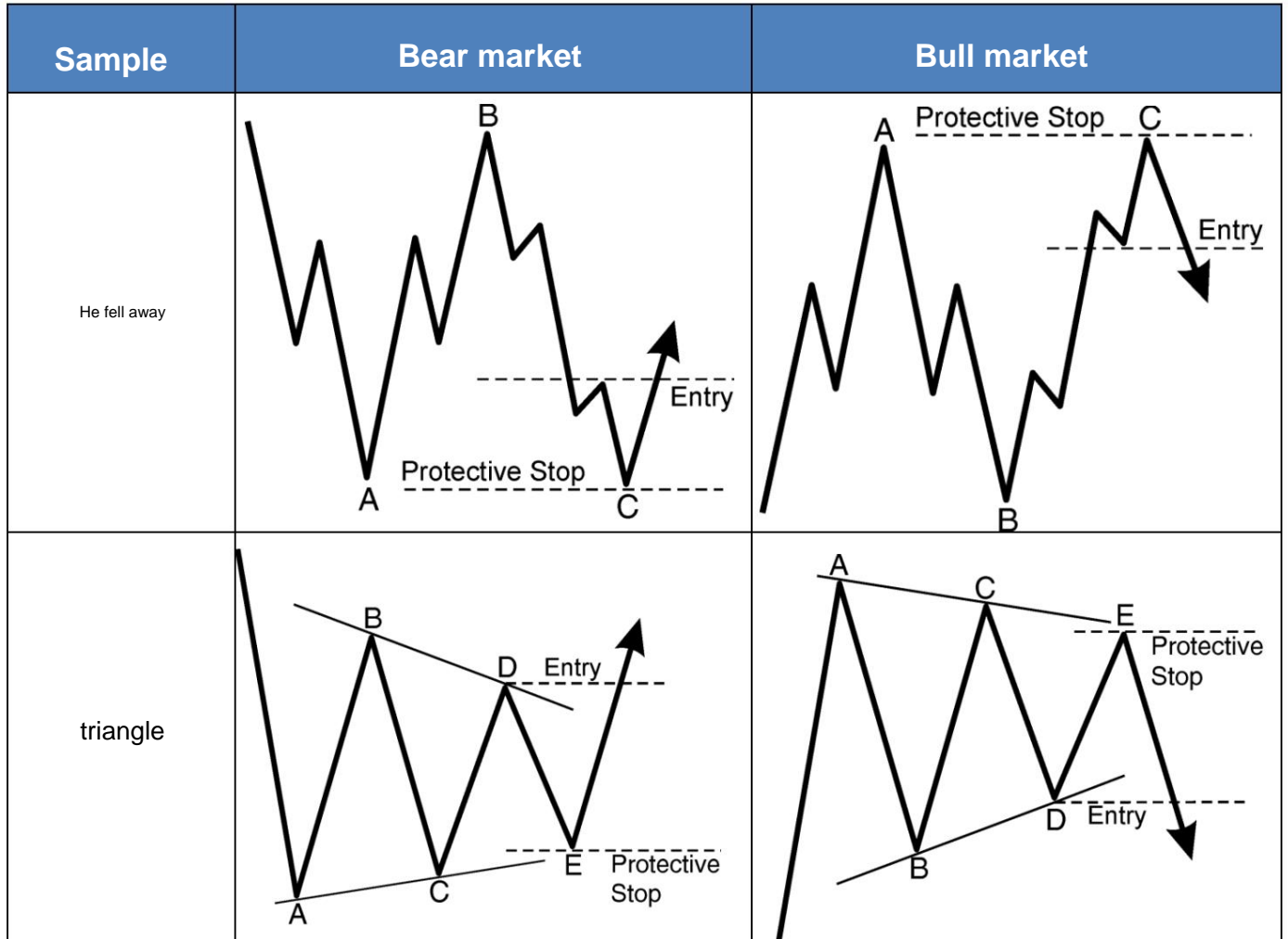
The correct entry points will be presented in detail in the next section.

-5 Where do I reserve my profits and start closing part of the open contracts?

In corrective waves, it turns into a compound pattern and completes Especially the model that you selected It is very likely in the same direction, so it is important to reserve some profits from the strong support and resistance points, which are often the end areas of lower degree waves.

**Determine the correct entry points and stop loss areas:**

Sample	Bear market	Bull market
Impulse wave		
Diagonal background		
Zigzag		



Thank God, everything related to Elliott waves and everything related to the rules, instructions and advice that a trader needs in order to succeed in this market has been explained,  
after the success of God Almighty.

The last two pages contain a summary of the rules and guidelines that will be useful for review.

I remind you that the equation for success in the currency market = business plan + capital management + commitment.

..... We ask you to pray

your brother

Samer Omran

**Summary of all rules and guidelines:****الموجات التصحيحية**

ZIGZAG أولا الموجات التصحيحية المتعرجة		
TZ	DZ	ZZ
موجات تصحيحية W-X-Y-XX-Z	موجات تصحيحية W - X - Y	حافزة (A) - تصحيحية (B) - حافزة (C)
• الموجات W, X, Y لها نفس قواعد DZ	• نموذج موجة متعرجة ZZ	• IM or LD
• أي موجة تصحيحية ماعدا ET	• أي موجة تصحيحية ماعدا ET	• أي موجة تصحيحية
• يجب ان تكون اقصر من Y	• يجب ان تكون اصغر من w	• اقصر من A في السعر
• نموذج موجة متعرجة ZZ	• نموذج موجة متعرجة ZZ	• IM or ED
• اطول من او تساوي xx	• اطول من او تساوي x	• لا يمكن ان تكون ED اذا كانت (A) LD

ثانيا الموجات التصحيحية المسطحة FLAT		
T3	D3	FL
موجات تصحيحية W-X-Y-XX-Z	موجات تصحيحية W - X - Y	تصحيحية (A) - تصحيحية (B) - حافزة (C)
• الموجات W, X, Y لها نفس قواعد D3	• موجة FL او ZZ	• أي موجة تصحيحية
• موجة FL او ZZ	• موجة FL او ZZ	• أي موجة تصحيحية ماعدا المثلثية
• تصحح على الاقل 50% من y	• تصحح على الاقل 50% من w	• تصحح على الاقل 50% من A
• تصحح على الاكثر 400% من y	• تصحح على الاكثر 400% من w	• أقل من 200% من A في الغير منتظمة
• موجة مثلثية او FL او ZZ	• موجة مثلثية او FL او ZZ	• IM or ED
• اطول من xx	• تكون اطول من x الا اذا كانت موجة مثلثية	• لا تكون اكثر من 300% من A
• لا تكون متعرجة الا اذا كانت الموجة y متعرجة		• تشترك مع A في منطقة سريعة واحدة

ثالثا الموجات التصحيحية المثلثية TRIANGLE	
ET	CT
موجات تصحيحية A-B-C-D-E	موجات تصحيحية A-B-C-D-E
• كل الخمس الموجات يجب ان تكون ZZ or DZ or TZ	• Flat or ZZ or DZ or TZ
• يجب ان تكون A او B هي الاقصر بالسعر	• يجب ان تكون A او B هي الاطول بالسعر
• يجب ان تكون B اقصر من C على ان تكون اكثر من 40% من C	• ZZ or DZ or TZ
• يجب ان تكون C اقصر من D على ان تكون اكثر من 40% من D	• أي موجة تصحيحية ماعدا المثلثية
• تكون اطول من D على ان تكون اكثر من 40% من E بالسعر	• ZZ or DZ or TZ or CT
	• أقل من D على ان تكون اكثر من 20% من D
	• تنتهي في المنطقة السريعة لـ A
قواعد خطوط القناة:	قواعد خطوط القناة:
• يجب ان تتحرك الموجات A, B, C and D بين خطي قناة متعاقدة، الاول من A الى C والثاني من B الى D	• يجب ان تتحرك الموجات A, B, C and D بين خطي قناة متعاقدة، الاول من A الى C والثاني من B الى D
• يجب ان يتقاطع خطي القناة المتعاقدة قبل بداية الموجة A	• يجب ان يتقاطع خطي القناة المتعاقدة بعد نهاية الموجة E
• لا يمكن ان يكونا خطي القناة المتعاقدة متوازيان	• لا يمكن ان يكونا خطي القناة المتعاقدة متوازيان
• لا يمكن ان يكون احد خطي القناة مستقيما افقيا	• لا يمكن ان يكون احد خطي القناة مستقيما افقيا

عائلة فلاتة	FL
مثلث متعاقدة	CT
مثلث متسعة	ET

زجاج	ZZ
دبل زجاج	DZ
ثلاثي زجاج	TZ

دافعة	IM
قطرية امامية	LD
قطرية خلفية	ED

PATTERN	WAVE	IM	LD	ED	ZZ	DZ	TZ	FL	D3	T3	CT	ET
IM	1	✓	✓	✗	✗	✗	✗	✗	✗	✗	✗	✗
	2	✗	✗	✗	✓	✓	✓	✓	✓	✓	✗	✗
	3	✓	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗
	4	✗	✗	✗	✓	✓	✓	✓	✓	✓	✓	✓
	5	✓	✗	✓	✗	✗	✗	✗	✗	✗	✗	✗
PATTERN	WAVE	IM	LD	ED	ZZ	DZ	TZ	FL	D3	T3	CT	ET
ZZ	A	✓	✓	✗	✗	✗	✗	✗	✗	✗	✗	✗
	B	✗	✗	✗	✓	✓	✓	✓	✓	✓	✓	✓
	C	✓	✗	✓	✗	✗	✗	✗	✗	✗	✗	✗
PATTERN	WAVE	IM	LD	ED	ZZ	DZ	TZ	FL	D3	T3	CT	ET
FL	A	✗	✗	✗	✓	✓	✓	✓	✓	✓	✗	✗
	B	✗	✗	✗	✓	✓	✓	✓	✓	✓	✗	✗
	C	✓	✗	✓	✗	✗	✗	✗	✗	✗	✗	✗
PATTERN	WAVE	IM	LD	ED	ZZ	DZ	TZ	FL	D3	T3	CT	ET
DZ	W	✗	✗	✗	✓	✗	✗	✗	✗	✗	✗	✗
	X	✗	✗	✗	✓	✓	✓	✓	✓	✓	✓	✗
	Y	✗	✗	✗	✓	✗	✗	✗	✗	✗	✗	✗
PATTERN	WAVE	IM	LD	ED	ZZ	DZ	TZ	FL	D3	T3	CT	ET
D3	W	✗	✗	✗	✓	✗	✗	✓	✗	✗	✗	✗
	X	✗	✗	✗	✓	✓	✓	✓	✓	✓	✗	✗
	Y	✗	✗	✗	✓	✗	✗	✓	✗	✗	✓	✓
PATTERN	WAVE	IM	LD	ED	ZZ	DZ	TZ	FL	D3	T3	CT	ET
TZ	W	✗	✗	✗	✓	✗	✗	✗	✗	✗	✗	✗
	X	✗	✗	✗	✓	✓	✓	✓	✓	✓	✗	✗
	Y	✗	✗	✗	✓	✗	✗	✗	✗	✗	✗	✗
	XX	✗	✗	✗	✓	✓	✓	✓	✓	✓	✓	✗
	Z	✗	✗	✗	✓	✗	✗	✗	✗	✗	✗	✗
PATTERN	WAVE	IM	LD	ED	ZZ	DZ	TZ	FL	D3	T3	CT	ET
T3	W	✗	✗	✗	✓	✗	✗	✓	✗	✗	✗	✗
	X	✗	✗	✗	✓	✓	✓	✓	✓	✓	✗	✗
	Y	✗	✗	✗	✓	✗	✗	✓	✗	✗	✗	✗
	XX	✗	✗	✗	✓	✓	✓	✓	✓	✓	✗	✗
	Z	✗	✗	✗	✓	✗	✗	✓	✗	✗	✓	✓
PATTERN	WAVE	IM	LD	ED	ZZ	DZ	TZ	FL	D3	T3	CT	ET
CT	A	✗	✗	✗	✓	✓	✓	✓	✓	✓	✗	✗
	B	✗	✗	✗	✓	✓	✓	✓	✓	✓	✗	✗
	C	✗	✗	✗	✓	✓	✓	✓	✓	✓	✗	✗
	D	✗	✗	✗	✓	✓	✓	✓	✓	✓	✗	✗
	E	✗	✗	✗	✓	✓	✓	✓	✓	✓	✓	✗
PATTERN	WAVE	IM	LD	ED	ZZ	DZ	TZ	FL	D3	T3	CT	ET
ET	A	✗	✗	✗	✓	✓	✓	✓	✓	✓	✗	✗
	B	✗	✗	✗	✓	✓	✓	✓	✓	✓	✗	✗
	C	✗	✗	✗	✓	✓	✓	✓	✓	✓	✗	✗
	D	✗	✗	✗	✓	✓	✓	✓	✓	✓	✗	✗
	E	✗	✗	✗	✓	✓	✓	✓	✓	✓	✓	✗
PATTERN	WAVE	IM	LD	ED	ZZ	DZ	TZ	FL	D3	T3	CT	ET
LD	1	✓	✓	✗	✗	✗	✗	✗	✗	✗	✗	✗
	2	✗	✗	✗	✓	✓	✓	✓	✓	✓	✗	✗
	3	✓	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗
	4	✗	✗	✗	✓	✓	✓	✓	✓	✓	✓	✓
	5	✓	✗	✓	✗	✗	✗	✗	✗	✗	✗	✗
PATTERN	WAVE	IM	LD	ED	ZZ	DZ	TZ	FL	D3	T3	CT	ET
ED	1	✗	✗	✗	✓	✓	✓	✗	✗	✗	✗	✗
	2	✗	✗	✗	✓	✓	✓	✓	✓	✓	✗	✗
	3	✗	✗	✗	✓	✓	✓	✗	✗	✗	✗	✗
	4	✗	✗	✗	✓	✓	✓	✓	✓	✓	✓	✓
	5	✗	✗	✗	✓	✓	✓	✗	✗	✗	✗	✗