Opportunities and Challenges in the Development of Financial Intermediation Mechanisms for Energy Efficiency Projects in Brazil

Report prepared for the World Bank and ABESCO

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Disclaimer

The authors of the present study are affiliated to Rio Bravo Investimentos, a company which administers Fundo Rio Bravo Nordeste I – A Mutual Investment Fund for Emerging Companies. Fundo Rio Bravo Nordeste I is an investor in Ecoluz S.A.

Between June 2002 and September 2004, Maurício Marçal acted full time as Manager of Fundo Rio Bravo Nordeste I. In October 2004, he left the management of the Fund and went to reside temporarily in Tokyo, Japan, from where he participates in the management of the Fund as a consultant.

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The authors have prepared this study as independent consultants, and the points of view herein expressed are independent from Rio Bravo Investimentos as well as Ecoluz. Notwithstanding, the authors consider it relevant to disclose to the addressees of this document that they are affiliated to Rio Bravo Investimentos and to Ecoluz S.A.

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The authors emphasize that, in carrying out this study, they have aimed to be impartial, but they warn that each reader must maintain a critical spirit in relation to the information presented herein.

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Introduction

This report was prepared based on information obtained by means of extensive telephone interviews with the managers of the investment funds and ESCOs listed on the final part of the document. The contributions of the managers were duly registered, but the conclusions presented are of the exclusive responsibility of the authors.

For information concerning the ESCOs, the analysis has been based on the interviews with ESCO managers and the report prepared by Alan Poole, “Results Analysis of the Research on the Energy Services Companies in Brazil”(*“Análise dos Resultados da Pesquisa das Empresas de Serviços de Eficiência Energética no Brazil”),* prepared based on information collected by means of a questionnaire developed in cooperation with ABESCO as well as the authors of the present report and other projects commissioned by the World Bank and ABESCO in a meeting held on November 30, 2004.

The scope of the present project has been to analyze the challenges and options for the development of equity investment channels in Brazilian companies dedicated to energy efficiency, including ESCOs and suppliers of technology.

Summary

The difficulties for the occurrence of a higher level of investments in Brazilian ESCOs are, from the perspective of the current situation of the industry of increasing energy efficiency in Brazil, substantially similar to the ones referred to in the literature concerning the other developing countries (mainly India and China). In order of importance:

- Difficulties in obtaining necessary financial resources at reasonable interest rates and viable levels of guarantees, compatible with the nature of the business;
- The average size of the projects is still too small in relation to the transnational costs involved in the structuring of a project-by-project financing;
- The stage of development of the ESCOs themselves is, in the majority of cases, too early to attract the attention of investment funds.

The peculiar characteristics of the venture capital industry in Brazil, in our view, deserve special attention in the formulation of a strategy for the development of channels for investment in ESCOs in Brazil. We have therefore dedicated a large portion of this report to the discussion concerning the nascent capital risk industry in Brazil, and to the limitations stemming from its current stage of immaturity.

We have found, however, that the managers of venture capital funds in Brazil are alert to the investment opportunities in efficiency companies.

The low level of investments in the efficiency sector can be attributed to several factors, among which we point out the following:

- The stage of development of the Brazilian ESCOs still hinders the attraction of investments, as the companies are generally very small, and their growth has not been accelerated;
- In order to obtain resources via risk capital, the ESCOs will need to surpass the resistance of the venture capital industry to investment in services companies;
- Alternative means of provision of financing at a reasonable cost shall be crucial to the development of the industry of energy efficiency services, as well as to the attraction of equity investments.

The structuring of a means of investment to incentive the sector shall take the following into account:

- Venture capital funds seek to diversify their portfolio by investing in companies with strategies of operation and offers of products and services which are not co-related, in a manner to minimize the funds' indirect exposure to sectors of the economy;
- Despite being attractive from the financial point of view, direct investments in projects (via Sociedades de Propósito Específico – Special Purpose Companies), are not traditionally associated with venture capital activity. In order to surpass this cultural barrier of the industry, a means of investment in projects should not be defined, strictly speaking, as venture capital;

- Ideally, a means of investment in energetic efficiency should be incorporated with enough flexibility to act as an agent of risk capital, but also as a source of credit, structuring hybrid investments, which meet the necessities of the project and are not limited to the rules and habits of the venture capital funds existing in Brazil today;
- Finally, a means of investment in efficiency requires a team with technical as well as financial expertise, to provide steadiness and celerity to the process of project analysis.

The Private Equity and Venture Capital Industry in Brazil

In this section, we aim to succinctly present the venture capital and private equity industry in Brazil. In the first part, we present certain terms which are useful for the comprehension of the functioning of investment funds, which we hope shall be useful to the readers who are not familiar with the industry. In the second part, we have summarized certain important points concerning the functioning of the Venture Capital and Private Equity funds, their operation, investment strategies, etc. The third part of the section is a brief history of the Venture Capital and Private Equity industry in Brazil, and a discussion of the current context.

Terms and Definitions

The terms defined below are commonly used among the managers of investment funds. Notwithstanding their frequent use, the definition of these terms varies even among players in the industry. We have summarized below the basic concepts of each term, setting forth the meaning used in this document.

- Seed Capital – venture capital investments in companies at a conceptual stage or in research and development, frequently even before the invested company generates revenue.
- Closed-end fund – a type of fund wherein there is no liquidity for quotaholders. The retrieval of the quotas follows criteria determined in a regulation, and depends upon the availability of liquidity of the fund. Commonly, the possibility of selling quotas to third parties is also limited by means of the regulation of the fund.
- Brazilian Securities and Exchange Commission (CVM – Comissão de Valores Mobiliários). Federal agency responsible for monitoring and regulating the issuance of fixed and variable income securities in Brazil, including investment funds.
- Dis-investment – in the industry jargon, refers to the sale of the interest of the investor to third parties, be it via IPO, M&A, MBO.
- Emerging Companies – companies in a phase of rapid growth, which may or not generate positive cash flows. As per the definition provided by CVM Rule No 209, they are companies with an annual revenue of up to R$ 100 million. Different investment funds work with definitions for the term that are slightly different, which basically refers to companies with consolidated offers of products and services, and in a phase of accelerated growth.
- Equity – investment by means of interest in the capital stock of the company. In the case of investment funds, generally by means of newly issued shares.
- Stage of Expansion – consolidated companies, which already generate positive cash flow, and in a phase of territorial expansion or expansion of the line of products or services.
- Initial Stage – companies in the first stages of their organization, generally still in the phase of development of products and services, the revenues of which are yet too small or even inexistent.

- Mutual Investment Fund in Emerging Companies – type of investment fund regulated by CVM, by means of CVM Rule No. 209. Such are funds legally incorporated in Brazil, and subject to regulation by the Brazilian Federal Government through CVM.
- Off-shore Fund – funds legally incorporated out of Brazil and which invest in Brazil. In this document, we have included only the investment funds active in Brazil and with local representation.
- IPO – initials in English for Initial Public Offering, operation in which the company, or its partners, sell shares for the first time in the stock exchange.
- M&A – acronym for Mergers and Acquisitions.
- MBO – acronym for Management Buy-Out, operation in which the managers of a company purchase the interest from other shareholders.
- Mezzanine – refers to capital investments in consolidated companies, generally profitable, in the phase preceding the issuance of stock in the stock market. The term mezzanine refers to the intention of the investor that the dis-investment be carried out in a term that is shorter than normal.
- Private Equity ("PE") – capital for investment in companies ranging from companies in the expansion stage until large companies. It includes investments in issues not tradable in the Stock Exchange but issued by publicly traded companies. Generally associated with the investment in medium-sized to large companies, which generate a positive cash flow.
- Special Purpose Companies (Sociedade de Propósito Específico – "SPE"). Legal entity, in the form of a company, incorporated to develop a sole activity, of a restricted scope, generally with a pre-determined term of duration and existence.
- Venture Capital / Venture capital ("VC") – capital for investment in companies ranging from the initial stage until the expansion stage. Generally associated with the investment in companies with a rapid growth potential, but which, generally, still do not generate a positive cash flow.

Mechanics and Logic of the Investment in Venture Capital and Private Equity

Investors in Private Equity and Venture Capital seek to purchase interests in companies which have a potential of appreciation (of the interests) which significantly exceed the returns available through investments in securities of greater liquidity. In order to realize the return on their investments, the investors in VC and PE seek to sell their interests by means of (in order of preference): offer in the stock exchange, sale of the company to strategic investors that pay a premium for the corporate control, or sale of their interest to the other shareholders of the company.

This core strategy of investment funds determines the selection of the invested companies, their stage of development and prospected sectors of the economy, among other items. Some characteristics of investment funds in Private Equity and Venture Capital common to the industry in Brazil and throughout the world are as follows:

- The VC and PE fund in general are incorporated in the form of closed-end funds. The period for subscription of the quotas of the fund is predetermined, so that the entrance of new quotaholders after the initial period of subscription is prohibited, except as set forth in the fund's bylaws.

- The funds have a predetermined duration, with provisions concerning an "investment period" during which investments will be made in new companies for the portfolio of the fund, and a subsequent period, for "dis-investment", when investments in new companies are no longer made (in general the fund can make new contributions to companies already invested in) and during which the fund shall seek to sell its interests in the companies of the portfolio and distribute the dividends to the quotaholders.
- In general, the capital stock of the funds is not paid-up by the quotaholders until the moment immediately preceding the paying-up of each investment of the fund. The total capital stock of the fund is, in this manner, only the committed capital. As a rule, the quotaholders honor such capital calls when they take place. In Brazil, the industry is still recent, and the culture concerning the obligation to pay-up the required capital is still not consolidated, despite the clarity of the legal dispositions on the matter.
- The duration of the funds commonly varies between five and ten years. The periods of investment commonly vary between two and five years, and the periods of dis-investment, as a rule, vary between three and eight years.
- The funds in general have specific mandates over sectors of the economy and/or stage of development of the companies to be invested, and carry out a business prospect within these parameters.
- In general, in Brazil, the investments need to be approved of by an investment committee which represents the main quotaholders. Such process tends to extend the necessary term for the carrying out of the investments.
- In general, the managers of the funds have the liberty to choose the investments that they will present to the investment committee, but the chosen investments must be in accordance with the previously determined parameters set forth by the regulation of each fund.
- Above all, in the Venture Capital sector, the investment strategies prioritize investments in developing companies, and in industries in stages of rapid growth and transformation. Consequently, the managers seek to minimize the risks inherent to the portfolio of the fund by means of the diversification among sectors of the economy, business strategies, geographic distribution, reliance on external and internal markets, among others.
- The VC and PE investment funds, by definition, offer less liquidity to their quotaholders when compared to the investment funds in securities negotiated in the stock market. The managers seek to compensate the smaller liquidity by generating proportionally greater returns, which compensate the lack of liquidity and the greater risks inherent to the portfolio.
- The VC funds, in general, focus their investments in companies with a potential for rapid growth as well as sound profit generation. The PE funds, besides seeking companies with a sound potential for profit generation, may specialize in strategies such as investments in companies with financial difficulties, MBO, mezzanine, etc.

- As a rule, the managers of funds seek companies with sustainable competitive advantages in the medium term, which allow them to consolidate their market position and generate economies of scale. Such competitive advantages are generally associated with intellectual property in the form of patents, industrial and commercial secrets, innovations in processes and trade marks.
- As a result of their pre-determined terms of duration, the funds need to liquidate their investments in five to ten years. As a result, the funds seek to invest in companies which can issue shares in the stock market within this term, or for which there is an M&A market, especially of strategic buyers.

In the case of Brazil, treated in greater detail in the following section, we emphasize some specific characteristics:

- The majority of domestic funds have a strong component of foment. The main investors in VC and PE funds in Brazil are development agencies, both national and foreign, as the National Bank of Economic and Social Development (Banco Nacional de Desenvolvimento Econômico e Social - BNDES), Brazilian Service of Support to Small-Sized Companies (Serviço Brasileiro de Apoio às Micro e Pequenas Empresas - SEBRAE), Inter-American Development Bank (Banco Inter-Americano de Desenvolvimento - BID), National Financer of Studies and Projects (Financiadora Nacional de Estudos e Projetos - FINEP), state and regional development agencies, among others.
- In countries where the PE and VC industry is more traditional and developed, the main investors in PE and VC funds are pension funds. The pension funds have long investment horizons, greater tolerance to risk, and seek greater portfolio returns in order to reach their actuarial targets of return while reducing the contributions in cash of the employer. In Brazil, the investments of pension funds in VC and PE are still negligible, if we exclude the investments in PE funds, which, in the 1990's participated in consortiums to acquire privatized state companies.
- In Brazil, the VC and PE funds are still excessively regulated by CVM. Even the funds held exclusively by institutional investors and high net worth individuals are subject to a rigid criterion of regulation and disclosure of results. Many of the rulings applicable to close-end funds are identical to those applicable to investment funds with daily liquidity invested in securities negotiated in the stock exchange. Such rules seek to protect the small investor and frequently do not make sense in the context of a closed-end fund which invests in securities of closely held companies. Many times, compliance with these rules represents an additional burden to the closed-end managers. The industry and CVM are engaged in a debate which seeks to perfect such rules, but the process is still under way and its result is uncertain.
- The Brazilian capital market is still at an initial stage, and the opportunity of dis-investment by means of IPO, past the euphoric wave around the Internet, once again became restricted to large companies. Therefore, investors in small and medium-sized companies seek always to invest in sectors where there are perspectives for dis-investment via the sale of the company to strategic investors.

History of the Industry in Brazil

The VC and PE market in Brazil has presented a rapid advance in the 1990s, caused by some domestic and international factors. Among these factors, we point out:

- The stabilization of the Brazilian currency in the beginning of the 1990s and the end of hyperinflation, which have enabled investors and companies to make long term plans, in opposition to what took place in the years of high inflation rates and hyperinflation, when the difficulties of corporate planning were augmented by economic shocks and “packages” of measures which altered, overnight, the economic rules of the country;
- The privatizations of state companies, in the federal, state and municipal levels, which attracted the interests of corporate investors, both domestic and international, which mobilized themselves to structure consortiums and investment funds whose goal was to acquire the corporate control of privatized companies.

In the international context, two principal factors contributed towards a great influx of capital for investment in PE and VC in Brazil in the 1990’s:

- The exuberance of the US capital market. In the 1990s, stocks indices in the USA (S&P500, Dow Jones, NASDAQ) frequently reached record highs. Such exuberance was brought about by several macroeconomic factors, the discussion of which is out of the scope of the present report;
- The so-called “speculative bubble” which was formed around companies related to the Internet and Telecommunications, the prices of which aggregated an enormous amount of optimism with respect to their potential for growth and profitability. The “bubble” lasted from the middle of the 1990s until the beginning of the current decade, when the prices of the shares of companies in such sectors decreased abruptly all over the world.

Motivated by the great availability of capital from the US and European markets, managers of large funds began to include Latin America and Brazil in their prospecting efforts.

As a result of the international tendency for investments in technology companies by means of VC and PE, the administration of President Fernando Henrique Cardoso created, by means of BNDESPAR and FINEP, programs to foment the technology industry, and the nascent venture capital industry in Brazil. By means of BNDESPAR and FINEP, the Brazilian federal government began to invest in venture capital funds. Among other requirements of these programs, the companies managing the funds had to obtain, to balance the state investments, matching investments from the private sector or from non-profit entities.

BNDES created the first national venture capital fund in 1996, managed by Banco Garantia (afterwards acquired by Credit Suisse First Boston). The aim of the institution was to foment the venture capital industry, increase the opportunities for obtaining long-term funding by Brazilian companies, and increase the capacity of the bank itself to attend the needs of small-sized companies. In all, since then BNDES has invested a total of R$ 144 million, through 9 venture capital funds. In total, the funds in which the Bank holds quotas manage R$ 247 million. Up to now, the 9 funds have already invested in a total of 62 companies. Among the funds invested by the Bank, 4 focus on companies related to technological infrastructure, and invest within certain states. Three of the funds have a regional focus, without sector restrictions. The two first funds created by the Bank did not have geographic or sector restrictions, but, for strategic reasons, have specialized in companies related to technological infrastructure.

The first board of officers of BNDES appointed by the current administration of the federal government has not shown interest on the increase of the program of investments in venture capital funds. Neither has it opposed the program, being that all the players in the venture capital industry are under the impression that such was “forgotten” within the structure of the Bank, amidst an ambitious operational restructuring through which he institution has been subject. The new board of BNDES, recently appointed, has transmitted to the players of the industry the interest in retaking the program, but concrete measures have not yet been announced.

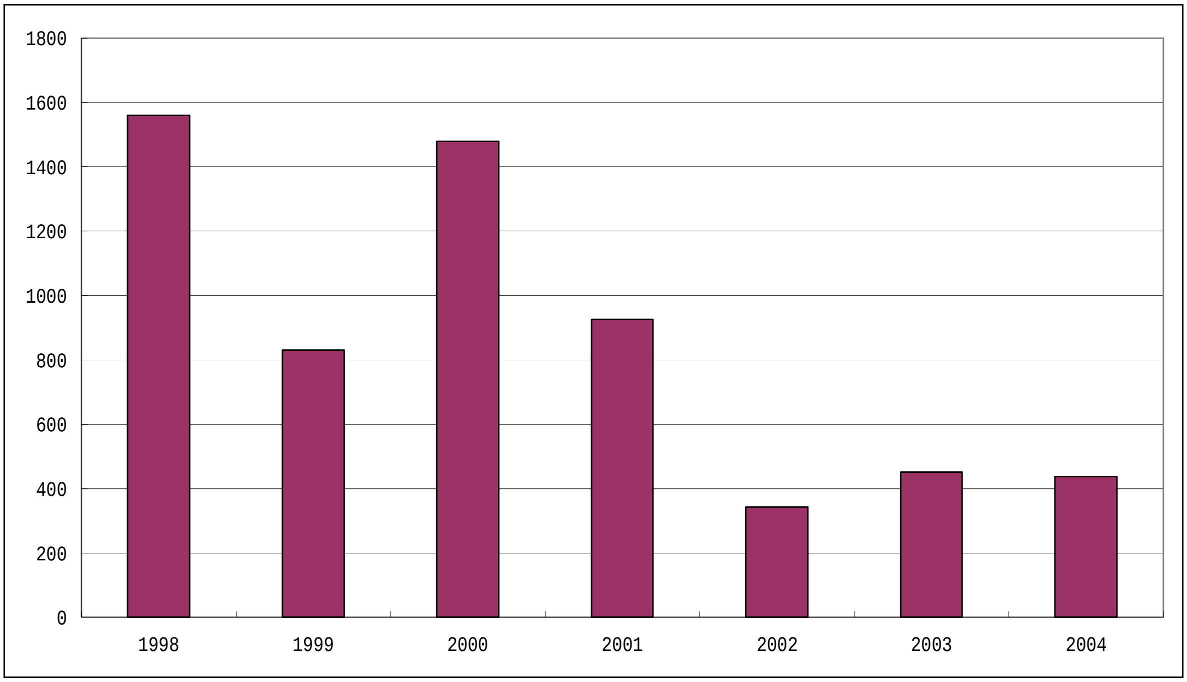
SEBRAE, motivated by the opportunity of bringing about incentives towards the development of the smaller-sized companies, which would be the addressees of the capital contributions of investment funds in developing companies, also began to invest in venture capital at the end of the 1990s by means of the investment in funds, creating a specific program for this purpose.

Currently, SEBRAE considers that its role of fomenting the venture capital industry in Brazil has already been accomplished and now it is the task of the pension funds to assume a leading position in investments. As from the end of the 1990s, SEBRAE invested R$ 50 million in 8 funds, making it the largest non-governmental investor in venture capital in Brazil. The 8 funds invested by SEBRAE have invested in 56 companies, of which 38 are smaller-sized companies, in accordance with the definition of SEBRAE. The decision of SEBRAE of not investing more resources in venture capital funds also stemmed from the fact that the multiplication factor of the investments is modest in comparison with the invested capital, since there are almost 5 million smaller-sized companies in Brazil which SEBRAE would like to attend. SEBRAE intends to continue providing support to venture capital by means of its role as propagator of information.

In financial terms, SEBRAE does not yet have cases of success related to risk capital, because the funds in which it has invested have begun to operate between 2000 and 2002. Some funds are already completely invested, but the majority is not.

Project INOVAR, initiated on May 2000, is managed by FINEP, and invests capital from a consortium of corporate investors which includes the Inter-American Development Bank (Banco Inter-Americano de Desenvolvimento - “BID”), by means of the Multilateral Investment Fund (Fundo Multilateral de Investimento - “FUMIN”), SEBRAE and Petros, the Petrobras pension fund – Petrobras is the state owned petrochemical company. Up to now, Project INOVAR has already invested in 4 venture capital funds (Stratus VC, GP Tecnologia, SPTec and Investech II – see Appendix), having approved investments in six more funds that are in the stage of obtaining matching resources with other investors (Novarum, FundoTech II, CRP Venture, Stratus VC II and III, and Dynamo II). The obtaining of a private matching by these funds has extended itself for much beyond the terms originally estimated by FINEP and by the managers.

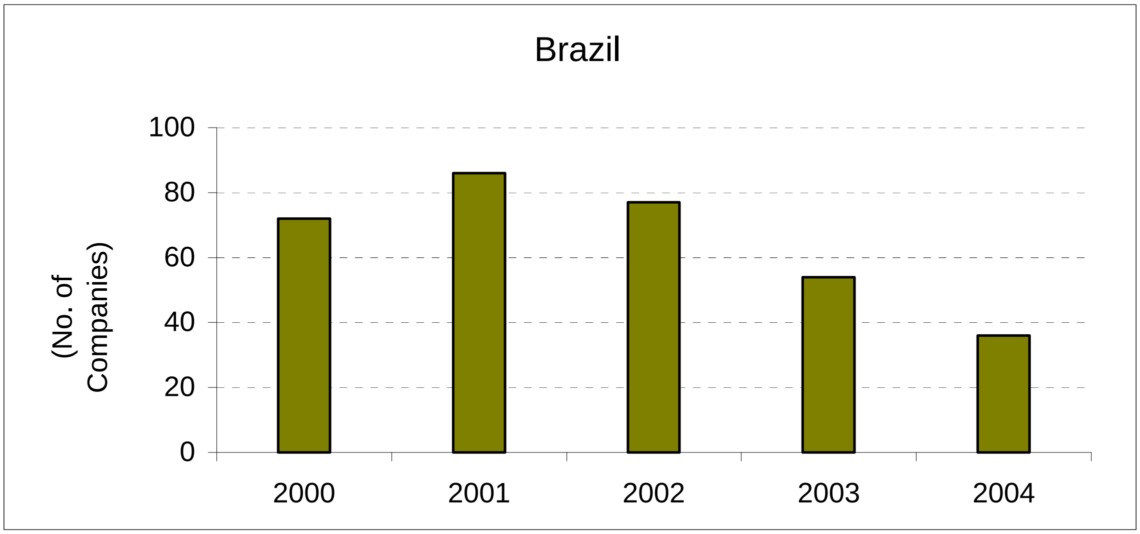
Figure 1: Investments in PE and VC in Brazil – US$ millions



Sources: Brazilian Association of Venture capital (Associação Brasileira de Capital de Risco) for the Years 2000 through 2003, Rio Bravo Investimentos for 2004 (estimate, official data shall be published on April, 2005).

The investments in PE and VC in Brazil had their peak in 1998, totalizing US$ 1.56 billion. In 1999, the investments had a significant decrease, to US$ 830 million, recuperating again in the year 2000, when they reached US$ 1.48 billion. Since then, the trend has been of a decrease, having registered in the following years the levels of US$ 926 million, US$ 342 million, US$ 451 million, respectively. The data for the year 2004 have not yet been compiled officially, but have been estimated at US$ 438 million. Such variation reflects the end of the larger privatizations, around 1998, and the quick existence, in Brazil, of an investment "bubble" in Internet and Telecommunications companies around the years 1999 and 2000. Also is reflected in these numbers is the devaluation of the currency in the first quarter of 1999, when the Real lost 42% of its value in relation to the US Dollar.

Figure 2: Investments in VC and PE in Brazil – Number of Companies



Sources: Brazilian Association of Venture capital (Associação Brasileira de Capital de Risco) for the Years 2000 through 2003, Rio Bravo Investimentos for 2004 (estimate, official data shall be published on April, 2005).

The graph above shows the trend towards the concentration of the number of invested companies. The number of invested companies has decreased more rapidly than the aggregate amount of investments, reflecting the tendency for larger investments, in companies in a more advanced stage of development. Also reflected here is the greater activity of the PE offshore funds, when compared to the VC funds (domestic and offshore), which have decreased the level of investments since the beginning of the current decade.

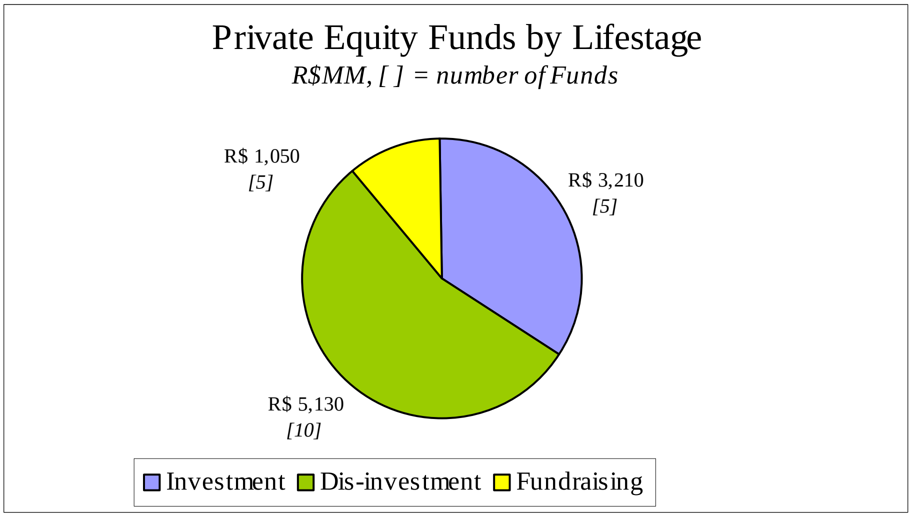
Current Context

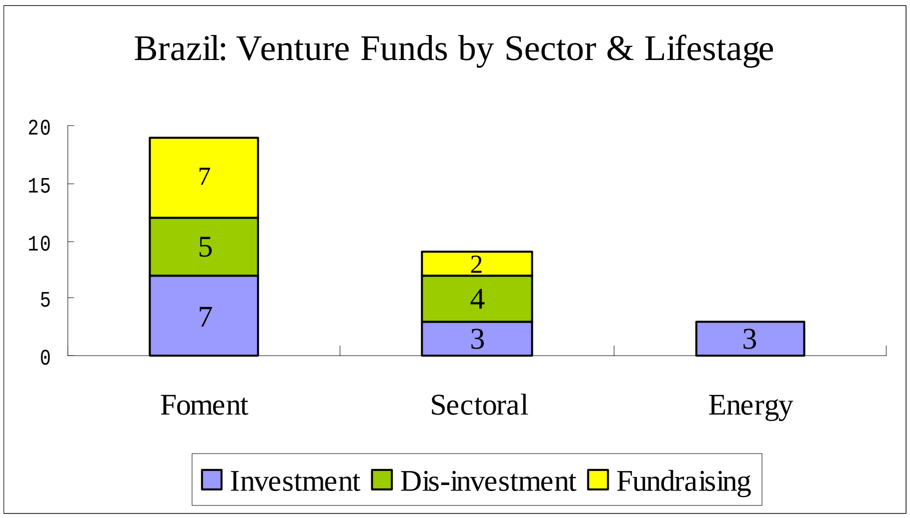
With the change in government in 2003, there has been a change in the focus of operation of the development agencies. These have continued to honor their commitments towards the VC and PE funds assumed in the previous administration, but have not demonstrated interest in carrying out new investments.

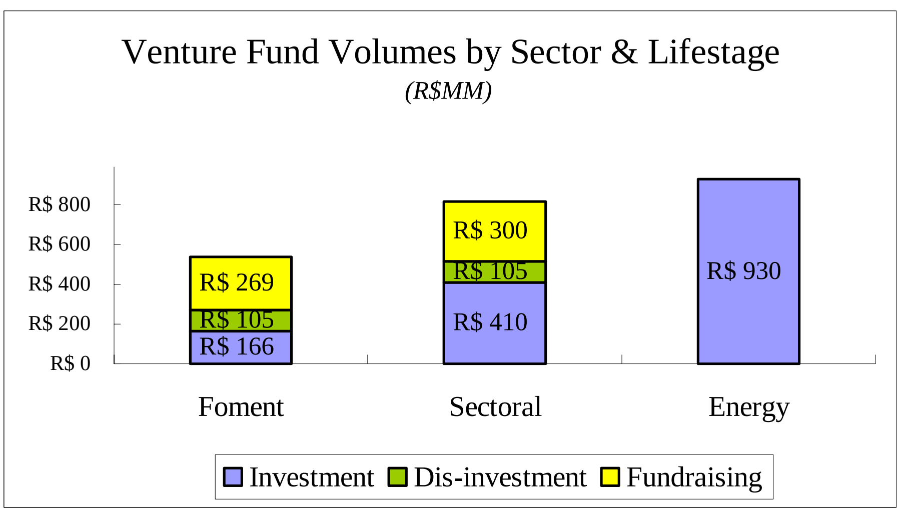
Amongst the domestic VC funds, few are the ones which still have available funds for investment. The majority of such funds initiated operations between 1998 and 2000, and many have already been terminated their investment periods (or shall terminate in the course of 2005). Some domestic VC funds, whose public investments were approved at the very end of the Fernando Henrique Cardoso administration, continue their efforts to obtain the private matching so that they may begin operations.

The environment for obtaining private investments is now more difficult, as a result of the negative impact of the “bubble” over the image of the industry. The judicial disputes between the quotaholders of the Opportunity fund, which invested heavily during the privatizations, have also affected the reputation of the industry as a whole.

Figures 3 to 5: Distribution of the Funds operating in Brazil



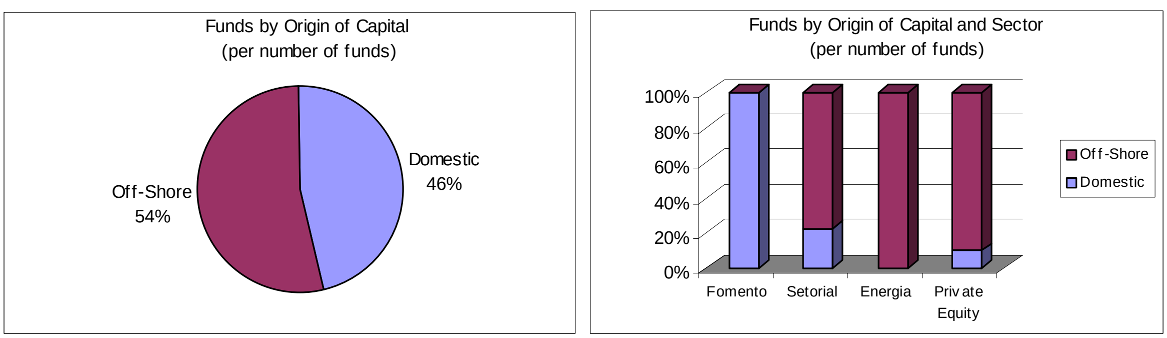




Institutional investors (especially pension funds) and high net worth individual investors are awaiting the returns of this first generation of funds in order to determine whether they will continue to invest by means of this type of vehicle. The appetite of the foment agencies for new investments in funds may increase, despite the philosophical orientation of the new boards appointed by the current government, if the first generation of domestic funds generates satisfactory returns. It will still be necessary to wait some years for these funds to have a history of investment. Today there are isolated cases of successful investments in companies, but with the exception of the first private funds of GP and Opportunity (see Appendix), whose terms of existence have expired and which have brought attractive returns to their investors, **there is yet not a history in the industry that allows for the establishment of an average expectation or a distribution of the returns of these funds. It would be premature to estimate an average return for the industry in Brazil. The managers consulted in this study target inflation adjusted annual returns between 22% and 30%.**

The off-shore PE funds have once again begun to seek Brazil after the fears concerning the economic orientations of the new government diminished and the fear of the potential widespread of the Argentine crisis was over. These funds seek medium to large sized transactions (in the level of US$ 20 million). However, the euphoric spirit of the "bubble" years passed, and we do not see movements of new capital coming from abroad to invest in companies in initial stages.

Figures 6 and 7: Distribution of Funds operating in Brazil by Origin of Investors



Besides the difficulties stemming from the dynamics of the PE and VC industry itself in the last years, the actual interest rate in the Brazilian economy has hindered the growth of the Brazilian industry in general, with a considerable impact on the PE and VC industry. During the 1990s, with the end of inflation, the market players believed that the decrease in the interest rates was just a matter of time. Today, there is a growing perception among the market players that the decrease in the interest rates shall require structural reforms, both in the economy and in the Brazilian society, and the optimism in relation to the speed of implementation of such reforms is not unanimous. **It is important to emphasize that the venture capital funds currently compete in the obtaining of investments with public and private (corporate) securities which offer very high rates of return.**

Perspectives and Opportunities

Despite the difficulties faced currently by the PE and VC industry, the participants believe in its perspectives for the medium and long term. Some factors justify this optimism:

- The Brazilian pension funds still have an insignificant participation in the VC and PE funds, but gradually have shown disposition to analyze this sort of investment. The pension funds have been implementing greater profissionalization in the management of their investment portfolios, which resulted from, among other factors, the privatizations of the last decade. In this environment, it is likely that the interest for assets of VC and PE increases, as a form of diversification of portfolios.
- With respect, specifically, to investments in energy efficiency, via ESCOs or Special Purpose Companies, which may be structures in accordance with the project finance modality, the pension funds have shown themselves interested in investment analysis. It is more likely that the pension funds begin to invest in efficiency projects by means of fixed income securities. We believe, however, that this approach shall generate greater familiarity with the sector and may bring about direct investments (via equity) in the future.
- One difficulty to attract investments from the pension funds for investments in fixed income securities in Special Purpose Companies involved with energy efficiency is the restriction which obliges the pension funds to only invest in papers with credit rating. It is still difficult, in Brazil, to obtain satisfactory ratings for project financing, creating in this manner the necessity for spread in the guarantees provided by the client (if the client of the ESCO possesses the financial situation to provide such guarantee) or by a financial institution (the cost of which is usually high).
- CVM has shown a disposition to reform rulings which regulate the closed-end funds, and has been consulting the market about the proposed changes. CVM has also increased the flexibility of the implementation of rules where these clearly do not make sense when applied to the closed-end funds.
- In 2004, three companies invested by PE funds made their initial offers in the stock market – the airline company Gol, the logistics company América Latina Logística, and the diagnostic medicine chain Diagnósticos da América. All are large companies, which receive investments from PE funds. For 2005, an initial offer is expected from Submarino, an on-line retail store which received venture capital investments for the first time in 1999, still in its early stage. These cases of success shall certainly have a positive impact on the image of VC and PE, and the expectations of the investors, increasing the amount of capital with disposition to invest.

Viability and Forms of Investments in Companies of Energetic Efficiency

Below, we summarize and comment on the main considerations made by the interviewed managers of funds.

Challenges

ESCOs Seen as Companies in the Services' Sector

- In general, fund managers, above all those of venture capital (in opposition to the private equity funds, which invest in medium and large-sized companies), are predisposed against investments in services' companies.
- There is a perception, widespread throughout the industry, that services' companies tend to grow at a slower rate than companies which commercialize products (whether tangible or not).
- There is also a perception that services' companies suffer greater pressure on their profit margins, and that gains of scale are not easily practicable.
- The tax burden over payroll in Brazil is extremely high, causing many small and medium-sized services' companies to operate informally, hiring employees as service providers, which gives rise to significant contingencies. Such contingencies, not rarely, make the investment of venture capital funds untenable.
- The companies which operate strictly in compliance with Brazilian tax law tend to suffer with the competition from companies which operate informally. Without the benefit of economies of scale which compensate for competition from the informal sector, the profit margins of the services' companies tend to suffer severe pressure.
- For these reasons, the majority of the managers have shown themselves to be precautious with respect to direct investments in ESCOs.

Capital Leverage

- The difficulty in raising finance via debt for projects has been and continues to be the greatest impediment for the growth of venture capital investment in ESCOs and energy efficiency projects in Brazil.
- The cost of capital of the venture capital funds is very close to the average return of the efficiency projects. Without leveraging the invested capital via debt, in a manner to reduce the average cost of the capital employed, the equity investors shall continue to be reluctant to enter the sector.
- It is necessary that the investment in the industry does not remove from the ESCOs themselves all the capital return that their businesses will generate. In other words, the ESCOs shall not become consultancies working for the providers of debt and equity. Furthermore, it is important to avoid what currently takes place with the plan for the Brazilian Electrical Energy Agency (Agência Nacional de Energia Elétrica – ANEEL), where the profit margins of the ESCOs remain limited to a "cost plus" over the cost of the project. The ESCOs, in order to grow, need to generate profits which increase their

own capital, so that in the future they do not depend 100% upon the equity of third parties.

Size & Critical Mass

- There is a perception that the number of ESCOs and suppliers for technology of energy efficiency is still restricted in Brazil. ABESCO currently relies upon only 36 members considered active. The perception of the consulted fund managers is that there may be room for 3 to 5 ESCOs ranging from medium to large size in the country.
- The great majority of ESCOs are still too small to receive transfers from venture capital/private equity. The due diligence cost for a PE/VC investment in Brazil today is of around R$ 50,000.00 – included in this estimate only the minimum costs of attorneys and auditors.[1] In order to dilute the due diligence costs, the investment needs to be of at least R$ 1 million – with the exception of the funds which invest in seed capital, the structure of which contemplates investments above R$ 200 thousand. Companies and/or projects which require less than this amount of investment are not viable investments for the portfolios of the majority of the venture capital funds, unless mechanisms are created in the area of a specialized fund in the sector in a manner which reduces transnational costs.
- The managers were unanimous in making an alert against the idea of the creation of a vehicle for venture capital investment, strictly speaking, focused exclusively or mainly on ESCOs and providers of technology for energy efficiency, for believing that this scope would be too restrictive. In a general manner, the managers have shown to be cautious with respect to the potential of several companies with operation strategies receiving investment from one same fund, as this would be contrary to the philosophy of portfolio diversification.
- Without the benefit of having reflected, previously and in detail, on the alternative forms of structuring of investments in ESCOs and alike, the managers emphasized that the traditional strategy for venture capital investment is to try to choose companies positioned to be leaders in their sectors of operation. In this context, none of the fund managers seeks to invest in two or more companies which develop the same activity (for example, two ESCOs).
- Many managers have suggested that the most efficient strategy to promote venture capital investments in ESCOs would be to create mechanisms to stimulate existing or developing venture capital funds to invest in the sector.
- The managers have also suggested that the funds for investment in infra-structure currently being created in Brazil, as well as the funds for investment in energy generation, whether clean energy or not, should be the main target of the ESCOs in search for investment.

[1] In general, the costs of business due diligence are part of the expenses of the funds, and are not allocated to the investment. If the expenses incurred by an investment fund in connection with due diligence were included, this estimate would increase significantly.

Special Purpose Companies

With respect to investments by means of Special Purpose Companies, generally speaking, the reaction of the managers was to emphasize that investments via Special Purpose Companies are not compatible with the philosophy of venture capital investments for the following reasons:

- Structured investments, with predictable and finite cash flows cannot be properly considered equity. Structured investments are more similar to *loans*, despite not having the same guarantees traditionally associated with the debt. The regulations of most venture funds prohibit or discourage this type of investment, if not literally, at least in their intent.
- We note here that the majority of the interviewed manage funds with capital from development agencies, the objectives of which include the development of a culture of corporate shareholding and corporate governance, in opposition to the prevalent culture in Brazil, which is that of the companies financing themselves almost exclusively by means of loans from banks and development agencies .
- Besides emphasizing that the concession of loans is not the mission of venture capital funds, the managers have shown themselves skeptical in relation to the viability of taking part in the corporate governance of the companies benefiting from investments via SPEs, because in investments via Special Purpose Companies, the participation of the investor is not extended to the ESCO itself. As a comment, the authors believe that it is viable to structure investments via Special Purpose Companies which also allow the fund to take part in the corporate governance of the ESCOs. **We note here that the ESCOs consulted for this study have shown a preference for direct investments in projects, instead of corporate interest in the companies themselves.**
- The managers seek investments in which the objectives of the investor are most compatible with the objectives of the entrepreneurs. In the selection of potential investments, the profile of the entrepreneurs plays a vital role. **The view of the fund managers is that they invest in people, not necessarily in technologies, products or business models. Investors always seek companies in which entrepreneurs have integral and exclusive dedication.**
- In concrete terms, the funds avoid making investments where there is segregation of the financial results. In this sense, the investment via Special Purpose Companies is in principle troublesome for the majority of managers, once the financial return of the fund would be linked to a single project only, whilst the potential gains of entrepreneurs would be diversified in a greater number of opportunities.
- We believe that it is possible to structure investments via Special Purpose Companies which allow funds to take part in eventual extra-project gains of the ESCOs, and which simultaneously guarantee to the investor an alternative for liquidity at a minimum return, allowing the companies access to capital with characteristics of equity. Such structures, however, tend to involve more complexity, and, in reality, their legal robustness have still not been tested in the Brazilian courts – a motive which leads many managers to avoid them. In addition, more complex structures imply greater transactional costs. For smaller businesses, of the average size of ESCOs in Brazil, more complex structures may not be viable.

- An alternative for financing/capitalization could be offered to the companies of the sector within certain previously determined parameters. It would be important to structure a vehicle capable of offering an attractive structure to the ESCOs, allowing for certain flexibility for the adaptation of the format of the investments to the actual cases, but above all whose investment structure was possible to replicate at a low cost and with speed, to allow celerity to the process of project fundraising.
- Equity investments matched with financing via debt, to be obtained per project – by means of Special Purpose Companies or otherwise – hardly allow enough speed in the decision making process. When an ESCO makes a proposal to a client, time is an essential factor in determining the success of the proposal. If the ESCO is not able to make a firm proposal because it needs to raise capital – a process which lasts, at least, between 4 and 6 months – the probability of success of the proposal decreases substantially.
- Any means of financing to be created, be it via equity or via debt, by means of direct investment in the companies or via Special Purpose Company, must work as a pre-approved line of credit which may be "withdrawn" rapidly by the ESCO – which emphasizes the importance of investment structures with previously established parameters, which is the opposite of the modus operandi of venture capital, strictly speaking.

"Super ESCO" / Company Engaged in Project Cooperation

The consulted managers, in general, agreed that:

- A "Super ESCO" which had at its disposal capital to finance smaller ESCOs projects, as well as a team with enough expertise to analyze both the technical and financial aspects of projects, could be an attractive alternative as an investment vehicle for the sector.
- A Super ESCO would need, however, to solve two potential conflicts of interest:
    - Firstly, the Super ESCO should not be able to compete with the ESCOs it finances.
    - Secondly, a Super ESCO should be independent, in its corporate governance, from equipment and technology suppliers, from public utilities, and other agents of the sector, as a form of avoiding preference to be given to certain types of projects – even for reason of affinity of expertise with certain types of projects.
- An investment vehicle targeting Special Purpose Companies could not be strictly classified as venture capital. Notwithstanding, the strategy seemed viable to all investors, without prejudice to the fact that the expectations of the quotaholders of a vehicle of this type shall be in line with the investment strategy of such fund.

Opportunities

- Notwithstanding the small number of funds operating in Brazil that include the energy sector as their main focus of investments, there is amongst the contacted fund managers a consciousness of the great potential market for the services of efficiency, including electricity, natural gas and optimization of water use.

- With respect, specifically, to investments in energy efficiency Special Purpose Companies, which may be structures in accordance with the project finance modality, pension funds have shown interest analyzing investment opportunities. It is more likely that the pension funds begin to invest in efficiency projects by means of fixed income securities. We believe, however, that this approach shall generate greater familiarity with the sector and may bring about direct investments (via equity) in the future.
- The managers have shown knowledge concerning the growth projections for the demand of energy supply (above all electric) in Brazil, and the potential crisis of supply which approaches. In this context, many of the managers have already considered investment opportunities in energy generation, in partnerships with other groups.
- The interviewed managers have shown interest in the analysis of investment opportunities in the sector of energy efficiency. Some have expressed that they have restricted themselves to companies which supply products and technology, but others have shown themselves receptive in relation to services' companies. All of them have shown optimism in relation to the sector as a whole.
- Many managers understand that there is a window of opportunity for investment in ESCOs because there are no large local ESCOs dominating the market, and the large foreign ESCOs, as well as the companies supplying equipment for efficiency and/or environmental control systems – which certainly have availability of capital to dominate the national market – still do not have a significant presence in Brazil.
- For the foreign companies, acquiring a local ESCO may be a strategy for rapid growth in the country. For the Brazilian ESCOs which have been able to grow rapidly, acquiring smaller ESCOs may be a means to diversify expertise or geographic reach.
- The investors in venture capital always seek investments in which there are clear alternatives for dis-investment. Many managers understand that investing in a national ESCO now would be an opportunity for taking advantage of the wave of acquisitions which shall take place in a few years.

Equity Investments in Energy Efficiency and ESCOs in Brazil

The following are the main investments made in ESCOs and technology suppliers for energy efficiency in Brazil until today:

ESCOs

Ecoluz S.A.

Rio Bravo Investimentos invested R$ 3.5 million into Ecoluz, in the form of Redeemable Preferred Shares. The redemption schedule and the rate at which the redeption value increases were agreed upon with the company. The redeemable shares are convertible in any liquidity event (sale of the company, IPO, etc.) occurring prior to the full redemption of the shares.

Rio Bravo invested in Ecoluz because, besides believing in the excellence of the company itself, it has also believed in its own ability to raise financing via debt to invest in projects, at a reasonable cost. Other areas of operation of Rio Bravo Investimentos work with issuance of asset-backed securities (real estate, and agricultural and credit rights in general), which provides Rio Bravo with the expertise to issue securities backed by the cash flows of efficiency projects.

Aditionally, the fund has BNDES as a quotaholder, which facilitates the analisis of projects presented by Ecoluz to the Bank, since the Bank already has access to all information concerning the company by means of its venture capital department. Finally, the fact that Ecoluz is headquartered in the Northeast of Brazil implies its access to financing at attractive costs via Banco do Nordeste do Brasil. That bank has an preeminent need for assets, and Rio Bravo has believed in the viability of placing Ecoluz and/or its projects in the credit portfolio of this bank.

Suppliers of Equipment and Technology

Airgate

An invested company of the Eccelera group (see Appendix). The focus of investments of the Eccelera group is in information technology and telecommunications (mainly mobile) companies. Airgate provides tools for the wireless and web management of electric energy generators and distribution networks. The investment of Eccelera in Airgate stemmed from the character mobile telecommunications of the technology developed by the company. One of the managers of the Eccelera group has a vast experience in the energy sector, and has been working with Airgate to develop partnerships with Brazilian ESCOs so that they serve as distribution channels for Airgate technology.

We estimate that Eccelera invested approximately US$ 1.5 million into Airgate, but investment amount and terms were not disclosed.

ESCOs: Desirable Characteristics for Venture capital Investment

In this section we make certain considerations concerning the characteristics of ESCOs and efficiency projects via Special Purpose Companies most important in the attraction of institutional equity investments.

We have noted that despite the low level of response to the joint questionnaire sent by ABESCO to the ESCOs, which hinders the possibility of a more specific examination of the universe of Brazilian ESCOs, the responses have indicated a general feeling in relation to the sector, that is: that the Brazilian ESCOs are still mainly very small companies, most with revenues below R$ 2 million and with a dozen or less employees, and as a result of the difficulty of obtaining financing, are restricted to small-sized projects.

Direct Investments in the Companies

- Ideally, the company must have a size to allow it to absorb an investment of at least R$ 1 million, on average. In very small companies, the partners would have to accept a very severe dilution of their interest, or investment terms by means of preference shares with attractive rights to investors. In Brazil, there is not yet a consolidated culture of investments in venture capital, and many times the entrepreneurs consider the terms of certain rights of preference shares abusive, such as, the anti-dilution clause, redemption clause, preferential dividends, among others.
- The company needs to have a level of governance and financial controls which are satisfactory to meet the funds' due diligence requirements. Small-sized companies, which is the case of the majority of the ESCOs, tend to have lesser financial controls, which hinders and even renders impossible the analysis of the opportunities of investments by the funds.
- The fund managers participate actively in the management of the invested companies. Partners which oppose a contribution by the managers, or by persons appointed by the latter, towards the management of the company, will have difficulty in receiving investments from venture capital funds.
- The partners of the companies must demonstrate the willingness to entertein selling their business entirely within 4 to 5 years, when the period of dis-investment of the fund arrives and the latter seeks to sell its interest to third parties.
- Many funds are limited by regulation to minority stock holding positions in the invested companies, which forces them to make use of aggressive clauses in the structuring of the preferred shares (which in Brazil still meets considerable resistance), or to limit their investments to companies with sizes that justify the minority stake in exchange for investments at the level of R$ 1 to R$ 5 million, which is the standard range for investments of venture capital funds in Brazil.
- As a result of the typical clauses in a venture capital investment being perceived as "aggressive" by most ESCOs, there is a widespread mistrust of venture funds among ESCOs, which translated into lesser interest on the part of ESCOs to pursue direct investments.

- The strategic expertise must be "tied-up" within the company: it is highly desirable that the main members of the technical staff be partners, and, conversely, highly undesirable that key personnel be subcontracted service providers, without formal labor relationships. Not only because of the potential labor and tax contingent liabilities, but also because the competitive advantage of an ESCO lies in the exclusivity of the expertise available to it.

Investments Via Special Purpose Companies

- By the average size of the projects currently, R$ 200 thousand, the costs of structuring a Special Purpose Company would be excessively high for the majority of projects. The R$ 1 million minimum threshold applies to investments in projects as well as in companies directly.
- It is believed that the average size of the projects will significantly increase (the interviewed ESCOs have estimated between 50% and 200% of growth), which would allow the structuring of via Special Purpose Companies for a greater number of projects.

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ESCOs

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