

Google Inc. share price on the BMV**Google Inc. Cotización de Google Inc. en BMV**GARCÍA, Rafael[†]*Universidad Iberoamericana.*ID 1st Author: *Rafael, García***DOI:** 10.35429/JIEC.2021.8.5.5.11

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Abstract

In 1995, two young doctoral level students at Stanford University, Larry Page and Sergey Brinse postulate his doctoral thesis in computer science, where his idea was to create an algorithm to organize Internet searches. In 1996, develop a system to search the internet (BackRud) that used links to determine the importance of specific web pages and was a year later when he decides to rename the browser and name "Google". The name originates from the word "Googol" which means 10 I evelado to 100.

Resumen

En 1995, dos jóvenes estudiantes de nivel de doctorado en la Universidad de Stanford, Larry Page y Sergey Brinse postulan a su tesis doctoral en informática, donde su idea era crear un algoritmo para organizar las búsquedas en Internet. En 1996, desarrolla un sistema de búsqueda en internet (BackRud) que utilizaba enlaces para determinar la importancia de determinadas páginas web y fue un año después cuando decide cambiar el nombre del buscador y llamarlo "Google". El nombre tiene su origen en la palabra "Googol" que significa 10 elevado a 100.

Google, Internet, BMV**Google, Internet, BMV****Citation:** GARCÍA, Rafael. Google Inc. share price on the BMV. Journal-International Economy. 2021. 5-8:5-11.

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Introduction

In 1995, two young Ph.D. students at Stanford University, Larry Page and Sergey Brinse, submitted their doctoral thesis in computer science, where their idea was to create an algorithm to organize Internet searches.

In 1996, he developed a system to search the Internet (BackRud) that used links to determine the importance of specific web pages and it was a year later when he decided to change the name of the search engine to -Google|.

The name has its origin in the word - Googol| which means 10 elevado a la 100.

Google Inc. was born in 1998, when the co-founder of Sun Mycosystem, decided to grant a check of 100,000 USD and that is how it was consolidated as a company, in September of that same year.

It was in 2004 when Google Inc. debuted on the United States stock exchange (NASDAQ) on August 18, 2004, with an initial public offering of 19,605,052 common shares.

Definition and geographical representation of Google Inc.

Definition

International technology company that offers an internet search engine through its website. Offers a wide variety of search options. Date of listing on bmv apr 03, 2014

Geographical representation

Google se encuentra ubicado en más de 40 países alrededor de mundo con más de 70 oficinas, ubicadas en Norte América, Latín América, Europa, África y Asia.



Figure 1

Products and services offered by Google Inc.

- Google AdWords
- Google Adsense
- Google AdMob
- Google My Business
- Google Ads
- Google App for Work
- Google Analytics
- YouTube

Company name

GOOG Inc /Alphabetic Inc.

Market in which it is listed

NASDAQ

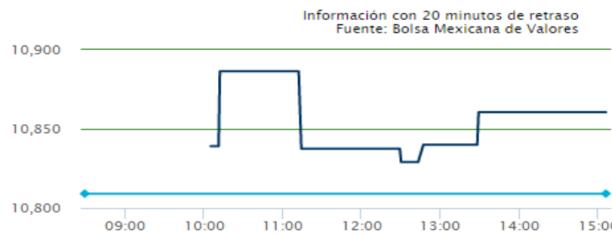
Legal basis

Google is a company and the revenue it earns comes from offering search technology to businesses and from selling advertising displayed on our search engine and other sites on the Web.

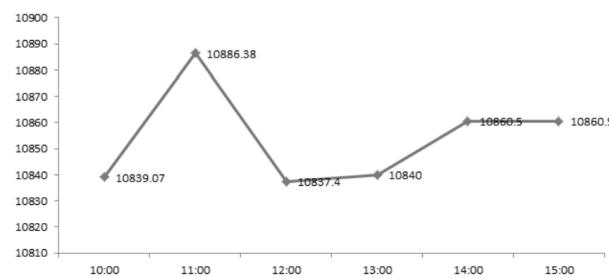
Risk and return variables

Descripción:	Variable:	Valor:
Precio máximo	P_a^M	10886.38
Precio mínimo	P_i^M	10829
Variación	V	0.47
PPP	PPP	0
Max. año anterior	MP_a^a	7892.5
Min. año anterior	M_a^i	6573.75
Acciones en Circulación	A_c	341,692,000
Partición 1	P_1	0
Partición 2	P_2	10,839.07
Partición 3	P_3	10,886.38
Partición 4	P_4	10,837.40
Partición 5	P_5	10,840.00
Partición 6	P_6	10860.50
Partición 7	P_7	10860.50
Precio/Utilidad	P_u	0
Precio/Valor libro	P^{VL}	0
Precio último Hecho	P^{Uh}	10860.5
Volumen de compra	V_c	3
Volumen de venta	V_V	0
Postura de compra	P_c	9890
Valor Libro p/Acción	V^{La}	0

Volumen Operado	V_o	4734
Tipo de cambio (Dollar)	D_p	16.58
Tipo de cambio (Dollar)	D_l	1
Postura de venta	P_v	0
Inflación No Subyacente (Sep 2015)	IPC	2.96
Inflación Subyacente (Sep 2015)	IPC_s	2.38
Utilidad p/Acción	U_a	0

Table 1

Graphic 1 Represents Goog Inc.'s stock market performance



Graphic 2 Represents the market shares of Goog Inc.

PUT (Sales) Model

$$P = \frac{[V_V - P_V]^{1/2}}{V_0 - P^{U_h}} + \frac{3}{4} \left[\frac{(P^{VL})}{(P_u)} \right] \rightarrow \int_{V^{La}}^U$$

$$P = \frac{[0 - 0]^{1/2}}{4734 - 10860.5} + \frac{3}{4} \left[\frac{(0)}{(0)} \right] \rightarrow \int_0^0$$

$$P = \frac{0}{-6126.5} + \frac{3}{4}[0] \rightarrow \frac{\ln(1)}{\log(1)}$$

$$P = 0 + \frac{3}{4}0 \rightarrow \frac{0}{0}$$

$$P = 0 - 0 + \frac{3}{4}(0)$$

$$P = \frac{3}{4}$$

$$P = 0.75$$

Call Model (Purchasing)

$$C = \left[\frac{V_c - \frac{P_c}{1}}{\frac{|V_o|}{P^{U_h}}} \right]^{\frac{3}{4}} + \int_{P^{uL}}^P - [\int_{P_u}^P + \int]_{\infty...}^{U^a + V^{La}}$$

$$C = \left[\frac{\frac{3}{4} - \frac{9890}{10860.5}}{\frac{4734}{10860.5}} \right]^{\frac{3}{4}} + \int_0^0 - [\int_0^0 + \int]_{n_{n-1}^{n+1}}^{0+0}$$

$$C = \left[\frac{-9887}{0.43 \cdot \frac{1}{2}} \right]^{\frac{3}{4}} + \frac{\ln(1)}{\log(-1)} - [\frac{\ln(1)}{\log(-1)} + \frac{\ln}{\log}]_{n_{n-1}^{n+1}}^0$$

$$C = \left[\frac{-9887}{0.65} \right]^{\frac{3}{4}} + \frac{0}{0} - [\frac{0}{0} + \frac{\ln}{\log}]_{n_{n-1}^{n+1}}^0$$

$$C = [-15210.76]^{\frac{3}{4}} + \frac{0}{0} - [0 + \frac{\ln}{\log}]_{-1}^0$$

$$C = -1369.66 + 0 - [0 + \frac{\ln}{\log}]_{-1}^0$$

$$C = -1369.66 + 0 - [0 + \frac{\ln(0)}{\log(-1)}]$$

$$C = -1369.66 + 0 - 0 + 0$$

$$C = -1369.66$$

Market price model

$$PM = \frac{\partial \left[\frac{P_u + \partial P^{VL}}{P^{U_h}} \right] + \left(\frac{\partial P_V}{\partial P_u} \right)^{\frac{3}{4}} - \left(\frac{\partial V_{V-1}}{\partial V_{C+1}} \right)^{\frac{1}{2}}}{\int_0^{P_u}}$$

$$PM = \frac{-1 \left[\frac{0 + (-1)0}{10860.5} \right] + \left(\frac{(-1)0}{(-1)9890} \right)^{\frac{3}{4}} - \left(\frac{(-1)0-1}{(-1)5+1} \right)^{\frac{1}{2}}}{\int_0^{4734}}$$

$$PM = \frac{-1 \left[\frac{0+0}{10860.5} \right] + \left(\frac{0}{(-1)9890} \right)^{\frac{3}{4}} - \left(\frac{(-1)-1}{-5+1} \right)^{\frac{1}{2}}}{\frac{\ln(4734)}{\log(1)}}$$

$$PM = \frac{-1[0] + \left(\frac{0}{-9890} \right)^{\frac{3}{4}} - \left(\frac{-2}{-2} \right)^{\frac{1}{2}}}{\frac{0.46}{0}}$$

$$PM = \frac{(-1)0 + (0)^{\frac{3}{4}} - (1)^{\frac{1}{2}}}{0}$$

$$PM = \frac{-1 + (-1)}{0}$$

$$PM = -2$$

$$\text{MRE} = \frac{\frac{1.000039}{\left\{ \frac{0+0}{-1869.66+0+0+\log(-1)} \right\}^{81.64}}}{+ \frac{0}{\frac{8.46}{0}}} + \frac{0}{4.035}$$

$$\text{MRE} = \frac{\frac{1.000039}{\left\{ \frac{0}{-1869.66+0+0+\log(-1)} \right\}^{81.64}}}{+ \frac{0}{0}} + \frac{0}{4.035}$$

$$\text{MRE} = \frac{\frac{1.000039}{\left\{ \frac{0}{-1869.66+0+0+0} \right\}^{81.64}}}{+ 0}$$

$$\text{MRE} = \frac{\frac{1.000039}{\left\{ \frac{0}{-1869.66+0} \right\}^{81.64}}}{+ 0}$$

$$\text{MRE} = \frac{\frac{1.000039}{\left\{ \frac{0}{0} \right\}^{81.64}}}{+ 0}$$

$$\text{MRE} = \frac{\frac{1.000039}{\left\{ 0 \right\}^{81.64}}}{+ 0}$$

$$\text{MRE} = \frac{\frac{1.000039}{0}}{+ 0}$$

$$\text{MRE} = \frac{\frac{1.000039}{0}}{+ 0}$$

$$\text{MRE} = \frac{1.000039}{B} + \frac{0}{D} - 0$$

$$\text{MRE} = 1.000039 + 0$$

$$\text{MRE} = 1.000039$$

Integration of the risk vs. return model

$$\text{MRR} = \int_A^B + \frac{(limC)^\pi}{(limD)^TC} + \left[\frac{\log B}{\ln A} \right]^{3/4} + \frac{(limD)^TC}{(limC)^\pi} + \frac{\ln A + \log B}{C-D} + \xi^2$$

$$\text{MRR} = \int_{0.00072}^{1.000039} + \frac{(lim0)^{3.14}}{(lim0)^{16.58}} + \left[\frac{\log 1.000039}{\ln 0.00072} \right]^{3/4} + \frac{(lim0)^{16.58}}{(lim0)^{3.14}} + \frac{\ln 0.00072 + \log 1.000039}{0-0} + \xi^2$$

$$\text{MRR} = \frac{\ln 1.000039 + (\sqrt{0})^{3.14}}{\log 0.00072} + \left[\frac{\log 1.000039}{(\sqrt{0})^{16.58}} \right]^{3/4} + \frac{(\sqrt{0})^{16.58}}{(\sqrt{0})^{3.14}} + \frac{\ln 0.00072 + \log 1.000039}{0-0} + (-1)^2$$

$$\text{MRR} = \frac{0.000028}{-3.12} + \frac{(0)^{3.14}}{(0)^{16.58}} + \left[\frac{0.000016}{-7.26} \right]^{\frac{3}{4}} + \frac{(0)^{16.58}}{(0)^{3.14}} + \frac{-7.26 + 0.000016}{0} + -1$$

$$\text{MRR} = -0.000012 + \frac{0}{0} + \left[-0.0000022 \right]^{\frac{3}{4}} + \frac{0}{0} + \left[\frac{-7.25}{0} \right] + -1$$

$$\text{MRR} = -0.000012 + 0 + (-0.000057) + 0 + (-7.25) + 0 - 1$$

$$\text{MRR} = -0.000012 + (-0.000057) + (-7.25) + (-1)$$

$$\text{MRR} = -0.000012 + (-0.000057) + (-7.25) + (-1)$$

$$\text{MRR} = -0.000012 - 0.000057 - 7.25 - 1$$

$$\text{MRR} = -0.000012 - 0.000057 - 7.25 - 1$$

$$\text{MRR} = -8.25$$

Risk vs. return model (Lagrange)

Lagrange

$$\text{MRI} = \frac{\left\{ \left[\frac{P_M^M + P_L^M}{PP_L^M} \right]^{3/4} + \left[\frac{MP_u^2 + M_L^2}{AC} \right] + 0.75 \right\} \left(\frac{D_p - D_J}{1/2} \right) \left(\frac{1/PC}{1/2} \right)^{2/4}}{\left\{ \left[\frac{V_Y - P_Y}{V_G - P_U/h} \right]^{1/2} + \frac{2}{d} \left[\frac{P^2 V_L}{P_u} \right] - \frac{U_u}{V_L h} \right\} - \left\{ \left[\frac{V_C - P_C}{V_G} \right]^{2/4} + \left[\frac{P^2 u}{h} - \left[\frac{P^2 u}{h} \right]_{n-1} \right]^{2/4} + \left[\frac{V_G}{P_u h} \right]^2 \right\}}$$

$$+ \frac{\frac{\ln P_1 - \log P_7}{P_u + 0.5 P^2 L}}{\frac{P_u + 0.5 P^2 L}{P_u/h} + \left(\frac{0.5 P_u}{0.5 PC} \right)^{2/4} - \left(\frac{0.5 V_Y - 1}{0.5 V_G + 1} \right)^{1/2}}$$

$$\text{MRI} = \frac{\left\{ \left[\frac{1.022428 + 0.0219}{0.5} \right]^{3/4} + \left[\frac{7.4912 + 6.2737.7}{c345693000} \right] + 0.75 \right\} \left(\frac{1.622-1}{1/2} \right) \left(\frac{1.942/4}{1.33} \right)}{\left\{ \left[\frac{0 - 0}{4734 - 0.0460.2} \right]^{1/2} + \frac{2}{d} \left[\frac{0}{0.5} \right] - \left[\frac{2 - 0.0000}{4734} \right]^{2/4} + \left[\frac{0 - 0}{h} \right]_{n-1}^{2/4} \right\}}$$

$$+ \frac{\frac{\ln 0 + \log 10000.5}{P_u + 0.5 P^2 L}}{\frac{P_u + 0.5 P^2 L}{P_u/h} + \left(\frac{0.5 (0)}{0.5 (0)} \right)^{2/4} - \left(\frac{0.5 - 1}{0.5 + 1} \right)^{1/2}}$$

$$\text{MRI} = \frac{\left\{ \left[\frac{1.171228}{0} \right]^{3/4} + \left[\frac{14.664122}{c345693000} \right] + 0.75 \right\} \left(\frac{1.522}{1/2} \right) \left(\frac{1.15}{1.33} \right)}{\left\{ \frac{0.01/2 + \frac{2}{d} [0 - \ln (1)]}{-411542 + \frac{2}{d} [0 - \ln (1)]} \right\} - \left[\frac{0 - \ln (1)}{0.425} \right]^{2/4} + \left[\frac{\ln (1)}{0.425} - \left[\frac{\ln (1)}{0.425} \right]_{n-1} \right]^{2/4}} + \frac{\frac{0 - 4.03}{-1.144602 + (0)^{2/4} - \left(\frac{-1}{2} \right)^{1/2}}}{-1.144602 + (0)^{2/4} - \left(\frac{-1}{2} \right)^{1/2}}$$

$$\text{MRI} = \frac{\left[\frac{1.171228}{0} \right]^{3/4} + \left[0.000042 \right] + 0.75}{\left[0 + 0 \right] - \left\{ \frac{15196.92}{1368.72} + 0 - \left[0 + \frac{\ln (0)}{\log (-1)} \right] \right\}} + \frac{0}{-0.000046 + 0 - (-0.4)^{1/2}}$$

$$\text{MRI} = \frac{\frac{0 + 0.22}{0} + 0.75}{\left[0 - \left\{ \frac{1368.72}{0} + 0 - \left[0 + \frac{0}{0} \right] \right\} \right]} + \frac{0}{-0.000046 - -0.68}$$

$$\text{MRI} = \frac{\frac{0.75042}{1368.72} + 0.75}{\left[1368.72 \right]} + \frac{0}{0}$$

$$\text{MRI} = \frac{\frac{0.00017}{1368.72}}{0} + \frac{0}{0}$$

$$\text{MRI} = 0.00000012 + 0$$

$$\text{MRI} = 0.00000012$$

$$\text{MRE} = \frac{\left\{ \left[\frac{P_M^M + P_L^M}{PP_L^M} \right]^{3/4} + \left[\frac{MP_u^2 + M_L^2}{AC} \right] + 0.75 \right\} \left(\frac{1/PC}{1/2} \right)^{2/4}}{\left\{ \left[\frac{V_Y - P_Y}{V_G - P_U/h} \right]^{1/2} + \frac{2}{d} \left[\frac{P^2 V_L}{P_u} \right] - \frac{U_u}{V_L h} \right\} - \left\{ \left[\frac{V_C - P_C}{V_G} \right]^{2/4} + \left[\frac{P^2 u}{h} - \left[\frac{P^2 u}{h} \right]_{n-1} \right]^{2/4} + \left[\frac{V_G}{P_u h} \right]^2 \right\}}$$

$$\text{MRE} = \frac{\left\{ \left[\frac{1.022428 + 0.0219}{0.5} \right]^{3/4} + \left[\frac{7.4912 + 6.2737.7}{c345693000} \right] + 0.75 \right\} \left(\frac{1.622-1}{1/2} \right)^{1/2}}{\left\{ \left[\frac{0 - 0}{4734 - 0.0460.2} \right]^{1/2} + \frac{2}{d} \left[\frac{0}{0.5} \right] - \left[\frac{2 - 0.0000}{4734} \right]^{2/4} + \left[\frac{0 - 0}{h} \right]_{n-1}^{2/4} \right\}} + \frac{0.5 \left[\frac{0.4 - 1.0}{1.144602} + \left(\frac{0.5 + 0.5}{0.5 + 1} \right)^{2/4} - \left(\frac{0.5 - 1}{0.5 + 1} \right)^{1/2} \right]}{\left[\frac{0.5}{1.144602} \right]^{1/2}}$$

$$\begin{aligned}
 MRE &= \left\{ \frac{\left[\frac{57.58}{(1)^{1/2}} \right]^{3/4} + \left[\frac{14466.25}{3416920000} + 0.75 \right]^{\frac{2.25}{2.38}}} {\left[\frac{-9887}{(0.42)^{1/2}} \right]^3 + \beta - [\beta]_{n-1}^0 + 0} \right\}^{\frac{2.25}{2.38}} \\
 &\quad + \frac{0.5 \left[\frac{0+0}{10860.5} \right] + \left(\frac{0}{4945} \right)^{3/4} - \left(\frac{0-0}{1.5+1} \right)^{1/2}}{\ln(4784)} \\
 MRE &= \left\{ \frac{\left[\frac{57.58}{0} \right]^{3/4} + [4.23] + 0.75}{\left[\frac{-9887}{0.45} \right]^3 + \frac{0}{\ln(-1)} - \left[\frac{\ln(1)}{\log(-1)} + \ln^0 + 0 \right]} \right\}^{\frac{2.25}{2.38}} \\
 &\quad + \frac{0.5 \left[\frac{0}{10860.5} \right] + \left(\frac{0}{4945} \right)^{3/4} - \left(\frac{-1}{2.5} \right)^{1/2}}{0} \\
 MRE &= \left\{ \frac{0 + [4.23] + 0.75)^{0.94}}{\left[\frac{-13210.76}{0} \right]^{3/4} + \frac{0}{0} - \left[\frac{0}{0} + \ln_0 \right]_{-1}} \right\}^{\frac{2.25}{2.38}} \\
 &\quad + \frac{0.5 [0] + (0)^{3/4} - (-0.4)^{1/2}}{0} \\
 MRE &= \left\{ \frac{0}{-1369.66 + 0 - 0 + 0} \right\}^{\frac{2.25}{2.38}} + \frac{0 + 0 - -0.63}{0} \\
 MRE &= \left\{ \frac{0}{-1369.66 + 0 - 0 + 0} \right\}^{\frac{2.25}{2.38}} + \frac{0.63}{0} \\
 MRE &= \left\{ \frac{0}{-1369.66} \right\}^{\frac{2.25}{2.38}} + 0 \\
 MRE &= \left\{ \frac{0}{-1369.66} \right\}^{\frac{2.25}{2.38}} + 0 \\
 MRE &= \left\{ \frac{0}{0} \right\}^{\frac{2.25}{2.38}} + 0 \\
 MRE &= \frac{4.52}{0} + 0 \\
 MRE &= 4.52 + 0 - 0 \\
 MRE &= 4.52 + 0 \\
 MRE &= 4.52 + 0
 \end{aligned}$$

MRE = 4.52

Percentage of Market Profit

SIM Annual rate = 36.0 % = 3 % * 12					
Time limit = Time initial + Operativity					
Market-SIM = Time initial * Val-Book *Asset					
Activity	Operativity	Time initial	Time limit	Val-Book *Asset	Market-SIM
INICIO	0	8	8	0.5	4
Proc A	10886.38	16	10902.38	1.0	16
Proc B	10829	24	10853	1.5	36
M 1*	0.65	32	0	2.0	64
Proc C	0.47	40	40.47	2.5	100
M 2*	1.3	48	0	3.0	144
Proc D	7892.5	56	7948.5	3.5	196
Proc E	6573.75	64	6637.75	4.0	256
Final	0	0	0	4.5	0
				208	
				163.2	

Figure 2

Google has 256 days that it can be listed on the stock market with a stock market entry

Google has 109 days that it can be listed on the stock exchange with a fork

Level of net income and expenses

Purchase Volume	Sales Volume	Outstanding Shares	Net Incomes
3	0	341,692,000	2,289,801.135
Price Value in Book			click to calculate
0.5	1.0	1.5	1.0

Figure 3

The company shows a net income percentage of -2.28% of its outstanding shares.

$$\begin{aligned}
 AC * \% \text{ Net income } 341,692,000 * 2.28 \\
 = 779,057,760
 \end{aligned}$$

Net income is —779,057,760||

Confidabilidad de la empresa Goog. Inc.	Variable	Valor	Log
9	Maximum	10886.38	4.03688349
8	Minimum	10829	4.0345884
7	Variation	0.47	0.327902142
6	PPP	0	0
5	Max. prev. year	7892.5	3.897214591
4	Minimum one year prev.	6573.75	3.817813184
3	Outstanding shares	341,692,000	8.533634811
2	Partition 1		
1	Partition 2		
0	Partition 3	0	0
	Partition 4	10839.07	4.03
	Partition 5	10886.38	4.03
	Partition 6	10837.4	4.03
	Partition 7	10840	4.03
		10860.5	4.03
		10860.5	4.03

Figure 4 Reliability

As shown in the table above, the logarithm of the partitions is constant, for this reason it is said that Goog Inc. is solvent and financially well and does not need to finance or leverage, because it has a financing of 4.03 % of dividends generated.

On the other hand, the value of R2 as shown in graph 2.1 is < 0.5, therefore it is determined that it is a financially solvent company.

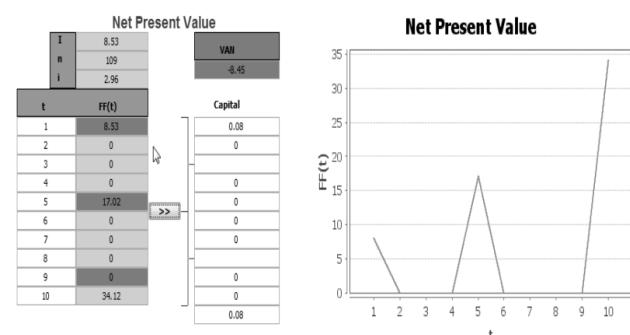


Figure 5

Net present value

Internal rate of return

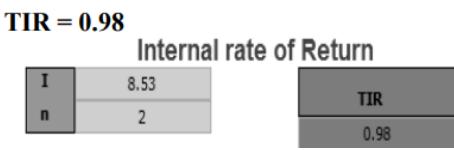


Figure 6

Acquisition payment rate

	Bank payments					Plazo: Mensual Bimestral Trimestral Cuatrimestral Semestral	Tasa: 0.3 0.6 0.9 1.2 1.8
	Monthly	By two months	By three months	By four months	Semiannual		
	0.3	0.6	0.9	1.2	1.8		
	0.003	0.006	0.009	0.012	0.018		

Figure 7

Government subsidy rate

	28			92			182			Plazo: (CETES) 28 92 182	Tasa: 0.23 0.77 1.52
	0.23489	0.77178	1.52678	0.00235	0.00772	0.01527					
Cover months in days											
Days	30.0000		1								Note: A month of 30

Figure 8

Funding frontier

	Num of years					Plazo: Mensual Bimestral Trimestral Cuatrimestral Semestral	Prestamos: 36 18 12 9 6
	36	18	12	9	6		
Monthly	36	18	12	9	6		

Figure 9

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