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Internet Valuations: the Case of Terra-Lycos

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Abstract:

In this paper, we review twelve valuations of Terra performed by Spanish and non-Spanish bank analysts and brokers.

Of the twelve valuations, only one used cash flow discounting. Another valuation was based on multiples, but also used cash flow discounting to perform a reverse valuation. All others used several multiples. Only one valuation report recommended to sell.

Terra started trading on the stock market in November 1999. The placement price was 13 euros per share (11.81 for retailers). In February 2000, its price stood at 139.75 euros. Between November 1999 and February 2000, Terra provided a return of 975% for its shareholders. However, by December 2000, the share price had plummeted to 11.6 euros, 8.3% of its February high. The average annual volatility of the Terra share was almost 100%.

If you can't find a rational explanation for a share to continue rising, you can be sure that it will fall. To become a millionaire, you must sell your shares at the right time. A website is not necessarily a business. Selling below cost gets you lots of customers, but not much money.

Key Words: *Internet, Valuation, Internet valuation, Analysts*

JEL Classification*: G12, G31, M21*

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1. Introduction

Terra started trading on the stock market in November 1999. The placement price was 13 euros per share (11.81 for retailers). In February 2000, its price stood at 139.75 euros. Between November 1999 and February 2000, Terra provided a return of 975% for its shareholders. However, by December 2000, the share price had plummeted to 11.6 euros, 8.3% of its February high. The average annual volatility of the Terra share was almost 100%.

In this paper, we review twelve valuations of Terra performed by Spanish and non-Spanish bank analysts and brokers[2]. We will start with the opinion of one Internet business analyst.

Opinion of a Spanish bank analyst regarding the valuation of Internet companies

In valuing Terra, we encounter the same difficulties that make the valuation of any Internet stocks problematic. Such obstacles include: the difficulty in finding fully comparable companies, the limited track record of the companies in the sector, which makes discounting cash flow analysis more challenging, the significant volatility of the sector, and the wide divergence of the multiples.

To calculate the value of an Internet company, the following methodologies should be considered:

a) Valuation by sum of the parts, applying the relevant multiples to each business line

b) The application of the Price/sales multiple of listed Internet companies

c) The book value, interpreted as the "absolute minimum valuation"

d) A maximum valuation calculated from the multiples of industry leaders (AOL, Yahoo, etc.)

We consider that cash flow discounting is not the right tool for valuing a company like Terra. First, given the changes that the industry is experiencing (the Internet revolution) and the changes that the company could experience (new acquisitions), cash flow discounting would provide an incorrect valuation. In addition, almost all the value depends on the residual value. One could also discuss which are the right WACC and the appropriate perpetual growth. The right multiples are price/subscriber and price/sales. As all the Internet companies are still a long way from breaking even, in our opinion, price/sales is the most reasonable multiple for making comparisons.

[2] Most of them can be described - depending on what the reader prefers - as highly questionable, esoteric, cabalistic, out of this world, or useless.

As the above lines show, there are analysts and managers who maintain that the Internet companies cannot be valued using the traditional method of discounting expected cash flows[3]. This is not correct, it is a conceptual error, and it is the best recipe for creating speculative bubbles.

An investor is prepared to pay a price for a share (which is a piece of paper) if by having this piece of paper, he expects to receive money (flows) in the future. Therefore, the share's value is the current discounted value of the expected cash flows[4]. Otherwise, shares would be like sardine cans during the black market days in the 40's. There is a joke[5] that says that one black marketer sold a sardine can to another for one dollar. This black marketer sold it to another for two dollars and the third black marketer sold it to another for three dollars. The can continued to change hands and increase in price until a black marketer bought it for 25 dollars (an enormous sum at that time) and decided to open it. To his enormous surprise, he saw that the can was empty. He ran back to the black marketer who had sold it to him to get his 25 dollars back. However, this black marketer simply told him, "How could you be so stupid as to open the can? This can is for selling, not for eating".

This joke also illustrates perfectly the distinction (with no basis) that some people make between shares for investing in (to hold them for a long time, so they say) and shares to speculate in (to sell quickly, so they say).

Expected cash flow discounting is the right method for valuing any company's shares. However, we should add that cash flow discounting should be complemented in certain cases with the valuation of the real options, but not all Internet companies have valuable real options. A real option real only contributes value to a company when this company has some kind of exclusive right for exercising the option in the future. Furthermore, the real options to be found in Internet companies cannot be described as readily as the real options offered by the operation of a mine or the operation of an oilfield. A good valuation of an Internet company should consider the reasonableness of the business plan (paying particular attention to the analysis of the expected growth of sales and margin), and it must recognize and quantify the value (if any) of the real options existing in the company.

2. Twelve Valuations of Terra: Different Expectations

Existing Table 1 shows the projected sales and earnings provided by the twelve valuations of Terra. The table's second column shows the date on which the projections were made. Valuations [9], [11] and [12] give much higher sales figures than the others do because their projections include Terra's merger with Lycos. It is

[3] There were many more in the first quarter of 2000.

[4] Plus the value of the real options, which is simply the expected flows contingent upon some future uncertainty.

[5] Rafael Termes told the author this joke.

interesting to observe that although there are differences in expected sales, the largest differences are to be found in the estimate of future earnings. For example, if we observe expected earnings for the year 2000, it seems that expected losses increased as time went by.

Of the twelve valuations, only one ([4]) used cash flow discounting. Another valuation ([6]) was based on multiples, but also used cash flow discounting to perform a reverse valuation[6]. Valuation [11] says "we will perform the valuation by cash flow discounting when the company Terra-Lycos offers joint accounting statements".

Valuation [4] was performed by an American bank immediately before the subscription offer, based on its cash flow forecasts. They assumed that Terra's beta was 2.5 and the market premium was 3.5%[7]. As the yield on long-term Treasury stock was 5.15%, they estimated the required return to equity at 13.9%. This gave them a value per share of 16.3 euros. On the basis of this valuation, they recommended accepting the subscription offer (11.81 euros per share).

The only valuation report in which the recommendation was to sell was [6], made in March 2000, when Terra's share price was 117.15 euros. The French bank valued the share at 86 euros. The valuation was based on the [market value/sales] multiple of comparable companies: Freeserve, Tiscali, Freenet.de and Infosources. The French bank also provided a reverse valuation by cash flow discounting. The bank argued that in order to obtain the market price of 117.15 euros per share, it was necessary to expect a growth in cash flows[8] of 14% after 2010. As this 14% growth seemed excessive to it, the French bank concluded that, at 117.15 euros, Terra was overvalued.

[6] Reverse valuation consists of calculating the hypotheses that are necessary to attain the share's price in order to assess these hypotheses.

[7] They justified Terra's beta on the betas of AOL, Amazon and Yahoo, which were 2.3, 2.5 and 2.7.

[8] Assuming a beta of 2.5, a market premium of 3.5% and a risk-free rate of 6%. These parameters gave a required return to equity of 14.75% and a weighted average cost of capital of 14.6%.

Table 1. Twelve projections of sales, net income and EBITDA made by different companies (million euros)

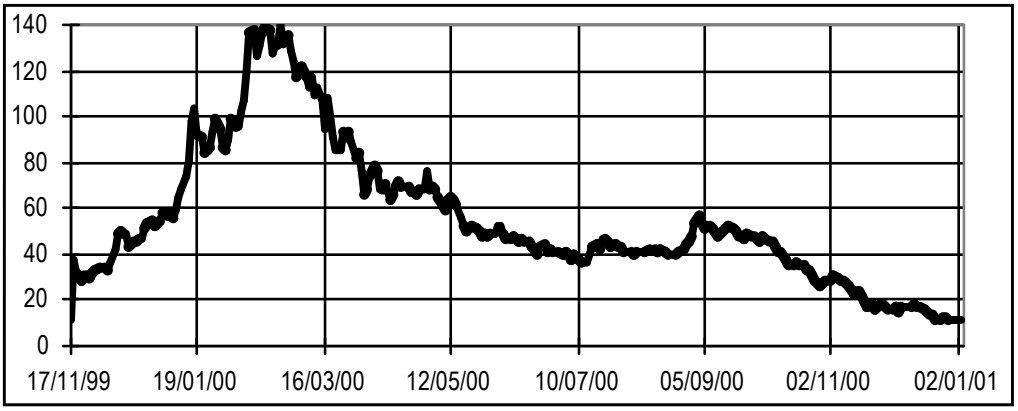
		Sales	1999	2000	2001	2002	2003	2004	2005
[1]	sept-99	American bank 1	76	149	269	456	748		
[2]	sept-99	Spanish bank 1	67	146	279	499	798		
[3]	sept-99	Spanish bank 2	74	153	265	409	604		
[4]	sept-99	American bank 2	72	138	220	375	610	919	1,311
[5]	sept-99	American bank 3	70	171	331	553	847		
[6]	march-00	French bank	79	188	311	463	652	828	
[7]	april-00	Euroamerican bank	79	178	323	539	860	1,238	1,617
[8]	may-00	Spanish bank 2	79	182	340	548	753		
[9]	june-00	American bank 4	79	576	905	1,166	1,465		
[10]	july-00	German bank	79	196	414	773			
[11]	oct-00	American bank 5	79	572	988	1,374	1,735		
[12]	oct-00	Spanish bank 2	79	591	1,019	1,473	1,962		

		Net income	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**
[1]	sept-99	American bank 1	-152	-154	-138	-120	-51		
[2]	sept-99	Spanish bank 1	-154	-243	-221	-99	40		
[3]	sept-99	Spanish bank 2	-179	-185	-175	-136	-7		
[4]	sept-99	American bank 2	-146	-174	-135	-51	67	246	529
[5]	sept-99	American bank 3	-154	-206	-196	-95	51		
[6]	march-00	French bank	-174	-269	-280	-208	-80	54	106
[7]	april-00	Euroamerican bank	-174	-341	-337	-267	-112	173	368
[8]	may-00	Spanish bank 2	-173	-532	-472	-317	-124		
[9]	june-00	American bank 4	-174	-601	-400	-54	173		
[10]	july-00	German bank	-173	-558	-641	-650			
[11]	oct-00	American bank 5	-173	-1,067	-2,750	-2,550	-2,442		
[12]	oct-00	Spanish bank 2	-173	-365	-595	-286	38		

		EBITDA	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**
[1]	sept-99	American bank 1	-59	-51	-12	28	137		
[2]	sept-99	Spanish bank 1	-38	-149	-123	15	160		
[3]	sept-99	Spanish bank 2	-74	-68	-42	13	153		
[4]	sept-99	American bank 2	-132	-152	-107	-17	106	290	578
[5]	sept-99	American bank 3	-49	-103	-83	28	102		
[6]	march-00	French bank	-86	-173	-145	-64	57	182	330
[7]	april-00	Euroamerican bank	-86	-329	-307	-195	49	352	656
[8]	may-00	Spanish bank 2	-86	-418	-336	-164	39		
[9]	june-00	American bank 4	-86	-84	8	245	413		
[10]	july-00	German bank	-86	-371	-380	-320			
[11]	oct-00	American bank 5	-86	-379	-245	-11	121		
[12]	oct-00	Spanish bank 2	-86	-258	-165	130	476		

Figure 1 shows the evolution of Terra's share price in euros per share.

Figure 1. Terra's share price in euros per share



3. Some Comparisons between the Projections and the Valuations

In this section, we will compare some of the projections. Thus, for example, Table 2 compares the earnings projections made by an American bank in September 1999 with those made by a French bank in March 2000. The difference shows that the American bank projected lower losses and higher earnings than the French bank. However, the American bank valued the Terra share at 16.3 euros per share, and the French bank (which expected much higher losses and much lower earnings) valued the Terra share at 86 euros per share.

Table 2. Projections of Terra's earnings (million euros). Difference between projection [4] and [6]

		Net income	1999	2000	2001	2002	2003	2004	2005
[4]	sept-99	American bank 2	-146	-174	-135	-51	67	246	529
[6]	march-00	French bank	-174	-269	-280	-208	-80	54	106
[4]-[6]		**Difference**	**28**	**95**	**145**	**157**	**147**	**192**	**423**

Similarly, Table 3 compares the projections made by an Euroamerican bank in April 2000 with those of an American bank in June 2000. It is clear that the Euroamerican bank projected lower losses in 2000 and 2001 but higher losses in 2002 and 2003. However, the Euroamerican bank valued the Terra share at 104 euros per share while the American bank valued it at 53 euros per share.

Table 3. Projections of Terra's earnings (million euros). Difference between projection [7] and [9]

		Net income	1999	2000	2001	2002	2003
[7]	april-00	Euroamerican bank	-174	-341	-337	-267	-112
[9]	june-00	American bank 4	-174	-601	-400	-54	173
[7]-[9]		**Difference**	**0**	**260**	**63**	**-213**	**-284**

The reader can make other inconsistent comparisons considering that the value per share in euros given by the valuations was:

valuation	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]
date	sept-99	sept-99	sept-99	sept-99	sept-99	march-0	april-00	may-00	june-00	july-00	oct-00	oct-00
Value (euros/share)	> 13	19.8	> 13	16.3	> 13	86	104	84.4	53	40	46	40
Share price (euros)	11.81	11.81	11.81	11.81	11.81	117.5	73.8	68	45	40	45.1	25.7

4. Valuation performed by a Euroamerican bank in April 2000: 104 Euros

This section summarizes the valuation of Terra's shares performed by an Euroamerican bank in April 2000, when Terra's share price was 73.8 euros. As the valuation given by Table 4 is 104 euros per share, the bank advised its customers to buy Terra shares.

Table 4. Valuation of Terra performed by an Euroamerican bank on 7 April 2000

7 April 2000	Price per share ($)	Million shares	Capitalization ($ million)	Net debt	EV (enterprise value)
AOL	65.0	2,282	148,315	-1,472	146,843
Yahoo!	158.0	526	83,184	-1,208	81,976
Lycos	61,5	110	6,760	-618	6,142
Excite@Home	30,0	352	10,559	302	10,861
Go Networks	19,0	165	3,133	349	3,482
NBC Interactive	38,5	32	1,223	259	1,482
About.com	65,0	17	1,075	-176	899
The Go2Net	71,4	31	2,182	214	2,396
Ask Jeeves	59,0	35	2,062	-166	1,896
LookSmart	38,0	88	3,340	-97	3,243
Juno	13,8	39	531	-89	442
Infospace	65,5	217	14,186	-89	14,097
GoTo.com	43,0	49	2,107	-104	2,003
Earthink	18,0	138	2,489	-206	2,283
TheGlobe.com	5,0	30	152	-52	100
Sum of the 15 largest information hubs in USA			**281,298**	**-3,153**	**278,145**
No. inhabitants (million)					273
EV per capita (US$)					1,019
GNP per capita in the US (US$)					32,328

	PNB per capita (US$)	GNP per capita vs. USA (%)	Adjusted EV per capita (US$)	Million inhabitants	Terra market share (%)	Value
	[1]	[2]	[3]	[4]	[5]	[6]
Spain	17,207	53%	542	39	30%	6,345
Hispanic America	16,164	50%	509	30	5%	764
Latin America	7,513	23%	237	338	25%	20,008
Average	***9,080***	*28%*	***286***	***407***	*23%*	
Value of Terra ($ million)						**27,117**
Net debt ($ million)						-525
Implicit capitalization ($ million)						**27,642**
Million shares: 280	Dollar/euro exchange rate: 0.94875					
			Price per share (euros)			**104**

The valuation given in Table 4 is based on the 15 largest Internet companies in USA. The first column gives the price per share, the second column the number of shares outstanding, and the third column the companies' capitalization in million dollars. When the net debt is added to the capitalization, what the bank calls *enterprise value* (EV) is obtained, that is, the company's value. Thus, the sum of the *enterprise values* of the 15 largest Internet companies in USA was 278.145 billion dollars. The Euroamerican bank's analyst then divided this quantity by the number of inhabitants in USA, which he estimated to be 273 million, obtaining the EV per capita in USA: 1,019 dollars.

At the bottom of Table 4, the analyst divided Terra's market into 3 geographical areas: Spain, *Hispanic* America[9] and Latin America. Column [1] shows the gross national product per capita in each of the three geographical areas, and

[9] American citizens who are Spanish speakers.

column [2] shows the percentage they represent with respect to the gross national product per capita in USA ($32,328). Column [3] is the result obtained by multiplying the EV per capita in USA (1,019 dollars) by the ratio between the gross national product per capita in each of the three geographical areas and the North American gross national product per capita (column [2]). He then multiplied column [3] by the number of inhabitants in each geographical area (column [4]) and by Terra's estimated market share in each of these markets (column [5]), and obtained Terra's value in each of these geographical areas (column [6]). Adding the 3 amounts in column [6], he arrived at the value for Terra: 27.117 billion dollars. After subtracting the net debt from this amount, he obtained Terra's implicit capitalization: 27.642 billion dollars. By dividing this quantity by the number of Terra shares (280 million) and by the euro's exchange rate, the analyst obtained the value of the Terra share: 104 euros per share.

Doesn't this valuation seem surprising to the reader? We can propose three more ways of getting the figure of 104 dollars per share:

1. The value of the Terra share is twice the age of Manolo Gómez's mother-in-law, who is 52. We chose Manolo because he lives near Terra's corporate headquarters.
2. The value of the Terra share is eight times the price of the initial public offering (13 euros).
3. The speed of light in thousand of kilometers per second raised to the power of 0.3682.

Of course, these three valuations are absurd, but they have the same rigor as that given in Table 4. As the Spanish saying goes, "the blind man dreamt he saw and he dreamt what he wanted to see".

5. Valuation performed by a Spanish bank in May 2000: 84.4 Euros

In this section, we transcribe the valuation of Terra performed by a Spanish bank in May 2000, when Terra's share price stood at 68 euros. As the valuation concluded that the value of the Terra share was 84.4 euros, the Spanish bank also advised in favor of buying.

Table 5 shows the valuation of Terra performed by the sum of the parts. The top of the table shows the result of the valuation performed by the analyst using a number of multiples. He used the capitalization/subscriber multiple for the years 1999, 2000 and 2001, and also the capitalization over sales multiple for the same years. He also performed an additional valuation assuming a time lag in the multiples. The valuation by the sum of the parts consists of adding the Internet access business (ISP), the valuation of the portal, the valuation of the corporate services, and Terra's holdings in other companies. To obtain a valuation for the ISP

businesses, he used the multiples of the companies that seemed to have similar features (Earthlink, Prodigy and PSInet), and he calculated the average of these data and applied it to Terra. Thus, the ISP business according to the capitalization/subscriber multiple has a value which ranges between 1.892 and 4.485 billion euros. Using the capitalization over sales multiple, the value of the ISP would only be between 199 and 339 million euros. Using the multiples with a lag to take into account the companies' varying states of maturity, the valuation ranges between 9.385 billion and 846 million euros. To obtain the valuation of the portal, the analyst performed a similar analysis taking as his reference companies whose main business is the portal. Using the capitalization over sales multiple, he obtained values ranging between 1.915 and 11.012 billion euros.

To value the corporate services business, the analyst used Reuters capitalization over sales multiple. In this case, the analyst arrived at figures with a much lower scatter: the value of this business of Terra's ranges between 107 and 112 million euros.

The top of Table 5 summarizes the valuation by the sum of the parts: the valuation of Terra ranges between 4.69 and 22.87 billion euros.

Table 5. Valuation of Terra by the sum of the parts performed by a Spanish bank on 10 May 2000

Sum of the parts (million euros)

	Capitalization/Subscriber			Capitalization/Sales			With lag	
	1999	2000	2001	1999	2000	2001	Cap./Subscriber	Cap./Sales
ISP business	1,892	3,754	4,485	199	303	339	9,385	846
Portal business	8,201	1,915	3,378	8,201	1,915	3,378	11,012	11,012
Corporate services	107	108	112	107	108	112	107	107
Other shareholdings	2,364	2,364	2,364	2,364	2,364	2,364	2,364	2,364
Terra valuation (million euros)	12,564	8,141	10,339	10,871	4,690	6,193	22,869	14,329

Valuation of the "ISP" business

	Capitalization	Capitalization/Subscriber			Capitalization/Sales			With lag		
	(million euros)	1999	2000E	2001F	1999	2000E	2001F	Lag	Cap/Subs	Cap/sales
Earthlink	2,215	715	527	403	3.0	2.0	1.3	-2	715	3.0
Prodigy	834	556	261	194	4.0	2.8	2.0	-2	556	4.0
PSInet	3,074	2,196	1,464	1,025	5.0	2.8	1.8	-2	2,196	5.0
Average		1,437	961	687	4.1	2.5	1.7		1,681	2.5
Implied Terra valuation		1,892	3,754	4,485	199	303	339		9,385	846

Valuation of the portal business

	Capitalization	Capitalization/Sales			With lag	
	(million euros)	1999	2000E	2001F	Lag	Cap/sales
Yahoo	72,752	111.0	60.7	34.6	-2	111.0
Lycos	6,106	27.4	17.1	12.2	-2	27.4
Go2Net	1,684	72.0	21.6	12.6	-2	72.0
AskJeeves	1,014	41.4	13.0	6.1	-2	41.4
Go.com	2,466	11.1	6.3	4.4	-2	11.1
About	837	27.9	10.7	5.0	-2	27.9
Goto.com	1,450	100.3	20.1	10.4	-2	100.3
LookSmart	2,148	42.9	21.4	11.7	-2	42.9
NetZero	1,071	41.9	13.8	6.4	-2	41.9
Average		97.6	52.3	29.9		97.6
Implied Terra valuation (million euros)		8,201	1,915	3,378		11,012

Valuation of the "Corporate services" business

	Capitalization/Sales		
	1999	2000	2001
Reuters	4.9	4.7	4.6
Terra implied valuation (million euros)	107	108	112

There is an enormous scatter in the multiples used of comparable companies. For example, in the valuation of the portal, depending on the year being considered, the multiples range between 1.11 and 111; between 6.3 and 60.7; and between 4.4 and 34.6. With such scatter, using the average of such different data has very little solid basis.

Table 6 shows the valuation of Terra performed by the analyst considering it as a complete company. To do this, he compared Terra with companies offering similar services. The multiples used are the same as in the valuation by parts: capitalization by subscriber, capitalization by sales and an adjustment for lag. This valuation gives values ranging between 5.8 and 42.8 billion euros. Observe here too the enormous scatter in the multiples used in Table 6: the multiples in the fifth column range between 14.7 and 960, those of the last column between 5.6 and 275.4.

Table 6. Valuation of Terra performed by a Spanish bank on 10 May 2000
Valuation of the entire company

	Capitalization	Capitalization/Subscriber			Capitalization/Sales			With lag		
	(million euros)	1999	2000E	2001F	1999	2000E	2001F	Lag	Cap./Subs.	Cap./Sales
Terra	19,040	14,457	4,875	2,914	242.4	104.9	56.1	-2	2,914	56.1
Tiscali	10,461	11,955	3,487	2,092	330	65.4	34.9	-2	2,092	34.9
Freeserve	6,974	4,359	3,170	2,325	275.4	91.2	45.6	0	4,359	275.4
Freenet	3,360	4,098	2,100	1,344	960	187.7	84	-1	2,750	187.7
World On Line	3,300	2,750	1,100	550	51.6	16.5	8.2	-1	3,869	16.5
Liberty Surf	3,676	11,055	3,869	2,162	602.5	147	61.3	-1	12,106	147
T On Line	50,844	12,106	6,356	5,084	118.8	56.5	36.3	-1	6,007	56.5
AOL	142,975	6,007	5,199	4,399	22.6	17.1	14.3	0	5,988	22.6
Excite@Home	6,887	5,988	3,443	1,722	14.7	8.3	5.6	0	5,988	14.7
El Sitio	376	4,580	3,414	2,504	19.1	11.3	5.6	-2	2,504	5.6
Stamedia	1,408	NA	NA	NA	68.8	30.1	14.1	-2	NA	14.1
Average (ex-Terra)		7,004	4,740	3,843	82.1	32	20.7		6,552	31.0
Implied Terra valuation (million euros)		**9,225**	**18,511**	**25,107**	**6,447**	**5,802**	**7,035**		**42,805**	**11,866**
Euros per share		35.5	71.2	96.6	24.8	22.3	27.1		164.6	45.6

Table 7 is the end of this analyst's valuation. It is a summary of the data obtained in Tables 5 and 6. The analyst used the maximum, minimum and average values obtained in the valuation of the entire company (data from Table 6) and in the valuation by the sum of the parts (data from Table 5). Line (a) is the average of the data obtained for the valuation of the entire company and the valuation of the company as a sum of the parts. The analyst then calculated the average of all these numbers, which gave 17.232 billion euros.

Table 7. Summary of the valuation of Terra performed by a Spanish bank on 10 May 2000

10 May 2000	Without adjustments			"Click Lag" adjustment			Average
	Maximum	Average	Minimum	Maximum	Average	Minimum	
Entire company	25,107	12,021	5,802	42,805	27,335	11,866	
Sum of the parts	12,564	8,800	4,690	22,869	18,599	14,329	
(a) Average	18,836	10,411	5,246	32,837	22,967	13,098	**17,232**
(b) Valuation with adjustments for population and gross national product per capita							36,606
Value of Terra shares = Weighted average [67%(a) + 33%(b)] (million euros)							23,626
Number of Terra shares (million)							280
Target price per share (euros)							84.4

Line (b) provides a data calculated by the analyst in which he adjusted the value of 17.232 billion euros for Terra's target population compared with the target population of other comparable companies and for the gross national product. He arrived at a valuation of 36.606 billion euros. The following line is the total valuation of Terra's shares: according to the analyst, 67% of line (a) plus 33% of line (b), which gives 23.623 billion euros. Dividing this value by the number of Terra shares (280 million), the analyst concluded that the value of each Terra share is 84.4 euros per share.

Another valuation with a rigor similar to that given above (i.e., none at all) would be to say that the value of Terra's shares is the average capitalization of the companies listed in Table 6 (23.026 billion euros). This figure is very close to that obtained in the valuation of Table 7 (23.626 billion euros).

6. Valuation performed by an American broker in June 2000: 53 Euros

In this section, we summarize the valuation performed by an American broker in June 2000; when Terra's share price was 45 euros per share. As his valuation gave 53 euros per share, the broker recommended buying Terra shares.

Table 8 shows a summary of the valuation performed by the broker by geographical areas. First, he valued Terra's business in North America using the value per page viewed multiple. For Europe, he added together two values: on the one hand, the value of Lycos Europe at market price, and, on the other hand, the value of Terra's business in Spain using the value per subscriber multiple for comparable European companies. To value Latin America, he used the value per subscriber multiple. To value the business in Japan and other Asian countries, he used the value per page viewed multiple and a discretionary adjustment of 1.000 billion. This gave him a total value for Terra-Lycos' shares of 28.974 billion dollars. After dividing this quantity by the expected number of shares after the Terra/Lycos merger and adjusting for the exchange rate, he obtained a value of 53 euros per share.

Table 8. Valuation of Terra performed by an American broker on 20 June 2000

20 June 2000	**Methodology**	**Comps**	**US$ (million)**
USA & Canada	EV/Pageview	Yahoo! (without Japan less 30%)	9,664
Total North America			**9,664**
Lycos Europe	Market price		1,264
Spain	EV/Sub	Comparable European companies	6,301
Total Europe			**7,565**
Brazil	EV/Sub	Comparable European companies	3,818
Mexico	EV/Sub	Comparable European companies	1,145
Other			400
Total Latin America			**5,350**
Japan (50/50 JV)	EV/Pageview	Yahoo! (Japan) less 30%	2,353
Rest of Far East	Guesstimate	(n.b. All 50/50 JV's)	1,000
Total Far East			**3,353**
Total EV			25,932
Plus Cash			3,042
Total			**28,974**
No. shares (Post Issue) (million)			591
US$ per share			49
Euros per share			53

Table 9 contains a verification of the value obtained by comparing Terra Lycos with Yahoo and America Online. The valuation of 53 euros per share gives a capitalization over sales ratio of 42.5. This ratio was 63.6 for Yahoo and 19.1 for American Online; the average of the two was 41.3. As 42.5 is close to 41.3, the valuation's author concluded that the valuation was correct. He also compared the capitalization over gross profit and capitalization over pages viewed ratios. Applying the same ratios to his valuation of Terra, he obtained 57.9 and 135.7. As both figures are close to the average multiples for Yahoo and American Online (56.8 and 117.7), he concluded that the valuation was correct.

Table 9. Verification of the valuation of Terra performed by an American broker on 20 June 2000

20 June 2000	Capitalization/Sales	Capitalization/ Gross Profit	Capitalization/ Pageview
Yahoo! (without Japan)	63.6	74.3	117.7
AOL (without Time Warner)	19.1	39.3	
Average	***41.3***	***56.8***	
Terra Lycos	**42.5**	**57.9**	**135.7**

7. Valuation performed by a Spanish bank in September 1999: 19.8 Euros

This valuation was performed before the initial public offering. The Spanish bank valued the shares at 19.8 euros. As this value was higher than the opening price, the bank advised its customers to buy. Table 10 shows the companies that are comparable to Terra according to the Spanish bank and Table 11 shows the valuation. The multiples used by the Spanish bank for Terra are markedly below that the average of the companies it calls comparable. It then applied these multiples to forecasts for 2002 and 2004.

Note the contradiction: it is argued that cash flow discounting is not used because it is very difficult to project Terra's future. However, multiples are applied to two and four-year projections.

Table 10. Companies comparable to Terra according to a Spanish bank in September 1999

	capitalization/sales	
Access (ISP)	1999E	2000E
America online	20	16
Earthlink	4	3
Excite@home	30	17
mindspring	6	4
Prodigy	7	5
weighted average	***20***	***15***

	capitalization/sales	
Portals	1999E	2000E
Infoseek	13	9
Lycos	22	14
Yahoo	90	63
	78	***55***

	capitalization/sales	
Services	1999E	2000E
Media metrix	60	33
Exodus	29	13
CMGI	34	22
	32	***19***

Table 11. Valuation of Terra performed by a Spanish bank in September 1999

	Capitalization/ Sales	Sales growth	Remark	Value (million euros)
Access (ISP)				
Market	15	51%		
Terra	**8**	66%	8 x sales in 2002	**1,784**
Portal				
Market	55	51%		
Terra	**10**	57%	10 x sales in 2004	**2,367**
Corporate services in Brazil and Mexico				
Market	19	83%		
Terra	**4**	26%		**81**
E-commerce			Does not contribute to sales	**0**
Value of Terra shares (million euros)				**4,232**
Value of each share (euros)				**19.8**

8. How Should Terra-Lycos be Valued?

What most analysts say about it being very difficult to make cash flow projections for Terra-Lycos is true (although they do make projections for sales, earnings and EBITDA, which we have seen in Table 1).

We do not know what Terra-Lycos's growth will be like or what real options it may have. However, one analysis that we can carry out is to assume a future year in which Terra-Lycos is a consolidated company, that is, a year after which Terra-Lycos has moderate growth. If this year is 2010, Terra's capitalization at that time should be today's capitalization (2000) appreciated at the required return. This calculation is shown in Table 12[10]. If the required return is 13%, a price per share today of 50 euros (capitalization 31.063 billion euros) assumes a capitalization of 105.446 billion by 2010, provided that no dividends are paid or capital increases are made until then. This capitalization is greater than that of Telefónica (biggest Spanish firm) in 2000 and is approximately the sum of the capitalization of BSCH and BBVA (the two biggest Spanish banks). If it seems reasonable to the reader that Terra-Lycos should have such a high capitalization in 10 years' time, then the price of 50 euros per share is also reasonable. However, if it seems too high to him, then he will value the share at less than 50 euros. Using the same reasoning with 10 euros per share, Terra-Lycos's capitalization in 2010 should be equal to that of Endesa (biggest Spanish electric utility) today, or three times that of Unión Fenosa, Gas Natural or Banco Popular.

[10] This methodology is an alternative to that proposed by Copeland, T. E., T. Koller, and J. Murrin (2000) in chapter 15 of the book *(Valuation)* entitled Valuing Dot.coms.

Table 12. Terra-Lycos. Implicit capitalization in November 2010 (assuming a required return of 13%) and equity cash flow in 2010 required to justify this capitalization (assuming a required return of 10%)

Price per share (euros) Nov-2000	Capitalization (million euros) Nov-2000	Capitalization (million euros) Nov-2010	Equity cash flow 2010 (million euros)			
			g=3%	g=4%	g=5%	g=6%
10	6,213	21,089	1,433	1,217	1,004	796
20	12,425	42,179	2,867	2,433	2,009	1,592
30	18,638	63,268	4,300	3,650	3,013	2,387
40	24,851	84,357	5,733	4,867	4,017	3,183
50	31,063	105,446	7,166	6,083	5,021	3,979
60	37,276	126,536	8,600	7,300	6,026	4,775
70	43,489	147,625	10,033	8,517	7,030	5,571
80	49,701	168,714	11,466	9,734	8,034	6,367
90	55,914	189,803	12,899	10,950	9,038	7,162
100	62,127	210,893	14,333	12,167	10,043	7,958
110	68,339	231,982	15,766	13,384	11,047	8,754
120	74,552	253,071	17,199	14,600	12,051	9,550
130	80,764	274,160	18,632	15,817	13,055	10,346
140	86,977	295,250	20,066	17,034	14,060	11,141

Another way would be to compare the cash flows required to justify the capitalization in 2010. A price per share in 2000 of 50 euros assumes an equity cash flow in 2010 (if the required return then is 10%) of 6.083 billion euros, growing at an annual rate of 4%. In 1999, Telefónica's earnings were 1.805 billion euros, those of Endesa 1.278 billion, and those of Repsol 1.011 billion. General Electric's earnings were 12 billion dollars and 5 billion dollars were paid in dividends.

With these comparisons, unless one has exceptional expectations for Terra-Lycos, it is difficult to justify a price per share greater than 10 euros.

The formulas used in table 12 are:

1. Capitalization2000 = Price per share2000 x Number of shares outstanding2000

2. Capitalization2010 = Capitalization2000 (1.13)10

3. Capitalization2010 = Equity cash flow2010 x (1+g) / (0.10 – g)

Table 13 contains data on the world's largest companies to compare with Table 12.

Table 13. The world's 20 largest companies in terms of market capitalization in November 2000 (billion dollars)

	Capitalization	Net income	PER	Dividend
General Electric (GE)	560.5	12.2	45.8	5.5
Cisco Systems (CSCO)	360.5	2.7	135.1	0.0
Exxon Mobil (XOM)	326.6	11.8	27.7	6.1
Microsoft (MSFT)	298.6	9.4	31.7	0.0
Pfizer (PFE)	278.6	4.0	69.9	2.3
Intel (INTC)	237.5	9.4	25.3	0.5
Citigroup (C)	222.6	11.7	19.1	2.5
American Int'l. Group (AIG)	217.8	5.3	40.9	0.7
Wal-Mart (WMT)	202.4	6.1	33.0	1.1
IBM (IBM)	197.2	7.3	27.0	0.9

	Capitalization	Net income	PER	Dividend
EMC (EMC)	194.3	1.3	153.9	0.0
Merck (MRK)	176.0	6.3	27.8	3.1
Oracle (ORCL)	175.6	6.6	26.8	0.0
SBC Comm. (SBC)	166.5	7.9	21.0	3.4
Sun Microsystems (SUNW)	164.0	1.9	88.4	0.0
Coca-Cola (KO)	145.1	1.9	90.2	1.7
Johnson & Johnson (JNJ)	133.5	4.5	29.6	1.8
America Online (AOL)	126.7	1.2	101.5	0.0
Verizon (VZ)	126.2	7.5	16.8	4.2
Bristol-Myers Squibb (BMY)	114.7	4.5	25.7	1.9

To conclude, some morals.

- If you can't find a rational explanation for a share to continue rising, you can be sure that it will fall.
- To become a millionaire, you must sell your shares at the right time.
- A website is not necessarily a business.
- Selling below cost gets you lots of customers, but not much money.
- Making a market is harder than it looks.
- If it doesn't make cents, it doesn't make sense
- In every mania, the small investor is the one left holding the bag

Annex I

Letter received from a reader of an article on the valuation of Internet companies (July 2000):

Dear Mr. Fernández:

After reading your article published today, I felt compelled to convey to you my personal experience in this area.

In the last twelve months, I been involved as potential investor in two different Internet portal projects, one of them promoted by former senior consultants [of a consulting firm of acknowledged repute]. In neither case was any serious attempt made to quantify the potential market or establish any hypothesis regarding the expected market share. There was not even a single consideration about possible competitors, although knowing in both cases that they existed. If the market that each portal was targeting was infinite and, on top of this, each portal was definitely going to capture this infinite market, one can readily imagine the size of the results that they were expected to achieve: INFINITE.

To tell the truth, what saddened me most was to hear the former consultant of the consulting firm of acknowledged repute say that the traditional methods of company valuation were not applicable to this industry (I was clearly out of date with such infiniteness). He also said that - this he said "iocandi causa" - the greater the losses, the more potential the company had for increasing its value, clearly referring to Terra. And I say it saddened me for the following reason. I am an MBA and I specialized in Financial Corporate Management at an American university. How was it possible that after studying Bodie, Kane, Marcus, Brealey, Myers, Copeland, (and I'll stop the list here) I could be listening to such nonsense? And how was it possible that someone who, until very recently, was advising top-notch companies and earning a fortune for doing so was saying this nonsense? And what was worse yet, how could the audience (consisting of 12 top-level executives) not raise any objection, any quibble, to what was clearly at odds with the most elemental common sense? Deep down, I believe that the other potential investors saw the same weaknesses as I did but their expectations were not centered on the growth of the business itself but on the capital gains they could realize within a year by selling.

In short, it was obvious that greed was silencing the warning voice of common sense. Like a kind of Californian gold rush, the profits were perceived to be substantial, quick, and sure. At the cost of passing on the future risks to secondary investors, who are always willing to invest their savings in unique opportunities, following the recommendations of "their advisors" (the branch manager of the bank underwriting the issue, the dealer at the brokerage firm who receives a commission for placing the shares). And this brings me back to the initial question: Are family savings infinitely available? Of course, for the purpose in hand, this is not really the important point. Because what really matter are not the savings' infiniteness but their availability during the required time horizon, after which it doesn't matter if the sky comes crashing down on our heads!

PS. In the end, I decided not to invest in either of the two portals. Six months later, one of them continues to be inactive and the other one only offers the possibility of searching for domains.

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