

Report *Dynamo* 48

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Fire and Iron III

In our previous Letters, we saw the role played by China's growth dynamic and its unique industrial organization features in the impressive evolution of its steel industry, particularly flat steel. We also examined the impacts of this growth on the global iron ore market, and analyzed the reasons supporting our investments in this sector.

If China's rapid steel production capacity expansion represents an opportunity for raw material suppliers, particularly the iron ore segment, it also epitomizes a grave threat to world steel producers. Hence, the industry response to the signs of times: massive production reallocations, strategic merger and acquisition movements, and major alterations in product mixes. Mittal's recent hostile offer for Arcelor is the most emblematic example of these changes¹. Following the developments of these events is essential to understand the future geography of the sector and, consequently the threats and opportunities for investments in a globalized industry. On the other hand, we also recognize that, by its very nature, there is one segment, the Brazilian long steel industry, which remains relatively protected from outside turmoil, and has been successful in maintaining a more interesting risk/return ratio. Since it is too soon to know the results of these recent strategic moves, the rather more modest aim of this Letter is to finalize this trilogy, by explaining the reasons for our optimism in rela-

tion to the prospects of Brazil's long steel industry.

Flat Steel x Long Steel

To begin, we shall describe the main features of the long steel segment as compared to the flat steel segment. The advantage of a comparative examination is that, in a single exercise, we can show the reasons for our relative optimism. A reminder: in our last Letter, we saw that long steel (rods, bars, sections, wires) are utilized in the construction, agriculture, and infrastructure industries, and flat steel (slabs, sheets) are mainly utilized by the automobile and transformation segments in general.

An innate important difference between long and flat steels begins in the supply and distribution chain: the long steel segment has a highly fragmented range of suppliers of its chief raw material, scrap metal. The Brazilian scrap market is very regionalized because transportation costs are prohibitive for the mostly under-capitalized suppliers. In other words, the scrap dealer (over four thousand in Brazil) has minimal bargaining power in negotiating prices with the steel producer. It is worth remembering that scrap is a reject of steel consumption and, accordingly, the very growth of the industry over time generates as a sub-product an increase in the supply of its main raw material, producing a self-discipline in production costs. As seen in the previous Letter, this differs entirely

Our Performance

During this fourth quarter, Dynamo Cougar yielded 8.46%, an accumulated return of 24.51% in 2005 (both in local currency terms). The Ibovespa rose 5.93% during the quarter and the IBX 7.26%, closing the year at 27.71% and 37.33%, respectively. The Fund's result for 2005 is fully compatible with our investment policy borne out by the comment that we tend to lag behind the principal indices during more bullish market periods. Since its inception in September 1993, Dynamo Cougar has yielded 35.91%^{pa} in US dollars and 31.14%^{pa} over local inflation index - IGP-M. During this same period, Ibovespa appreciated 13.68%^{pa} in US dollars and 9.68%^{pa} in IGP-M terms.

Before commenting on Dynamo Cougar's performance, we shall briefly discuss the recent Stock Exchange performance. Over the last three years, Ibovespa has accumulated a return of 197% in nominal Brazilian reais and 348% in US dollars, and the IBX 218% and 380%, respectively. In theory, a stock market's good performance can be attributed to three factors: i) growth in corporate profits, ii) increased liquidity, and, iii) changes in intertemporal discount patterns.

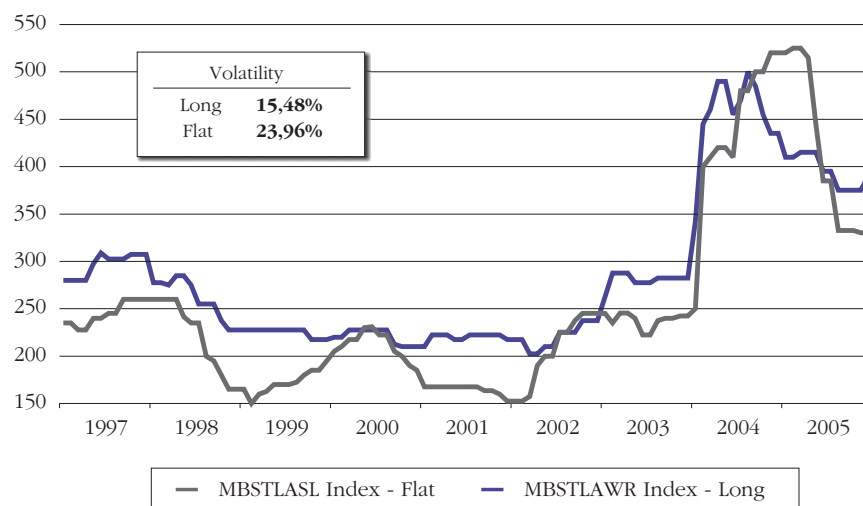
In fact, 2005 was yet another year of global growth and international liquidity, one that brought a

(1) It is about the offer from the world's largest producer to acquire the second largest. Mittal reached this position as the result of seven acquisitions over the last five years, and Arcelor is the successor of the 2001 merger of three other major companies in this sector, Usinor, Arbed, and Aceralia.

from flat segment where concentration grants iron ore suppliers a considerable bargaining power in negotiations. The same is true along the customers side. Long steel producers have a wide range of clients (small farmers, construction material stores, innumerable construction companies and contractors, etc.), while flat producers must battle through more complicated negotiations with the automobile and other large transformation industries.

Since their added value is lower and transportation is awkward, long products, such as wires and rods, present a relatively high logistics costs (they are said to 'travel' less) and are less tradable. In other words, the shorter distance between production and consumption is a key competitive advantage for this segment, one of the reasons why local producers are reasonably protected from the threat of overseas invasions. The greater the displacement of demand to outlying areas, such as in the farming sector, for example, the more this advantage increases. Moreover, long steel products involve a greater variety of specifications, thanks to their multiple end uses. This, in association with the disperse nature of their consumption, where the end delivery frequently involves low volumes, significantly increases the

Chart 1 – Long Steel x Flat Steel – Historic International Prices



Source: Bloomberg, Dynamo

complexities of supply chain, whereby distribution logistics represent a major entry barrier in this sector. As a result, the big domestic players, Arcelor and Gerdau, have their own service centers, with customized processing and distribution activities. Similarly, the smaller size and wider dispersion of customers reinforce the low direct import capacity of this sector. In the case of flat segment, where product added value and unit volume of orders are substantially greater, the products become appreciably more tradable and the boundaries more vulnerable².

Another interesting feature of the long steel industry is that expansion capex are smaller, since, as a rule, they are modular and compatible with gradual market growth. Moreover, electric furnace process, used by the minimills for manufacturing long steel, allows for these plants to be switched on and off based on raw materials availability and costs. This results in increased production controls and, thus, in a more disciplined supply. Lastly, the long steel manufacturing process requires fewer technological innovations.

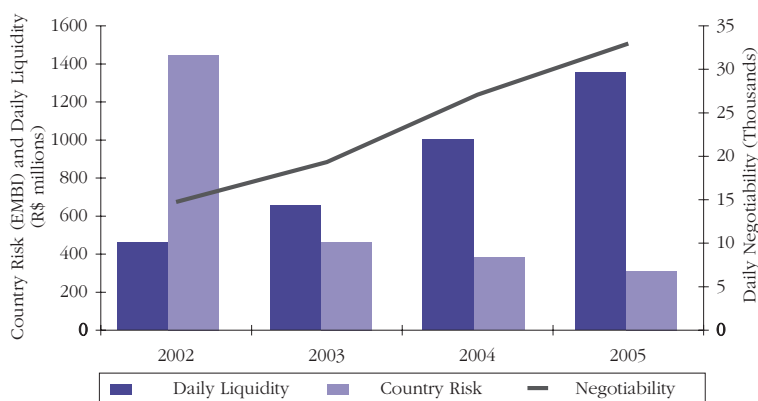
In the case of flat production, where scale is a vital competitive edge factor, investments are high and discreet, with the effect of generating a high idle capacity that, in turn, delays project pay-back and impacts market prices. Furthermore, given the nature of the production process, where cooling blast furnaces represent an exorbitant cost, the supply of flat steel is less flexible. Lastly, customers in this sector are more sophisticated, in addition to being more organized and concentrated, as exemplified by the automobile industry, which requires constant technological leaps chiefly in the development of prod-

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consistent flow of financial resources to emerging economies, Brazil among them. Statistics show that the net entry of funds allocated to emerging econo-

mies soared from US\$4 billion in 2004 to US\$20 billion in 2005. The daily Ibovespa liquidity rate rose by 35%, as shown in the following table:

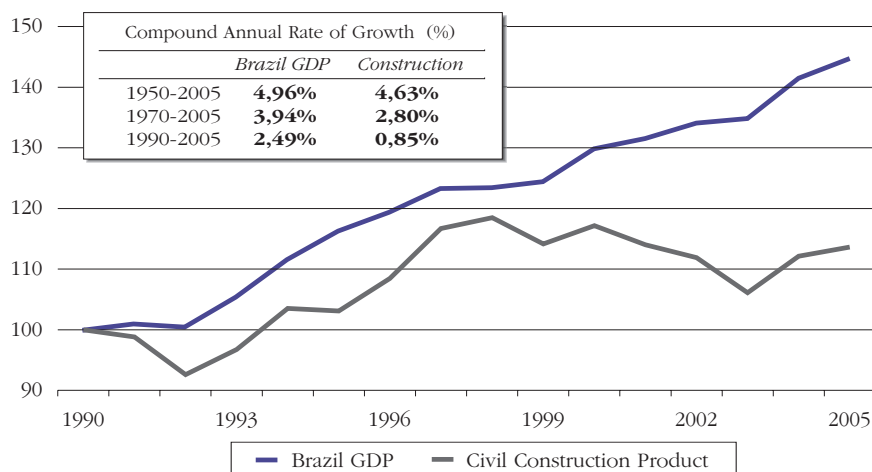
Brazilian Country Risk x Liquidity and Negotiability in Bovespa



Source: Economática, JPMorgan, Dynamo

(2) Over time, imports of flat products in Brazil have become negligible. The reasons are twofold: i) Brazil's cash cost is among the lowest in the world, and ii) even so, local producers charge shadow prices, where they adjust domestic prices to the reality of international prices plus costs to internalize. In other words, despite its competitiveness, in order not to lose volume to imports, the local flat steel industry would rather forfeit profit margins.

Chart 2 – Brazil GDP x Civil Construction Product (1900 base 100)



Source: IBGE, Depec, Dynamo

ucts, but also in improvement of processes³.

This combination of excess capacity and higher tradability has led to more volatile flat steel prices, where the risk to invest in these companies is regarded as greater, as shown in the following table;

Thus, the competitive advantages of long steel producers are based on the structure of their own supply chain, particularly in the control of their sales channel. This leads to a high operational leverage, with lower fixed capital and technology requirements. Domestic long steel producers are better protected from overseas competition, have sustainable medium/long-term competitive advantages, greater pricing power, and have recorded higher returns on invested capital and on equity than their flat steel colleagues. Moreover, long steel industry growth prospects are very encouraging, as we shall see.

Growth

Basically, the demand for long steel is conditional on the performance of the construction and infrastructure segments. Historically, performance of both areas in Brazil has been mediocre, as shown in the chart above.

Over the last ten years alone, Brazil's housing deficit increased by 1.7 million units, representing 16.5% of total homes. It is a well-known fact that, over the last 25 years, Brazil has made minimal infrastructure investments. There is a pent-up demand in strategic segments, such as housing, sanitation, energy, transportation, and logistics, that certainly will undermine Brazil's future growth ambitions. So true is this, that the most recent Ministry of Planning PPA (Deferred Expenditures Plan) for 2004-2007, projects aggressive targets for these areas, such as recovery of 75% of the federal railway net-

work, increased electric power generation of 14.1 thousand MW (+16%), the construction of 12.4 thousand kilometers of electricity transmission lines (+16%), extension of urban sewage network (+ 7%) and of waste treatment (+ 14%), the financing of or support for the construction of a further 1.2 million housing units, creation of a rural infrastructure for over 3.7 million families, 25% increase in the availability of grains, in addition to a number of gas pipeline, railway, waterway, airport, and airfield construction projects.

Despite the fact that Brazil's public resources are insufficient to meet this repressed demand, the high political cost of this continued reduced growth pattern, in addition to the problems caused by recent electric power rationing, should be sufficient motivation for the government to promote public/private enterprise associations or stimulate direct private investments in these strategic sectors. The tax relief package announced in February, to reduce taxes in 41 basic construction-related products, indicates that steps are being taking in this area.

The goals of the EPE (Energy Research Organization), a body from Ministry of Energy responsible for Brazil's electric energy planning, also point in this direction. The recently disclosed Ten-Year

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At the same time, advances on a number of macroeconomic fronts (current account adjustment, solvency indicators improvement, primary budget surpluses, inflation on target) have enabled the Brazil risk to rapidly converge to the average of emerging economies, where the more optimistic are already visualizing the country's near-by investment grade status. Confident at a lower level of equilibrium risk, as shown by the country risks indicators (chart), investors have begun to accept lower discount rates, which tends to increase the present value of assets.

Over the last three years, the growth of operating profits of Bovespa companies was 27.2%^{pa1}, while Ibovespa itself yielded 43.7%^{pa} and the IBX 47,1%^{pa}. In 2005, corporate profits increased by 12.7%, a growth 2.25 times lower than the Ibovespa and three times lower than the IBX, the biggest discrepancy since 1999. Thus, companies results contributed lesser to explain 2005 market's good performance. With substantial liquidity flow increases and important changes in investors intertemporal preference standards,

(3) Mittal itself recognized the threat concealed in the trend to consolidation of the flat steel customer chain, when, in submitting its reasons for acquiring Arcelor, it cited the example of the auto industry that, in 1970, consisted of 57 independent producers, that dropped to thirteen in 2000, and is expected to reduce further to six or eight in 2010.

(4) This is the sum of the EBIT (operating earnings before financial results and taxes) of the 374 companies listed on Bovespa (Econômica data).

"momentum" based allocations (favoring trends and growth) have prevailed, in detriment of the so-called "return to the mean" strategies, more value-driven, oriented by intrinsic value concepts.

Nevertheless, in terms of profits and indices, let us examine the following table:

and size, in 2005 also captured a significant percentage of the upside which could be explained by the companies' operating performance.

Dynamo Cougar achieved a 24.5% return for the year in local currency, 22.1% in real terms (above inflation), a performance we deem satisfactory. The year had two

Participation of the Largest Companies on the Market Indexes in the total EBIT of Bovespa and in the Respectives Indexes

	Ibovespa		IBX	
	% EBIT	% Index	% EBIT	% Index
5 largest companies	74%	34%	86%	53%
2 largest companies	54%	19%	74%	35%

Source: Economática, Dynamo

The increased operating profits of the five biggest Ibovespa companies (equivalent to 34% of the index) represented 74% of the entire operating profits growth of all listed Bovespa companies. The increase in profits of the two biggest companies of this index (participation of 19%) was responsible for 54% of the entire operating profits growth of these companies. In relation to the IBX, the numbers show even greater concentrations: the five main positions (53% of the index) were responsible for 86% of the entire profit growth of the companies. The two leading positions, (Petrobrás and CVRD, 35% of the index), were responsible for 74% of the entire profit growth of the companies in 2005. The difference between the indices is basically due to the improved performance of the banking sector, a growing part of IBX, versus the steel companies and Telemar, at Ibovespa. In other words, Brazilian Stock Exchange indices, that are known to be the most reliable thermometers for measuring increased market liquidity, based on their predominating criteria of negotiability

different phases for the Fund: a poor first semester, when we dropped 8.2%, due to the mediocre performance of some intermediary positions and to the fact that important long steel positions were excessively impacted by a concern with global steel industry adjustments, based on the news of excess of Chinese production. In our second quarter Letter, we noted that we saw no reason for this movement across the board, given the comfortable position of Brazilian long steel producers, which we have now had the opportunity to describe. In that occasion, we took advantage of these circumstances to increase our investments in this sector. In fact, the market rapidly corrected this overshooting, thereby aiding in our recovery during the latter half of the year. During this time, we increased by 32.7%, in line with the satisfactory performance of important Fund positions, such as Itaúsa, Ambev, and Pão de Açúcar, in addition to some intermediary investments such as Localiza, Coelce, Duratex, Unibanco, and ALL.

Electric Energy Plan (2006-2015) projects the total construction of 40.9 thousand MW installed capacity for this period, 29.8 thousand MW in hydroelectric plants alone. To meet the demand in this area, a further 64 thousand kilometers of transmission lines, an investment estimated at approximately R\$27 billion, are required, in addition to a further R\$12 billion in substations and transformers. The Ministry of Transportation is also planning a call for tender for 12.3 thousand kilometers under its highway concession programs, close to 21% of the country's entire paved roads. Thus, Brazil shows a long steel growth scenario fundamentally different from that of the developed world where the infrastructure network is quite matured, the farming sector does not expand, and the housing deficit is close to zero. Accordingly, in contrast to Brazil, this segment has limited attractions in these countries.

Thanks to the consolidation of the country's macroeconomic stability, interest rates are expected to drop, which will significantly impact the financial engineering of these long-term projects. This has already been borne out by a 60% yoy increase in housing loan transactions in 2005, and recent news are that some commercial banks are willing to offer a twenty-year fixed-rate loans for the home building sector. In the last two years, nine home builders, toll roads, and electric energy concessionaires went public in Brazilian stock market. And these companies keep trading in high multiples, rarely found here, showing investor willingness to pay up-front for the future growth in these segments.

Investments

Generally speaking, these are the reasons for our investments in the long steel segment, specifically in Arcelor and Gerdau, that jointly hold 83% of the domestic market. Despite potential competition in some regions, in practice, this is a highly concentrated and stable market where the barriers to entry and to the success of a new large-scale player are substantial. Both companies boast strong trademarks, are leaders in their distribution channels, have preferential supplier access, and are

highly cost competitive. In our opinion, these companies operate at a high discount level in relation to their intrinsic value.

A subsidiary of Arcelor Group, Arcelor Brazil was born in late 2005, with the merger of Belgo Mineira, CST, and Vega do Sul assets. In that year, the company produced around 10.1 million tons of crude steel, equally divided between flat and long products. Each division also contributed with half of the R\$5 billion EBITDA. Arcelor's consolidated EBITDA margin represented 38% and return on equity 28%. In 2005, the three chief markets for long products (construction, infrastructure, and farming) did not perform well, resulting in a 13% drop in domestic market sales volume, causing operating margin in this segment to drop to 35%, comparing to 43% margin presented by flat steel division.

Arcelor is significantly expanding its production in Brazil. This should consume US\$2.8 billion by 2008, when production capacity is expected to reach 16 million tons. These are investments in both long and flat segments, which should maintain their current production ratios. However, since the fixed capital costs of the two sectors are very different (offsetting the difference in the operating margins as pointed out above), the flat division is expected to consume close to 70% of the investments. These are high-return projects with an extraordinarily competitive marginal expansion cost (approximately US\$500/ton), that do not seem to have been adequately priced by the market.

Arcelor is trading at close to R\$27 billion (firm value), in other words, 4.5 times its operational cash generation (EBITDA) for 2008, when the ongoing investment cycle will end. This considers normalized steel prices, 20% below current price levels. One result that we constantly monitor is free cash flow after all annual expenditures, including financial charges, i.e., the volume of funds effectively outstanding to

pay shareholders or creditors. In this case, without factoring in any company re-leverage, we believe that Arcelor should generate R\$4 billion *per annum* by the end of its 2008 investment cycle, whereupon its free cash flow should produce a 15% yield ^{p.a.} This significant discount can be attributed to the fact that Arcelor Brazil's presence in the capital market is very recent. Investors Relations efforts to strengthen the relationship with financial community practically started by December 2005. Before that, the disclosure of the previous listed companies was very poor. In addition to that, many financial institutions involved in Arcelor Brasil restructuring are still restricted, and were not able to initiate official coverage.

The Gerdau Group is the major long steel producer in the Americas (first

duced margins and also returns. Gerdau's return on invested capital was reduced to 22% and return on equity dropped to 40%. Over the next three years, as in Arcelor's case, Gerdau plans to invest in a US\$2 billion expansion, to increase installed capacity by 4.8 million tons *per annum*, 4.3 million in Brazil alone. The same way as Arcelor, we estimate that these projects will contribute favorably to the Group's current high returns.

Gerdau common stock is being traded at 4.8x EV/EBITDA multiple, and its normalized free cash flow is expected to produce a 12% yield for 2006.

Dynamo Cougar x IBX x Ibovespa Performance up to december/2005 (in R\$)

Period	Dynamo Cougar	IBX	Ibovespa
60 months	364,82%	234,70%	118,66%
36 months	198,14%	218,92%	194,87%
24 months	88,00%	77,47%	49,60%
12 months	24,51%	37,26%	27,06%
3 months	8,46%	7,96%	6,13%
NAV/Share on December 30 th , 2005 = R\$ 107,438219			

place in Brazil and second in the US), with an installed capacity of over 18 million metric tons of crude steel *per annum* in its many plants in Brazil, Argentina, Canada, Chile, Colombia, US, Spain, and Uruguay, with a major market share in each one of these countries. In 2005, Brazil produced 6.9 million tons, close to 50% of the Group's total world production. Gerdau experienced a significant drop in domestic market volume (9.6%), partially offset by its increased export volume. Export sales from Brazil and in other countries, represented 74% of the company's total sales.

Gerdau's consolidated EBITDA amounted to R\$4.9 billion in 2005 with a 23% margin, 38% in the Brazilian operation and 16% in the US market. Decreased volumes and increased costs in 2005 re-

Here we highlighted the bases of Arcelor's and Gerdau's long steel business in Brazil and their comfortable competitive situations. As we saw, both companies are excellently positioned to take full advantage of the approaching growth opportunities, and show a satisfactory combination of sound prospects to growth with attractive valuation. In both cases, we see some noteworthy alignment matters to be monitored. Newly arrived in public markets, Arcelor Brazil, has yet to prove itself in

its position as the publicly traded subsidiary of a globalized group, subject to doubts engendered by possible changes in ownership control or in its strategic direction. In Gerdau's case, there is still the need for definitive evidence that its future growth imperative will always remain subordinate to minimum return requirements.

Despite these comments, it is interesting that Brazilian market is paying substantial premiums for less consolidated companies and less protected business, such as those we describe above. This has been challenging our analytical capacity. If we succeed in gathering constructive information contributing to our better understanding of this peculiar phenomenon, we undertake to cover the topic in a future Letter.

By the way:

Benefiting from the delays incurred in the publication of this Letter, we are in a position to comment briefly on the recent episode in which the controlling shareholders (through Grupo Gerdau Empreendimentos Ltda) attempted to charge royalties fees on the Gerdau name, payable at 0.6% of the revenues of some Gerdau S.A. subsidiaries. Given the market's instantaneous negative reaction and the consequent drop in share prices, in an extraordinary board meeting, the company's Board of Directors

took the decision to revoke and annul this decision. It is interesting to note that the Gerdau S.A. majority shareholders also announced their decision to transfer to the company, at no cost, the trademark in question. In the same announcement, Gerdau S. A. recognized the importance of the market's reaction to the event, took the opportunity to "strongly reaffirms its belief that the Company depends on the capital markets as one of its main sources for growth", and further reiterated its "policy to add value to its shares and that of its subsidiaries with the present decision".

As a rule, a company's corporate maturity arises from an evolutionary process where accidental deviations along the pathway are rectified in the very same dynamic interaction among its stakeholders. When the rough edges of different angles of interpretation are smoothed by democratic dialogue, the result tends to be one of improvement in the quality of corporate relations and an institutional strength, where everybody benefits. In this case, backing off is stepping forward.

Rio de Janeiro, May 19th, 2006.

Dynamo Cougar x Ibovespa x FGV-100 (in US\$ dollars)

P Period	DYNAMO COUGAR*			FGV-100**			IBOVESPA***		
	Quarter	Year to Date	Since 01/09/93	Quarter	Year to Date	Since 01/09/93	Quarter	Year to Date	Since 01/09/93
1993	-	38.78	38.78	-	9.07	9.07	-	11.12	11.12
1994	-	245.55	379.54	-	165.25	189.30	-	58.59	76.22
1995	-	-3.62	362.20	-	-35.06	87.87	-	-13.48	52.47
1996	-	53.56	609.75	-	6.62	100.30	-	53.19	133.57
1997	-	-6.20	565.50	-	-4.10	92.00	-	34.40	213.80
1998	-	-19.14	438.13	-	-31.49	31.54	-	-38.4	93.27
1999	-	104.64	1,001.24	-	116.46	184.73	-	69.49	227.58
2000	-	3.02	1,034.53	-	-2.63	177.23	-	-18.08	168.33
2001	-	-6.36	962.40	-	-8.84	152.71	-	-23.98	103.99
1 st Quar/02	13.05	13.05	1,101.05	3.89	3.89	162.55	-2.76	-2.76	98.35
2 nd Quar/02	-19.15	-8.60	871.04	-22.45	-19.43	103.60	-31.62	-33.51	35.63
3 rd Quar/02	-22.31	-28.99	654.37	-31.78	-45.04	38.90	-44.17	-62.88	-24.28
4 th Quar/02	29.76	-7.86	878.90	38.00	-24.15	91.67	45.43	-46.01	10.12
1 st Quar/03	4.47	4.47	922.65	4.63	4.63	100.55	5.39	5.39	16.06
2 nd Quar/03	27.29	32.98	1,201.73	38.16	44.55	177.07	34.33	41.58	55.91
3 rd Quar/03	19.37	58.73	1,453.83	24.72	80.29	245.56	22.34	73.20	90.74
4 th Quar/03	22.18	93.94	1,798.51	35.98	145.16	369.91	39.17	141.04	165.44
1 st Quar/04	4.67	4.67	1,887.16	2.35	2.35	380.16	-1.40	-1.40	161.72
2 nd Quar/04	-4.89	-0.45	1,790.04	-8.66	-6.51	339.30	-11.31	-12.56	132.11
3 rd Quar/04	35.12	34.52	2,453.91	23.73	15.67	443.56	21.13	5.92	181.16
4 th Quar/04	22.17	64.35	3,020.19	25.32	44.96	581.16	21.00	28.16	240.19
1 st Quar/05	-1.69	-1.69	2,967.41	-1.66	-1.66	569.87	1.06	1.06	243.80
2 nd Quar/05	5.41	3.62	3,133.23	2.98	1.27	589.80	7.51	8.65	269.60
3 rd Quar/05	32.32	37.12	4,178.29	25.21	26.80	763.71	31.63	43.01	386.50
4 th Quar/05	2.97	41.19	4,305.49	3.13	30.77	790.73	0.75	44.09	390.17
Patrimônio médio do Fundo Dynamo Cougar nos últimos 36 meses: R\$ 371.477.134.72									

(*) The Dynamo Cougar Fund figures are audited by Price Waterhouse and Coopers and returns net of all costs and fees, except for Adjustment of Performance Fee, if due.

(**) Index that includes 100 companies, but excludes banks and state-owned companies.

(***) Ibovespa average.

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