Fractal modeling for rational consumer

ESPINOZA-GOMEZ, Luis Éric†, CANO, Viridiana, GARCIA∗∗, Susana and ESPINOZA, Alexsandrini∗∗

‘Universidad Mayor Real y Pontificia de San Francisco Xavier de Chuquisaca
‘Universidad Tecnologica de Mexico. Departamento de Administración de Negocios

Received November 05, 2009; Accepted March 27, 2011

The development of Lagrange, Financial leverage, Carnot and Koch methods applied to company Grupo Bimbo is presented to determine the risks of Financial Employability. Based on the trading matrix of the Mexican stock exchange in March, he was working in each of the methods. When performing the calculation steps allowed us to observe the variations between models Exchange, shares outstanding and employment, we performed a comparative between three models, which has a higher % Employment taking 33%.

Employment, Exchange, Shares Outstanding, Carnot and Employability.

Citation: ESPINOZA-GOMEZ, Luis Éric, CANO, Viridiana, GARCIA, Susana and ESPINOZA, Alexsandrini. Fractal modeling for rational consumer. ECORFAN Journal-Mexico 2011, 2-3:190-195

† Researcher contributing first author.
Introduction

Grupo Bimbo was established in 1945. Since 1980, Grupo Bimbo shares are traded on the Mexican Stock Exchange (BMV) under the ticker symbol BIMBO it has 162 plants; its outlets are located strategically in 22 countries in America, Europe and Asia. Its main product lines include fresh and frozen bread, buns, cookies among others."Growing and create" were the key words from the beginning marked the successful path by which until today has continued to thrive Grupo Bimbo. Their commitment is to be a highly productive and fully human company, as well as innovative, competitive and oriented to the total satisfaction of its customers and consumers.

Methodology

The method to obtain the result of Carnot is star equation’s most striking property is that it can generate a power-law distribution with an exponent between 1 and ∞. This happens under delicate conditions that were dismissed as anomalous. It shall be argued that this perception is especially clearly unwarranted in the context of price variation made by applying the following formula:

\[ GISF = \frac{(PUT+CALL)^{\frac{1}{2}}}{(VCALL-VPOST)^{\frac{1}{2}}} = \left(\frac{117+116.2}{2}\right)^{\frac{1}{2}} = \frac{15.2708}{.5029} = 30.36 \]  

Data Call and Put were obtained from the Mexican Stock Exchange of Bimbo Company, where you can see a positive value, as expected, the Carnot cycle, helps us and must place the maximum and minimum of the trading matrix

Type Exchange

This method will try to maximize profits despite resource constraints, such as time and money. This método uses a technique in which the consumers can achieve maximum satisfaction and business can maximize the benefit or costs minimize with the limits specified, an example will be about this great method:

\[ TC = \left(\frac{\partial Tcf + \partial Tcft}{Tcx}\right)^{\frac{3}{4}} \]  

Where:

\[ \partial = \frac{.25}{.75} \]

\[ Tcf = 17.55, Tcft = 20.31 \text{ and } Tcx = 14.79 \]

\[ TC = \frac{0.25 \times 17.55 + 0.25 \times 20.31}{0.75 \times 14.79}^{3.75} = \frac{4.3875 + 5.0775}{19.72 + 5.85 + 20.31} = 1.3265^{3.75} = 2.8850 \]  

Lagrange, very large terms are reduced by lower terms, it is replaced in the formula the value of the differential that is 0.25 flexible exchange rate 17.55, adding the product of the differential floating exchange rate with values of 0.25 and 20.31 respectively. The value obtained from this sum of fractions, will be divided between the values of fixed exchange, this formula can be deduced that the values obtained from the Mexican Stock Exchange, with respect to the company Bimbo have a positive margin. Indicating that the method is helpful to give us information about how to reduce the variables efficiently terms of time and money

\[ TC = \frac{\lim_{\partial \to Tcf + \partial Tcft}{Tcx}}{\partial} \]  

Where:
\[ \text{Lim} = 0.618, \text{Tcf} = 17.55 \]
\[ \frac{\gamma}{\beta} = 0.5, \text{Tcx} = 14.79 \]
\[ \beta = 1.5 \]

The values obtained from the Mexican Stock Exchange of the Company are replaced Bimbo

\[ T_C = \frac{0.618 \cdot 17.55 + 5 \times 20.31}{1.5} = \frac{10.8459 + 10.155}{9.89} = \frac{31.8369}{9.89} = 3.2191 \]  
(5)

Which resulted in a positive value, it can be concluded that Financial leverage helps reduce values, they change and are very close to Lagrange the argument assumed that all the moments are finite otherwise meticulous scientists make this assumption all the time, without even a thought, but in this context it happens to lead to a paradox., still considered time and money in a tangential manner as expressed values show the behavior of the company with respect to a set time according to the Mexican Stock Exchange, the next task is to specify the rules of statistical dependence between weights. The most important and least constrained case, called canonical, the Wβ are independent random variables and one postulates \( E\beta = 1/b \), hence \( EM\beta = 1 \). This identity expresses conservation on the average.

\[ T.C = \frac{\frac{1}{2} \cdot 17.55 + \frac{3}{4} \cdot 20.31}{14.79} = \frac{8.775 + 15.2335}{14.79} = \frac{24.0075}{14.79} = 1.6232 \]  
(6)

Where:

Lim es igual a \( \frac{1}{2} \), Tcf = 17.55, Tcft = 2031 and Tcx = 14.79, of the three values is generated \( Sum = \text{Lagrange} + \text{Lemma de Itto} + \text{Koch} \)

\[ S = 2.8850 + 3.2191 + 1.6232 = \frac{7.7273}{3} \times 100 = 27\% \]  
(7)

No. 2 Employment

In this case the information was obtained from INEGI and ermiénndonos Stock market information to determine values and apply calculations show the following results which added together and divided by three, to obtain the application of this method is as follows:

\[ E = \left[ \frac{\omega + \eta}{\beta - \pi} \right]^{TC} + [Y]^{T_{i-\pi}} \]  
(8)

To perform the operation corresponding to Jobs must have the detail of the following items: \( W = 66.15, \pi = 2.60, D = 1.692.41, TC = 17.55, Y = 100 \) and \( Ti = 3.75 \)

\[ E = \left[ \frac{\log \frac{\omega + \beta \pi}{\pi}}{D} \right]^{TC} + [Y]^{b[T_{i-\pi}]} = \\
\left[ \frac{[0.25(66.15) + (0.75) (2.60)]}{1.692.41} \right]^{17.55} + 100^{[3.75-2.60]} \]  
(9)

\[ E = \left[ \frac{16.5375 + 1.95}{650.9269} \right]^{17.55} + 100^{[3.75-2.60]} = 199.5262 \]  
(10)

\[ E = \left[ \frac{\lim \omega + \frac{d}{dt} \pi}{\beta - \pi} \right]^{TC} + [Y]^{T_{i-\pi}} \]  
(11)

To determine Financial leverage the above formula is developed by replacing the matrix values, substituting, the whole financial or economic system adds up to a highly multidimensional process. The canonical cascade can be rationalized by assuming that investigating a financial time series by itself amounts to extracting a linear cross section from that full system.
OPTIMIZATION

\[
E = \left[ \frac{(0.25)(66.15) + (0.05)(2.60)}{1692.41} \right]^{17.55} + 100^{[3.75-2.60]} = 199.5262
\]

100\[3.75-2.60\] = \left[ \frac{16.5375 + 2.60}{650.9269} \right]^{17.55} + 100^{[3.75-2.60]} (12)

\[
E = \left[ \frac{1}{2}\frac{\omega + \frac{3}{4}\pi}{\pi} \right]^{TC} + [Y]^{[T_{i-\pi}]} = \left[ \frac{(0.25)(66.15) + (0.75)(2.60)}{1692.41} \right]^{17.55} + 100^{[3.75-2.60]} (13)
\]

To determine Koch, the above formula the only possibility is to follow the canonical cascades and make the weights into independent random variables, the resulting ‘MPCP process’ was worked out, first heuristically develops substituting the values of the matrix, reducing:

\[
E = \left[ \frac{18.48}{650.9269} \right]^{17.55} + 100^{[3.75-2.60]} = 199.5262
\]

Of the three values is generated \( S = 199.5262 + 199.5262 + 199.5262 = \frac{199.5262}{3} \times 100 = 33 \% \) (14)

\[
AC = \left[ \frac{(\log Psm + Ln Psm)_{1/2}}{Pam-Pmg} \right]^{3/4} (15)
\]

Financial leverage Method

\[
AC = \left[ \frac{(\lim Psm + \frac{d}{dt} Psw)^{1/2}}{Pam-Pmg} \right]^{3/4} (17)
\]

To determine Financial leverage, the above formula develops substituting the values of the matrix:

\[
AC = \left[ \frac{(0.6184955) + (0.54928)^{0.25}}{49.55 - 49.28} \right]^{1} = \left[ \frac{2.7265}{0.36} \right]^{1} = 7.3536 (18)
\]

Koch Method

\[
AC = \left[ \frac{\frac{1}{2}Psm + \frac{3}{4}Psw}{Pam-Pmg} \right]^{3/4} (19)
\]

To determine Koch, the above formula develops substituting the values of the matrix, of the three values is generated

\[
S = 7.3622 + 7.3536 + 51.7183 = \frac{66.4341}{3} \times 100 = 22 \% (20)
\]

Conclusions

Of the three values obtained were positive with the methods used, it can be concluded that the formulas used help reduce costs with respect to time and money invested in a company, being Bimbo a profitable company considering TCambio as a determining factor in deciding whether it is viable or not to invest in ela.
The three methods greatly reduce the variables used to determine the correct value that allows to know the behavior of a variable on the market, specifically in a company of great nickname.

References


Pérez, J. I. G. (2016). El efecto de la Reforma Laboral de 2012 sobre la dualidad y el empleo: Cambios en la contratación y el despido por tipo de contrato (No. 2016-06). FEDEA.


TORRES, N. J. F. MARIA PAULA GUTIERREZ VEGA.


