BAMBURRA
Planejamento e Economia Mineral Ltda.

Caixa Postal: 37005 - 22.622-970
Rio de Janeiro - RJ - Brasil
Fone: (+ 55) (21) 2439-8153 / 2449-1756
Fax: (+55) (21) 2493-2881 / 2439-8168
E-mail: Bamburra@highway.com.br
Web Site: http://www.Bamburra.com

BRAZILIAN *MINEBUSINESS* CLIMATE

A New Cycle of Growth

By Eduardo Vale

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A New Cycle of Growth

By Eduardo Vale*

1. Introduction

At the beginning of this decade, even after the illusion of a fast recycling in the economic systems of Eastern European countries had faded away and the resultant reinforcement of important flows of investments committed to exploration and mining had been directed to Latin America, Brazil was being continuously cast aside from this rush. In terms of South America for example, a good indicator of losing *status* was the opening up of a large number of mining company offices in Santiago.

After 1994, however, the combined introduction of some political, legal and economic changes affected the domestic business climate and a process of rebuilding the relative attractiveness of Brazil to foreign mining company portfolios had emerged.

The objective of this paper is to analyze some of those fundamental changes in the climate of investment and, perhaps even more important to review the profile of the process actually underway, trying to encompass other mineral related opportunities of investment. Despite the conspicuous role reserved to gold and base metals, the portfolio of investment opportunities extrapolates this dual focus and embraces several other mineral products in a multi-billion constellation of hundreds of exploration, exploitation and industrial mineral related projects.

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*Director, **BAMBURRA** - *Planejamento e Economia Mineral Ltda.*
bamburra@highway.com.br

In our perception, in general, the foreign investors community is not adequately informed about the extent, diversity, and cross-section impact of these opportunities. In this paper we try to fill this gap by approaching the mining business climate from a broad and more systematic perspective .

2. Macroeconomics Overview

In this section we present a short overview of some selected macro-economic variables that comprise the business climate of investment in any country. Considering the objectives of this paper and the complexity and interrelationship between the economic aggregates, these comments are limited to identifying and offering a qualitative analysis about the expected behavior of some fundamental aspects of the Brazilian economy, addressing a medium range list of priorities.

2.1 Domestic Economic Environment

Suffering from a secular tradition of high inflation environment, in the last two years the economy has begun operating at levels that can be considered very favorable, with the actual rate already positioned in a one digit class. Besides the sharp drop observed after the implementation of the *Real Plan* there is an unequivocal trend towards lower rates, reflecting the positive consolidation process underway. For 1997, government , academic and business community expectancies are pointing to 7% rate of inflation. Although this indicator is considered high, compared with the accepted standards for developed economies, in terms of the Brazilian experience, it should be qualified as an outstanding progress. Last year, in almost forty years was the first time the observed rate of inflation is below 10%.

In terms of growth the conceptual potential of the country is to resume an average annual rate of 7.5%, in the neighborhood of the historically observed rate. In fact, after a long decade permeated by recession and high annual inflation rates, the Brazilian economy still struggles with some strategic constraints. For 1997, the estimated GDP points to an increase of around 4.0%.

In a medium range frame, the mode of some qualified estimates based on quantitative prospective models as well as qualified expectancies suggests a 5% rate as the most probable attainable one by 2000.

On the employment side, the estimates for 1997 point to an aggregate rate of unemployment oscillating between 5% and 6%. The modest GDP's behavior in relation to the country potential and the increase in the ratio of imports to GDP derived from downsizing and/or removing of trade barriers are behind this scene. Currently, the Brazilian economy is undergoing a transitional period and the fluctuation in the industrial unemployment rate is somewhat analogous to that observed in some industrialized countries as a reflex of globalization. In this sense, it has been detected that, in the short to medium term, the reduced number of jobs in the industrial sector is going to be balanced to some degree by an increase in job opportunities offered by the service sector.

2.2 International Front

The solution for the foreign debt crisis in 1993, and the equation of the negotiating process with the international creditors contributed to displace this aggregate from the category of an important constraint to growth. Nonetheless, the upsurge in the stock of the debt - *US$160 billion* - observed thereafter, and the amount and schedule of payments concerning 1997 and 1998, called attention to this variable again. On the other hand, ultimately (1996/95), it was observed an increasing foreign trade deficit account caused by an expressive increase in the rate of growth of imports following the renewed of investments in an economic environment of more freedom. These combined factors adversely affected the expectancies, calling attention to the foreign currencies constraints again.

Concerning foreign trade, the government reacted by implementing some structural[1] measures to reduce or minimize what is called internally as the ***Brazil cost*** - *capital, transports and taxation* - bringing these prices a bit closer to the international averages. Certainly, this policy - *among others* - is going to leverage the export sector competition. On the other hand, it should be considered that the observed expansion in imports was related to a large extent to investments in modernization, expansion and development of new projects that unquestionably are going to positively affect the balance of payments.

In relation to the foreign debt[2] , the Brazilian economy presently embodies a set of circumstances quite different from the recent past, and it is worth mentioning the following:

- the exceptional character of the concentration of these payments (1997/98) in relation to the total consolidated schedule, with the remaining years showing a much more favorable profile;
- the further participation of the private sector, responding to almost 30% of the current total debt, while in the past this percentage was around 10%;
- the ever increasing proportion of capital inflows committed to the long instead to the short term (*hot money)*. In 1997, the government estimates an inflow of directed foreign investments amounting to US$18 billion, which would represent an addition of 60% in relation to last year. If we also take into account the inflow directed to the capital market, we are talking about US$ 25 billion. The magnitude of this amount can be better evaluated if we consider that in December 1995 the net stock of foreign capital was estimated to be approximately US$105 billion.

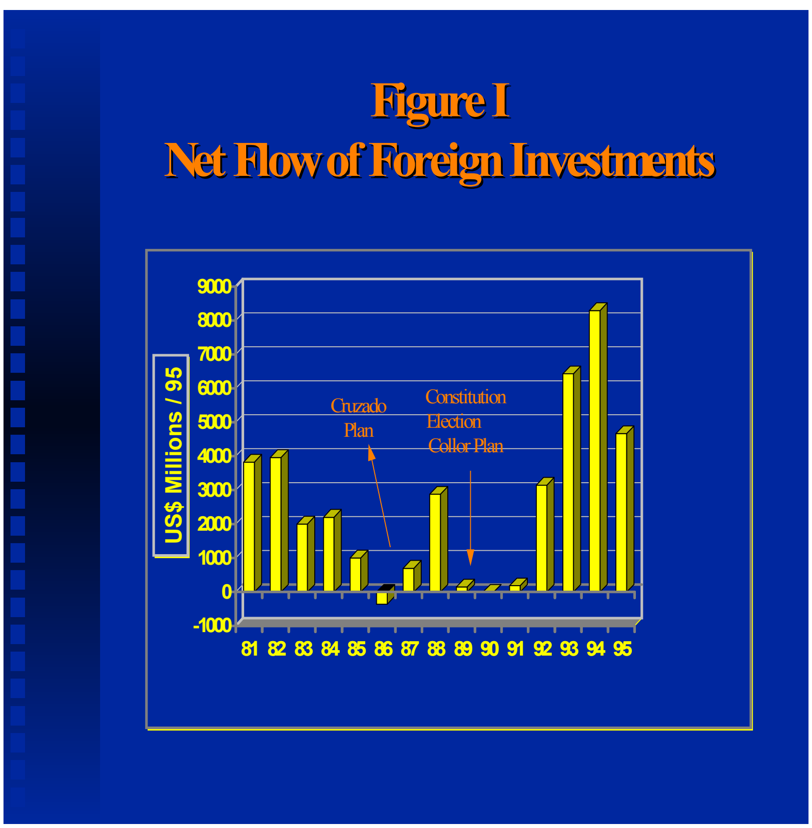


Figure I presents the behavior of this flow during the period 1995/81.

It is opportune to mention that, during 1995, in the total inflow of direct international investments to Latin America, Brazil was only surpassed by Mexico.

On a world scale the participation of Brazil evolved from

1% in 1995 to 2.7% in 1996.
In this sense, with the progress of the privatization program embracing intensive capital sectors like ports, railroad, energy and communication, just in the initial stages, this flow certainly is going to increase. An insight into the dimension of this process can be inferred from the government estimates of a receipt of at least US$ 10 billion in 1997 from the results of the privatization program; and

- the comfortable level of international reserves situated around US$ 60 billion. Following the expected inflow of capital, at the end of 1997, the international reserves would be in the US$ 80 billion order of magnitude.

2.3 Some Challenges

Excluding our comments on the structural social and economic challenges - *health, education, housing* - inherent to all developing countries, we list in sequence three of the most crucial constraints of the Brazilian economy from a macroeconomics point of view:

➲ To return to the historical rate of growth, one decisive vector in a matrix of conditions is to increase the annual gross capital investment figure to at least 25% of the GDP;

➲ To solve the equation on the international front, it is mandatory to increase the competitive position of the exports sector, in order to guarantee the expansion of the imports in demand due to modernization and growth of the economy; and

➲ To advance the economic program, the government must reduce or eliminate the persistent imbalance in the execution of its budget in order to consolidate the control of the inflationary process, to reduce the interest rate, to provide the conditions to finance the social projects required by society and to increase the gross capital investment rate.

The extensive accomplishment of all these objectives is dependent on the approval of some important reforms by Congress. Considering the quite assured climate in favor of presidential reelection and the favorable stance of the current president in this process, we face good prospects to implement the needed reforms.

3. Mineral Sector

3.1 The Current Role of Foreign Capital

Foreign capital has been accountable for a strategic and expressive amount of the mining investments in Brazil. A significant number of mining projects would not have been developed without the technological, financial, managerial and marketing support of foreign investors. Reflecting all this tradition, many foreign mining companies are committed to exploration and/or development of a diversified suite of minerals.

In **Figure II** a profile is shown with the most significant countries in terms of the origin of the capital and interests associated with the Brazilian mineral sector.

Fig. II - COUNTRIES

- ⇨ **Australia, Argentina, Belgium, Canada, China,**
- ⇨ **France, Germany, Holland, Italy, Japan, Norway,**
- ⇨ **Portugal,South Africa, South Korea, Spanish,**
- ⇨ **United Kingdom, United States**

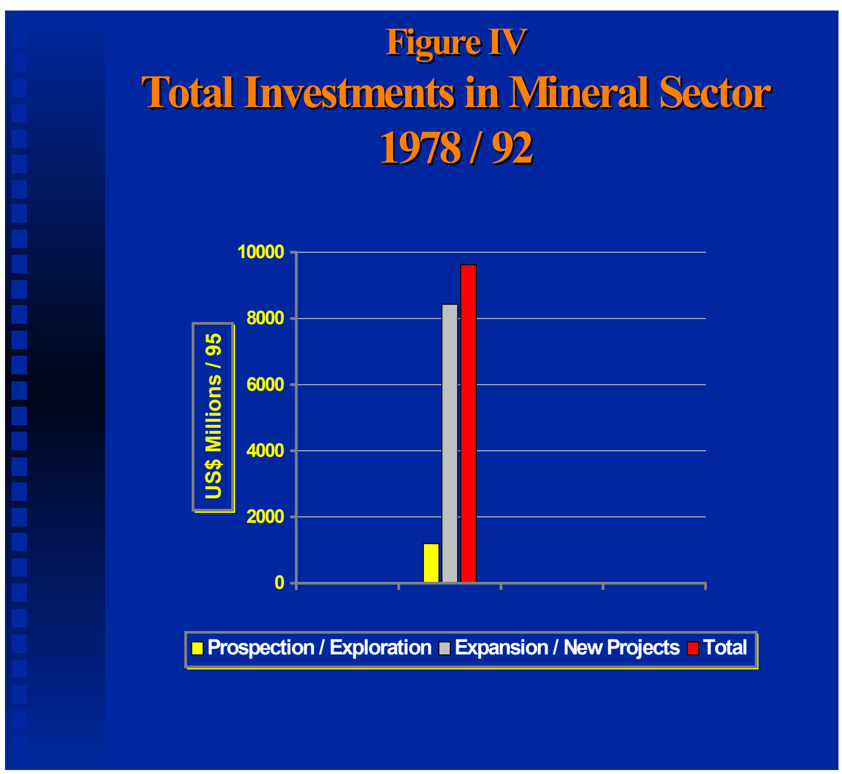
Figure III, shows a sample of the most representative groups in operation - *exploration, development and exploitation* - in the Brazilian mining sector. The directory of foreign companies already established is under a fast mutation been difficult to keep pace with this dynamic, and offer a complete and actual profile. Its estimated that since 1994, about 40 new foreign groups have begun exploration activities in Brazil, especially for gold. On the other hand, if we add the announced projects to the mergers and acquisition movements occurring along the forward linked chain of mineral industries, the task could be cumbersome.

Fig. III - GROUPS / COMPANIES

- AKW, Alcan, Alcoa, Ambrex, Anglo American, Bayer, Barrick, BHP, CEMEX, Echo Bay,
- Eldorado, ECC, Gold Star, Gencor, Inco, Holderbank, Homestake, Itochu, JMC, Jordex,
- Kawasaki, Lafarge, Lysander, Madison, Marubeni, Mitsubishi, Mitsui, Molycorp, Newmont,
- Nippon Steel, Nisho Iwai, Noranda, Norsk Hydro, Nomura, Pegasus, Posco, Placer, Reynolds,
- RTZ, Santa Fe, Southern Copper, Southwestern Gold,Teck,TVX, Utah, WMC, etc.

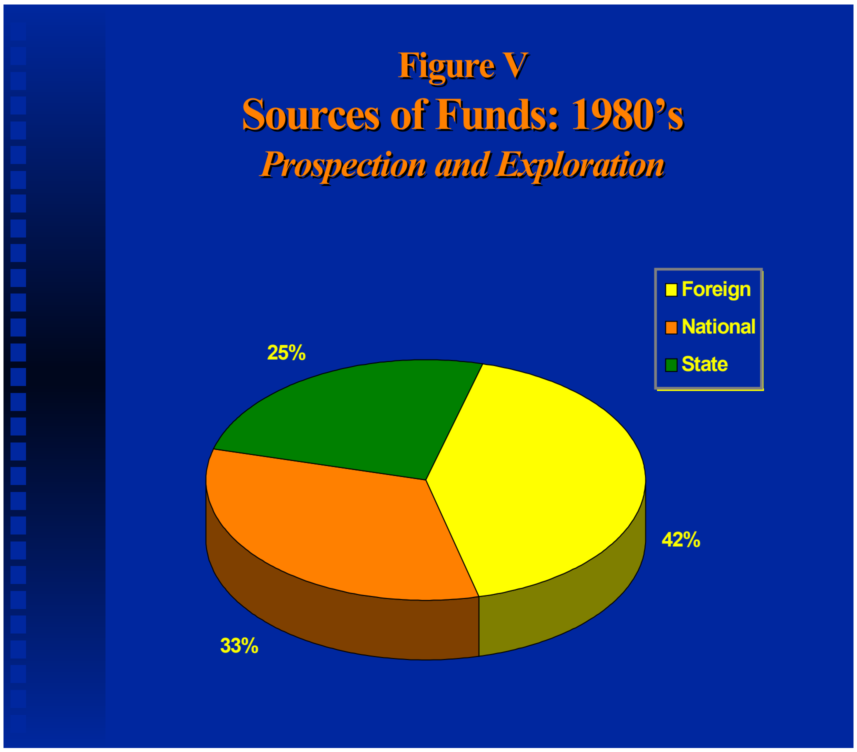
In **Figure IV** a consolidated profile of the total investments in the mining sector can be visualized, relating to a sample of 31 minerals with have an added relative participation of around 80% of the Value of the Mineral Production.

At prices of December/ 95 the total investments amounted to US$ 9.6 billion focusing on prospection and exploration and expansion and new projects.



An important angle to infer the role of foreign investments is derived from its relative importance in funding the prospection and exploration projects.

During the 1980's foreign companies answered for about 42% of these investments. **Figure V** ascertain the relative weight of the state, national and foreign companies in the 1978/92 period.



Despite a recognized tradition in welcoming foreign entrepreneurs, demonstrated by an expressive number of joint ventures operating in the mineral sector, in the 1984/ 1994 period the mining investment climate worsened, in detriment to its positive facets.

A series of political, legal and economical drawbacks and constraints were imposed on the decision process, causing the decline in Brazil's ability to attract mineral investments.

In a brief yet comprehensive review we may cite the following aspects:

- degraded macroeconomics environment characterized fundamentally by a long period of stagnation and high inflation rates, exacerbated by the poor management experience of the Cruzado Plan, the foreign debt crisis and the effects of the Collor Plan;
- on the political front, the adverse signs emanated from the promulgation of the new Constitution in 1988, as well the strongly dualized election process of 1989; and

- from a more directed focus on the mining sector interests, the ever increasing taxation burden and the prohibition of foreign companies controlling mining operations contribute to blocking the flow of investments;

Reflecting the retreat of the foreign capital, its relative participation in prospection and exploration was reduced to 12% in 1993. From an annual average level of around US$ 67 million in the 1989/80 period, the sum invested by foreign mining companies was reduced to less than US$ 8 million in 1993. The reduction in foreign investments was also more intense in absolute terms.

After 1994, however, the adoption of important measures by the government quite completely changed the economic and legal environment, rescuing the Brazilian mining sector to its proper place within the portfolio of the major and junior mining companies.

3.2 The Change in *Minebusiness* Climate

Reinforcing the promising macroeconomics evolution, we must point out some legal and administrative instruments addressing specifically the mining sector that are certainly going to positively impact the investments climate. This is only a sample of the most representative reforms that have been implemented. Facing the time constraint we should not go into detail about them, but only indicate the substance and nature of the implemented changes[3] :

- removal of the constraints to foreign capital actuation on mining, being enough to set up the company in the country ;

- a sensitive reduction in taxation. Although not yet at the ideal level, move unquestionably the country taxation system closer to the competition;

- review and modernization of the Mining Code embracing several instruments focused on implementing faster procedures in the analysis of mining permits and offering more operational flexibility;

- there is a real commitment by the government to face the scarcity of areas for exploration, using as means for better monitoring of the works conducted and by accelerating administrative procedures and opening up of new areas. In this direction we should mention the reintroduction of a fee for exploration permits;

- the administrative reform of DNPM[4] and CPRM[5] in the context of their new responsibilities is another positive aspect worth mentioning;

- the decisive action of the government to guarantee the execution of the victory of CVRD in the legal dispute with the *garimpeiros* that invaded the Serra Leste has given a decisive signal on the strong determination of the authorities to guarantee legal stability;

- parallel to a continuous trade-off between the downward trend of *garimpeiro* production as a result of the depletion of the secondary type of mineralization, the government is reorganizing this segment in small and medium sized mining companies;

- the privatization program in the mining sector, where, as would be expected, the negotiating of CVRD is the *major vein*. Nonetheless, an other important vertent of the program is related to tendering for areas of exploration pertaining not only to federal - CPRM and CVRD - but also to state companies. It is a good reaffirmation of the principle that the production activity is a primary concern of the private sector.

In short, distillating the mineral policy principles that permeate the presently redesigned legal and institutional scope of the mineral industry in Brazil we should call attention to:

➢ the increasing and quite absolute leadership reserved for the private sector in conducting the *minebusiness.* The political and economic spill over effects of the privatization wave were internalized at other levels of the public sector, with the tender and structuring of mining agreements for exploration in areas under state company control;

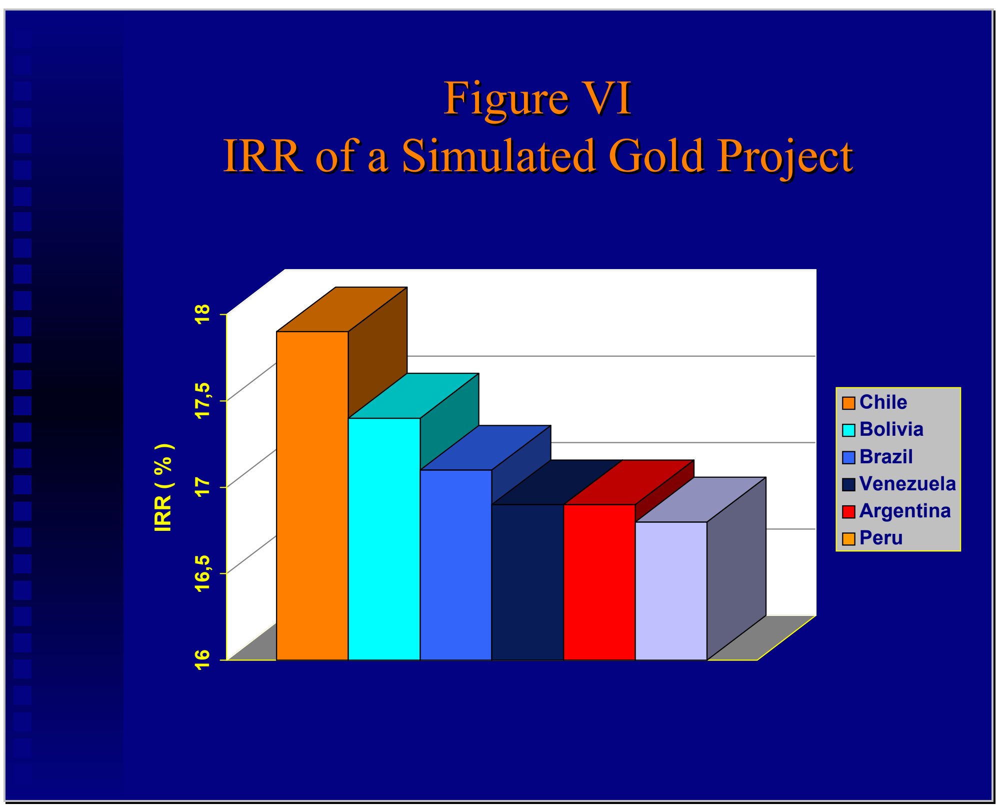
➢ the administrative reform of the principal mining institutions in order to better perform their promotional, regulatory and monitoring functions;

➢ the reform of the mining legislation.The security of tenure is an old and disseminated aspect of the Brazilian Mining Code. With the recent revision, it is now encompassing and reaffirming some additional prominent and modern aspects as such: a uniform treatment to investors, more flexibility about the issue of rights, and clear rules about transferring mining rights; and

- the real commitment of the government to upgrade the competitive position of the economy, eliminating or minimizing the negative influences of the ***Brazil Cost* = taxation + infrastructure + cost of capital + ß**[6] **.**

In fact, the expected generalized reform of the Brazilian taxation system has not yet begun. But the changes already introduced have adjusted the tax burden to an amount closer to that collected in other Latin American countries.

Figure VI represents the expected impact on *Internal Rate of Return* of a simulated gold project submitted to different tax systems[7,8].



In spite of the suggested disadvantage of Brazil's taxation system when compared with other Latin American countries, this is an argument that, to be useful, should be supported by an unbiased and comprehensive evaluation[9]. Brazil has an extensive part of its territory - North, Northeast and Mid-West - covered by a sort of tax incentive that, depending on the nature of the investment, can change the tax burden of a specific project completely.

Consider gold, for example, with more than 80% and 50% of its geological and defined reserves located, respectively, in those regions. Excluding the geological province of the *Quadrilátero*, and concentrating the argument on mega Archean provinces only, this unique environment covers an area of about 623,000 km^2 , representing approximately 7% of Brazilian territory[7]. Two fundamental attributes of these provinces are:

- ***geological*** - occurrence of greenstone belts;
- ***geographical*** - location on the abovementioned regions.

The competitive disadvantages relating to infrastructure are being attacked by a widespread program of privatization and transfer of concessions of public service operations to the private entrepreneur. As a result, a series of new projects embracing energy, communications and transports, represent a multi-billion dollar portfolio of opportunities are under evaluation. In the energy generation sector alone, the list of projects receptive to an engagement of private companies (at least partial) represents a budget of US$ 30 billion, associated with a consolidated new projected capacity of 29,000 MW. At the links with the mineral industry, taking into account their positions as expressive demanders of those services and envisaging significant cost reductions and productivity gains, several mining companies are engaged in setting up joint ventures to dispute these concessions, especially energy, railroads and harbors.

In terms of the cost of capital, besides the reforms directed to grant a balanced budget in the public sector, principal constraint on reducing the internal interest rate, we would like to emphasize a recent instrument created to boost the capital market. To be precise, in recent years, the Brazilian capital market has undergone continuous revision in order to accompany the global financial integration process. These modernization efforts are motivated fundamentally by an increasing importance attributable to the institutional investors as a source of risk capital, by the privatization program, that brought about appreciable dynamics to the market, by the growing importance of the international capital markets in funding some major Brazilian companies and by the ongoing integration of Brazilian stock exchanges with the international capital markets in general. Recently, our capital market offers some of the most interesting returns envisaged on a global scale.

"The announcement of ***Instrução nº* 255** by *Comissão de Valores Imobiliários - CVM* (Brazilian security exchange commission) that regulates the permission to issue and negotiate **Brazilian Depository Receipts - BDR** which are similar to the ADRs of Brazilian companies negotiated in North American markets offers to **foreign investors the perspective to option on funding their Brazilian operations, taking into account the design of structured issues on our stock exchanges.**

From the point of view of the foreign mining companies coming into and/or operating in Brazil, the alternative of funding their projects and prospects, apart from the issues on VSE or TSE (for example) and in the context of *the differing aspects and conveniences concerning* the relationship between the listed *holding* company, on one hand, *and* the capitalization of its *affiliate* operating in Brazil, on the other, *will probably offer another insight of strategic resolution*."[11]

To national investors the possibility of acquiring - *internally* - and including in their portfolios the stock of foreign mining companies will unquestionably **offer a strong *economic and financial leverage* to the Brazilian mineral sector** establishing the conditions to launch the Brazilian mining industry to its proper dimension, certainly more compatible with what would be expected from a country with its vocation.

3.3 Outlook and Trends

Reflecting the evolution in the *minebusiness* environment, investments in **prospection and exploration** during 1996 are estimated to have approached **US$100 million**, with at least 50% of this sum allocated to gold prospects and projects. The eloquence of this number can be better appreciated when we figure out that it represents an expressive reversal on the downward trend of last seven years, being equivalent to the amount invested by Argentina during 1996.

In real terms[12] during *1980/89* the average annual investments in prospection and exploration were about US$ 170 million, but if we compute a longer period - *1992/78* - the annual average falls to US$ 80 million. This strong discontinuity was caused by the sharp drop in investments observed after the promulgation of the new Constitution (1988). It is expected that by 1998, this indicator is going to approach or even transcend the level of the 1980s.

According to government projections[13] , the *cumulative Brazilian demand of capital resources for prospection and exploration*, during the period *1993/2010*, is estimated to be in the neighborhood of *US$ 4.3 billion*, implicitly representing an *annual average need* of around ***US$ 240 million***. In other terms, taking these numbers for granted, the average annual investment should be 200% and 41% higher than the levels observed in the periods 1978/92 and 1980/89, respectively,. At least 25% will probably be spent on gold exploration.

Despite the long term nature of this projection, the author's opinion is that this annual average is feasible to be attainable by 2000, especially if we consider similar estimates for Peru (US$ 220 million), Argentina (US$ 170 million) and Chile (US$ 120 million). The expressiveness of these investments suggests the role reserved to private capital, especially foreign capital, taking into consideration the new priorities on the government investments matrix.

In relation to the **development stage**, *including expansion, new projects, equipment substitution and maintenance* the estimates for the period *1993/2010*, in constant dollars, are pointing to a *need for investments* for around *US$ 33.4 billion*, representing an annual average flow of US$ 1.9 billion, about 230% higher than that observed during 1978/92[14]. The larger shares are associated with: *limestone, coal, potash, iron ore, gold, copper, phosphate, tin, nickel, asbestos, aluminum, niobium, tungsten, zinc, manganese and kaolim*.

It is important to call attention to the results of a recent survey conducted by the government[15] . A portfolio of public and private projects under evaluation and development has been identified comprising a total investment (*including infrastructure*) in excess of *US$ 220 billion for the period 1995/2000*. From

this total, at least US$ 120 billion should come from the private sector, with the ***mineral sector*** (*including industrial-mining related segments*) taking care of something around ***US$ 36 billion***.
In fact, the Brazilian per capita consumption rates of numerous mineral related materials are very low, but with a stabilized economy the effective demand is beginning to emerge. One important segment is cement production, with an expected average annual rate of consumption of 10% for the coming years. This explains the noticeable movement of major groups like Holderbank, Lafarge and CEMEX, in the mergers and acquisition market.This trend can be ascertained in several and varied spectrum of materials and products like glass, steel, gypsum, dimension rocks, base metals, ceramic, jewelry, mineral sands, aggregates and so on.

As would be expected, the upsurge in aggregate consumption followed by the consistent growth path of the industrial sector and the strategic role of the export sector as well are setting forth strong backward linkage effects that are creating several investment opportunities in the *minebusiness* sector as a whole, including not only the mining industry but equipment production, consulting services, suppliers and the like.

4. Conclusions

Over the last three years, we have been observing an ongoing process of upgrading Brazil's attractiveness within the pool of emerging mineral nations. Apart from the well known natural indicators like country and population sizes and geological potential that transcend when inserted in South American context, what really sharpened this perception has been the implementing of a series of political and economical changes that brought about an effective impact on structuring the *Directional Policy Matrix* and expectancies of important mining houses.

Abstracting the usual time lag of the press in taking notice of the concerted moves of the industry, currently we observe an excessive focus on the gold sector. Considering the specific nature of the industry, this biased evaluation can somewhat obscure a comprehensive evaluation of the implemented changes as well as the scope of the business opportunities. In this paper, we have tried to offer a broader perspective of this process, considering it as the beginning of a *new cycle of growth*. In conclusion, some particular aspects of the current Brazilian mining business climate of investments are worth mentioning:

❖ General Aspects

- political stability;
- the level of confidence in the political economy;
- its tradition as a good guest to foreign capital, that transcends the historical Latin American experience;
- the actual and the potential size of the domestic market;
- diversity, level of integration and sophistication of the industrial and technological base;
- speed and scope of the privatization program granting a decisive leap in extension and quality of the infrastructure;
- its competitive advantages as a launch pad to global exports;
- its significance within the Mercosur;
- a competitive taxation system;
- a modern and large financial market;
- a clear and liberal legal frame regulating the different flows of foreign capital;

❖ Sectoral

- extension and diversity of geological environments of interest;
- new mining legislation that is clear and transparent in granting exploration permits and mining concessions;
- exploration permits are granted for an initial maximum three year period, but can be extended if justified;
- it does not have a maximum period for the mining concession;
- good flexibility in transferring exploration and exploitation rights;
- a great number of national mining companies, specialized suppliers and consulting companies composing an expressive network of potential partners, sellers, buyers and customers;
- a modern and seasoned institutional frame of specialized government agencies;
- several regional and sectoral incentives;
- in terms of sovereign risk and land access, the regulation to prospect, explore and mine in Indian lands shall define the conditions.

It is important to mention that we are talking about one million km^2 , permeated by large tracks of impressive metalogenetic provinces.

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13. "Pluriannual Plan for the Development of the Mineral Sector" - DNPM / 1994.
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