LESSON I

The BEAMS CARRIERS PRICE TIME (PTV)

God does not play to dice Albert Einstein

INTRODUCTION

A variety of techniques tries to preview the prices in the financial markets. However, relatively little deal the more important element in the tempismo of the financial market, the time. The traditional analysis of the cycle is more commonly used than these techniques, but also therefore the expert sayings on this argument recognize the great limitations of their approach. The cycles (or more correctly, rhythms) without warning stretch to only vanish, to reappear to one given successive with changes of phase from their model originate them. cyclical contemporary analysts cannot explain because the cycles vanish, because they reappear with a change of phase, and a variety of other characteristics that will be explained in this course.

DEFINITION OF THE BEAM CARRIER PREZZO-TEMPO (PTV)

In order to begin the analysis of the dimension of the time it must be comprised that the movements of the financial markets are defined within the limits of the beams carriers. These carriers allow the analysts to expand their thought beyond one dimension to the time, in order that is, only the levels of price or only the values of the time, and **TO BEGIN TO SEE The PRICE - TIME LIKE A SINGLE UNIFIED ELEMENT.** For which, as it will be shown in this course, **THE PRICE AND THE TIME INTIMATELY ARE CONNECTED**.

On a traditional diagram price - time of a financial market, the beam carrier price - time is defined like shown in Figure 1.1. For amor of brevity, the beam carrier price - time will be reported, more ahead, like **PTV**.

This is an application of the theorem of Pitagora taught in the course of geometry to the advanced schools, that it asserts that the sum of the squares constructed on the cate ones to you is equal to the square constructed on the hypotenuse. In this case, cate you of the triangle the rectangle they are the

[1]

time and the price and the hypotenuse are the PTV.

B
P the beam carrier price - time,
R AB, is defined like:
And
Z
Z
Or*AB = PREZZO² + TEMPO²*
To
TIME

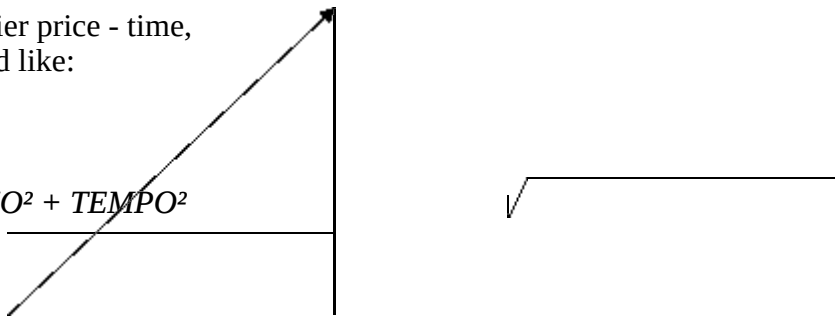


Figure 1.1
Definition of beam carrier price - time (PTV).

The PTV HAS CONSTANT LENGTH And DEFINES the INTERVAL OF OPERATION WITHIN SPECIFIC CONDITIONS OF MARKET.

CALCULATION OF THE PTV

Diagram I.To the PTV is used in order to demonstrate like is deliberate. On this graphical price - time

[2]

the distance of time between the two points classifies B to you and C was 131 hours of market. The difference of price between these same two points was 195,9 points. Therefore, using the equation of Figure 1.1, the PTV, BC, are calculated to be the square root of (131^2 + $195,9^2$), that it is equivalent to 235,7. This technique is repeated for everyone of the PTV shown on Diagram I.To, and it turns out to you are contained in Table 1.1. Tables similar to Table 1.1 will be used during all first part of this course. The PTV contain the used data in order to calculate all. To this point the reference to the Appendix is recommended very to the reader and in order to avoid every possible confusion R-with regard to as the data used in this course they are collected or calculates to you. If the reader is not interested to verify the used data in order to calculate the PTV, then the single necessary part of these tables is the last column, that it contains the final values of the PTV. As an example, in Table 1.the 1 first line of the data extension the PTV, AB, to be equivalent to 230,6. When they are studies the values to you of the PTV from the eighth column of the Tab. 1.1, one of the first observed things are that they are all approximately of the same length. The single shunting line is happened lessened called F (beam carrier DF = 219,4) that carrier EH was caused from the superimposition of the beam. On Diagram I.To it observes that F lies on the combining line and and H.

Table 1.1
Calculations of the PTV for Diagram I.To
Dow Jones Industrial Average (DJIA) 3/1991-12/1991

BEAM CARRIER PRICE TIME	DATE AND HOUR OF THE MAXIMUM	PTV THE TOP PRICE	DATE AND HOUR OF MINIMUM	(PTV) THE MINIMAL PRICE	CHANGE OF TIME (IN HOURS)	CHANGE OF PRICE IN POINTS	VALUE OF THE CARRIER (PTV)
AB	17/4 HOURS 14	3030,5	22/3 HOURS 24	2829,2	112,5	201,3	230,6
BC	17/4 HOURS 14	3030,5	15/5 HOURS 15	2834,5	131	195,9	235,7
CD	03/6 HOURS 16	3057,5	15/5 ORE15	2834,5	79,0	223,0	236,6
DF	03/6 HOURS 16	3057,5	08/7 HOURS 10	2897,4	150	160,1	219,4
EH	07/8 HOURS 24	3050,5	28/6 HOURS 13	2879,3	174,5	171,2	244,4
GI	23/7 HOURS 10	3038,2	19/8 ORE15	2836,3	128,5	201,9	239,2
IJ	29/8 ORE10	3068,6	19/8 HOURS 15	2836,3	47,0	232,3	237,0
JK	29/8 HOURS 10	3068,6	9/10 HOURS 15	2925,5	187	143,11	235,5
KL	14/11 HOURS 11	3085,0	8/10 ORE13	2927,8	173,5	157,2	234,1

A reason of because the market analysts have neglected to observe that all these movements of market were equal in length is that the scales of the price and the aces of the time must perfectly be in the order for this phenomenon for to be immediately visible on a graphical price - time. Specifically, the axis of

[3]

the price must reflect an unit of price for every unit of time. As the scales turn aside one by one from this relationship the aspect of the carriers more and more will be distorted from theirs puts into effect them dimension. In order to render this more clearly, ago reference of new to diagram I.To. It observes that the beam carrier CD appears to be longer of carrier CF. However, the calculations have tried that they are equal in length. distortion is caused since Diagram I."it is not squared". If the scale of the time of this diagram were lengthened these carriers they would appear to be nearer in length. Incurante of the scales used for the two aces on the diagram, employing the techniques described over is determined puts into effect it them length of the beam carrier, and the graphical approach is not necessary.

PTV RUOTANO ROUND TO A COMMON CENTER

On Diagram I.To i points "C" and "I" they possess one meant special one. These two points represent the points center them around to which these two beams carriers ruotano in hour direction. The beam carrier "C" begins with CA, extends through CB, over to CD, and finally it finishes with CF. The beam carrier "" begins with IE, extends until all IG, over to IJ, and finally it finishes with IK.

An interesting concept is that these two beams ruotanti carriers have their points begin defined before them that their points centers them has been caught up in the time. As an example, to the point To the beam carrier that extends gives To to B is already muovendo within the limits of the beam carrier centered to point C, **EVEN IF POINT C MUST STILL HAPPEN In the TIME.**

[4]

The following beams carriers are of equal length:

CA = 243,6

CB = 235,7

CD = 236,6

CF = 237,5

The values used for the calculation of these beams carriers are contained within Table 1.2.

Similarly, Table 1.3 extension that the beams ruotanti carriers round the point "" have equal length:

IE = 233,5

IG = 239,3

IJ = 237,0

IK = 234,9

Table 1.2

Calculations of the PTV for the Carriers

ruotanti round Point "C" on Diagram I.To.

BEAM CARRIER PREZZO-TEMPO	DATE AND HOUR OF THE MAXIMUM	PTV THE TOP PRICE	DATE AND HOUR OF THE MINIMUM	PTV THE MINIMAL PRICE	CHANGE OF TIME (IN HOURS)	CHANGE OF PRICE IN POINTS	VALUE OF THE CARRIER
CA	15/05 h. 15	2834,5	22/03 h. 24	2829,2	243,5	5,3	243,6
CB	17/04 h. 14	3030,5	15/05 h. 15	2834,5	131,0	195,9	235,7
CD	3/06 h. 16	3057,5	15/05 h. 15	2834,5	79,0	223	236,6
CF	8/07 h. 10	2897,4	15/05 h. 15	2834,5	229,0	62,9	237,5

The reason of because the beam carrier DF was shorter of the others is clear hour. The sequence of beams ruotanti carriers around point C finished with the beam carrier CF. However, the beams ruotanti carriers round the point began with the beam carrier IE. This means that the two cycles were overlapped for amount EF, making that the point finishes them of DF "was stopped" from the beam ruotante carrier round point I.

Table 1.3

Calculations of the PTV for the Carriers

ruotanti round the Point "" on Diagram I.To.

BEAM CARRIER PREZZO-TEMPO	DATE AND HOUR OF THE MAXIMUM	PTV THE TOP PRICE	DATE AND HOUR OF THE MINIMUM	PTV THE MINIMAL PRICE	CHANGE OF TIME (IN HOURS)	CHANGE OF PRICE IN POINTS	VALUE OF THE CARRIER
IE	28/06 h. 13	2879,3	19/08 h. 15	2836,3	229,5	43	233,5
IG	23/07 h. 10	3038,2	19/08 h. 15	2836,3	128,5	201,9	239,3
IJ	29/08 h. 10	3068,7	19/08 h. 15	2836,3	47,0	232,34	237,0
IK	7/10 h. 11	2926,2	19/08 h. 15	2836,3	217,0	89,9	234,9

ANGLE PTV DEFINES the EXTENSION And The DURATION OF A MOVEMENT

Since the length of the PTV is constant, follows that as you compose it time decreases the member price grows, and viceversa.

Knowing the length of the beam carrier the analyst is able to project the magnitudo and **DURATION** of a movement. If a fast advance is in way he it knows that it will not last very. Similarly, a market that is left over slowly will show a small gain of price since the length of the beam carrier will be consumed through the member time, remaining little for the price.
In Figure 1.2 PTV OA, OB, and all OC are long equal. Advanced OA a lot quickly to its maximum length, that is T_1 it is a short interval of time, consequently, you compose it price of OA, P_1, he is much large one.
As the angle between the PTV and the axis of the time decreases, the member time grows and the member price decreases. It would be, the member time of OB, T_2, it is longer that the member time of OA, T_1. And the member price of OB, P_2, he is smaller of the member price of OA, P_1.
Similarly, as the angle becomes still more inactive with the axis of the time, like with OC, the member time, T_3, he becomes larger or than OA or of OB.

An example of real life of a PTV similar to OA is shown on diagram I.To between i points C and D. The member time of CD was short, only 79 hours. Therefore, its price member had to be along to the aim maintaining to a beam carrier of constant length. In fact, the member CD price was 223 points, that she approaches the maximum to pile for a PTV to this level of energy.
An example of a PTV similar to OB is shown on Diagram I.To, between the points and and H. Between those two aim the member time were 174,5 hours. Therefore, the member price must be short than what she was in CD in order to maintain to the constant length of the beam carrier. In fact, the member price was 171,2 points.

The PTV And The MUSICAL SCALE

The note frequency on the musical scale is defined from relationships of simple entire numbers relati [5] you to the fundamental tone (like the eighth = 2:1, the fifth = 3:2, quarter = 4:3. etc.). Similarly, the lengths of the PTV are defined from the same relationships that are find to you on the musical scale.

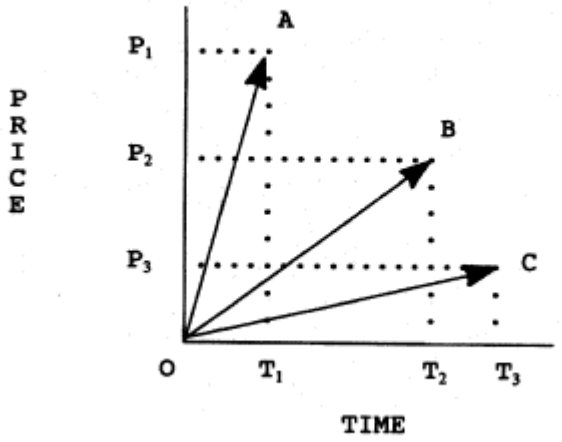


Figure 1.2

Decreasing of the angle between PTV and the axis of the time, extension decreasing of the member price and growing of the member time.
As an example, Diagram I.B is the continuation of Diagram I.To. On diagram I.B, between i points M and N, the distance in time was 185 hours and the member price was 443,2 points. Using the technique described over, the PTV between i points M and N (later on, reported as MN) it is calculated to be 480,3, that the eighth) deliberate amount for the beams is two times (carriers on Diagram I.To. Eighth over the PTV, MN, it can be seen on diagram I.B, between i points M and Or (later on called like MO) where the member time was 773 hours and the member price was 552,5 points. Therefore, PTV, MO,

are calculated to be 950,2, that it is two times (the eighth) length of MN and four times (double the eighth) beams carriers shown on Diagram I.To.
The values used for conteggi of the these beams carriers are contained in Table 1.4.

The PTV CAN EXTEND FOR CENTURIES

The application of the PTV is not limited to the every day diagrams. In fact, not there is a limit to how much great (or small) a PTV can be. As an example, Diagram I.C is a diagram of the securities market from 1929 to 1966, where the PTV, AE, time in length is calculated using the data weeklies magazine to be 1997 units of price -. The values used for this calculation are shown in Table 1.5. This PTV will be used in the successive lessons in order to show the geometric structure during this period of time.

Table 1.4
Calculations of the PTV for the Carriers
on Diagram I.B

BEAM CARRIER PREZZO-TEMPO	DATE AND HOUR OF THE MAXIMUM	THE TOP PRICE OF THE PTV	DATE AND HOUR OF THE MINIMUM	THE MINIMAL PRICE OF THE PTV	CHANGE OF TIME (IN HOURS)	CHANGE OF PRICE IN POINTS	VALUE OF THE CARRIER
MN	29/01 h. 13	3313,5	18/12 h. 10	2870,3	185	443,2	480,3
MO	8/06 h. 16	3422,8	18/12 h. 10	2870,3	773	552,5	950,2 = MN x 2

Table 1.5
Calculations of the PTV for the Carriers
On Diagram I.C

BEAM VETORE PREZZO-TEMPO	DATE AND HOUR OF THE MAXIMUM	THE TOP PRICE OF THE PTV	DATE AND HOUR OF THE MINIMUM	THE MINIMAL PRICE OF THE PTV	CHANGE OF TIME (IN HOURS)	CHANGE OF PRICE IN POINTS	VALUE OF THE CARRIER
AE	09/02/1966	1001	03/09/1929	386	1900 Settim.	615	1997
AB	03/09/1929	386,1	08/07/1932	41	148 Settim.	345	375

The PTV CAN SOVRAPPORSI And EXPERIENCE SHUNTING LINES

The origin or the end of a PTV not necessarily coincides with the origin or the end of an other PTV. In other words, the PTV can sovrapporsi and can esperire compensations. An example of superimposition between PTV can be seen on Diagram I.To where the defining PTV the maximum to the H point is originated to the point and. However, previous PTV EH finished to the F point. Therefore they are overlapped for amount EF. Similarly, the EH end is overlapped to the IG end.
The vertical compensations happen typically with the gap. Diagram I.D is used in the section "review of questions" of this lesson. On this diagram the origin of the final PTV the 6/03/1991 is shown to be the minimum of the 23/01/91, that it happened after the gap of the 17/01/91. The concept of vertical compensations is widened in the Lesson WAYS, the CYCLES.
The possibility that the PTV can sovrapporsi and to esperire compensations complicate the analysis. However, with practical and the experience the precise point of beginning of a PTV can be determined, even if carrier is found within the within of a previous beam. This argument is deepened more ahead in this course.

ARGUMENTS ARE LEFT OVER TO YOU

This section is added for those that they feel just comfort with an explanation that more appears to be progressed than that one met in the previous analysis.
On Diagram I.To since the beams carriers CA, AB, and BC are all of equal length, form the three cate [6] you of an equilateral triangle. In adding, the beams carriers CF, CD, and DF form the three cate you of an other equilateral triangle. These two triangles are contained within seeds - cycle, ABDF. Similarly, remaining the seeds - cycle, EHJK, contain two equilateral triangles. The meant one of this will be left like an exercise for the reader. But, like an indication, tried to find how many triangles equilateral are

arranges to you in a every circle with cateto equal to the beam of the circle. This produces one geometric figure.
The students of the relativity are familiar with the concept of "curvilinear time", rendered famous from Albert Einstein. The traditional diagrams of the financial markets supply one semplicistica rappresentazione bi - they determine the proportions of what it is really a phenomenon fines - determine the proportions them. The diagrams price - time simply reflects a "shadow" of this action fines - determine the proportions them. The time is not a linear dimension and therefore, it cannot accurately be represented with a uni - it determine the proportions them axis resisted along the inferior part of a diagram. When the price - time is forced on a bidimensional diagram, the turning out aspect is that the price - time serpeggia and turns within and outside of the observation page. The PTV, like described over, allows the analyst better to represent and to foretell this complicated movement. You on purpose pass some moments thinking of the time concepts introduces to you in this lesson. Like mentioned previously and repeated here, Diagram I.To it has shown that the action price - time was contained within the beam carrier originating to point C. When the market was to the point To and muoveva towards the B point it was under the infuence of a beam carrier whose origin to point C had to still happen in the time.

CONCLUSION

It is important that the material introduced in this lesson is padroneggiato because the having followed lessons confidano strongly on the PTV.
To this point in the course the reader would have to be able of:

1. To determine the every PTV between two points on a graphical price - time.
2. To project a value price - time from every maximum or given minimum the waited for number of days from that maximum or minimum.
3. To project when a maximum or minimum happens given to the dominant level of resistance or support.

REVIEW OF QUESTIONS

The following questions refer to Diagram I.D

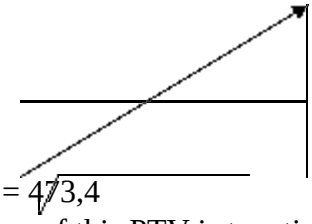
1. The 11/10/1990 to the hours 14 DJIA made the minimum to 2344,31, during the day. Cinquantasei days after, the 2/01/91 to hours 10, the DJIA catches up the maximum to 2651,73. Which is the PTV from this minimum to the maximum?
2. The 14/01/91 DJIA made the minimum to 2447,03 hours 15. Which is the PTV from the maximum of 2662,62 of the 21/12/91 to hours 15, lessened of the 14/01/91?
3. The 23/01/91 to the hours 11 DJIA made the minimum to 2584,65. Your analysis of the cycle is advanced to the stage where aspects a meaningful increase that will finish top to the 29 later days, the 6/03/91. Which value you preview for the DJIA in that moment?
4. The 11/10/90 to the hours 14 DJIA make the minimum to 2344,31. Your understanding of the levels of resistance has arrived to the stage where you can project the DJIA to arrive to the value of 3020. In which day this maximum will happen?
5. In The 1908 W. D. Gann astonished the journalists and the speculators with the affirmation "the Union Pacific will not exchange to before 169 that good reduction has one". At the moment of this affirmation the Union Pacific was exchanging to 168 and ⅛. Union Pacific did not touch 169. Gann said that its ability to make such affirmation was based on the "Law of Vibration". Based on the PTV, as such affirmation could be made one?

ANSWERS TO THE REVIEW OF QUESTIONS

1. Step (1) the change of price is:
2651,73 - 2344.31 = 307,42 points
Step (2) the change of time is:
56 days x 6,5 hours = 364 hours
day

- The four hours from the 10 to the 14 are embezzled from this value, in order to arrive to

the final difference of time of 360 hours.
Step (3) these values define the PTV like low:
PTV = 473,4
307,42 points



360 hours

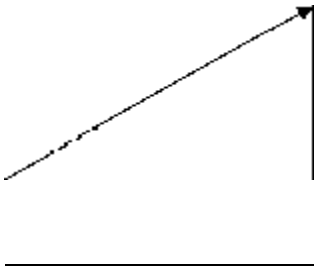
PTV = $307,42^2 + 360^2 = 473,4$

- The value of this PTV is two times that one measured previously in this lesson. That is: 473,4 = 236,6 x 2.
- He is also equal to the value calculated in Table 1.4 for MN.

2. Step (1) the change of price is:
2662,62 - 2447,03 = 215,59 points.

Step (2) the change of time is 14 days x 6,5 hours = 91 hours
Day

Therefore, the maximum and the minimum happened to the same hour of the day (ore15), not there are additional hours to add or to embezzle.
Step (3) These values define the PTV like under:



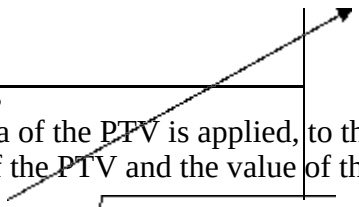
PTV = 234,01
215,59 points

91 hours

PTV = $215,59^2 + 91^2 = 234,01$
3. Step (1) the value of the time is 29 days x 6,5 hours = 188,5 hours
day

Step (2) Since is attended an increase important, the value of the PTV will be the eighth of the value base of 236. Or:
2 x 236 = 472
Step (3) the values of over for the PTV and the time, define the member head, like under:

PTV = 472
points
188,5 hours



The formula of the PTV is applied, to the opposite one, in order to find the number of points, data the value of the PTV and the value of the time. That is:

PTV = 472 = $188,5^2$ + punti²
Or, resolving this equation for the points:

Points = $472^2 - 188,5^2 = 432,73$ points
Adding this lessened one of 2584,65, projected the top to be:
2584,65 + 432,73 = 3017,38.
THE MAXIMUM PUTS INTO EFFECT THEM OF THE 6/03/91 WAS 3017,82, ONE DIFFERENCE ONLY 0,44 POINTS, OR 0,015%.

4. Step (1) the change of price is:
   3020 - 2344 = 676 points.
   Step (2) Since the value of the price is therefore large, the PTV will be the double one eighth.
   Or, 4 x 236 = 944.
   Step (3) the values of over for the PTV and the price, define the member time, like under:
   PTV = 944
   676 points
   hours
   The formula of the PTV is applied, in opposite, in order to find the number of hours, data the value of the PTV and the price. That is:

   $944 = ore^2 + 676^2$
   Or, resolving for the time,

   $944^2 - 676^2 = 658,9$ hours = 101 days
   The number puts into effect them of days of trading between 11/10/90 and 6/03/91 were 100 days, one difference of a day from the projected value, or 1% of error.
   That is very within the resolution of the data available.
5. In 1908 when Union Pacific exchanged to 168 1/8 was to a point where the PTV from its previous one bottom it had caught up its maximum length, based on the length of the previous PTV immediately to it. The this maximum length was calculated like demonstrated in this lesson. Since the PTV had caught up fine its, the single direction for the action to move was towards the lateral bottom or.

---

[1]
The concept to apply the Theorem of Pitagora to the price and the time simultaneously was uncovered from the author. For those without a cultural baggage, a beam carrier simply measure the distance and the direction from a point in the space to an other point in the space. On the diagrams price - time of the financial markets, a point in the space is a specific price to a specific time. As an example, if 14 action XYZ has exchanged to 33 January, that one would be a point in the space on the graphical price - time.

[2]
Twenty days of market times 6,5 ore/giorno, more an extra hour from the two to the three of the afternoon, they are equivalent to 131 hours of open ag.

[3]
This is that one to which W. D. Gann referred when it spoke "to square your diagrams". This is a concept a lot important that it allows to a graphical approach to geometry of the price - time. The topic of the quadrature of the diagrams is included in depth in *Master Course For Stocks* of W. D. Gann.

[4]
These values are equal within the resolution of the used data intraday for their calculation. The not homogenous nature of index DJIA plagues also these negatively turns out to you.

[5]
Greater information on the musical scale "Greater Diatonica" is included in the Lesson YOU, **RESONANCE SIMPATETICA And The LAW OF VIBRATION**. This was one of the enclosed voices like study argument before beginning this course..

[6]
An equilateral triangle has all and the three cate to you equal and three equal inner angles to 60°.