INVESTMENT LETTER

JULY 2024

The last 15 years have been remarkable for the venture capital (VC) industry in Brazil. In 2009, it was common to believe that venture capital would never develop in the region because successful startups were expected to emerge from Silicon Valley and expand globally (like Google and Facebook). It was thought that to invest in startups, one needed to be in Palo Alto, not São Paulo.

In recent years, however, the abundance of capital and high-quality companies in Brazil's venture capital industry has surprised even the most optimistic individuals. Hundreds of billions of dollars have been invested annually, with many exceptional companies transforming our markets and enriching entrepreneurs and investors. Unlike the 2000 bubble, the companies being created now are real, with tangible impacts and profits.

Spectra has closely followed this evolution. In 2013, despite widespread skepticism, we began our investment program in this asset class, believing that local champions would emerge with the support of local funds. Since then, we have invested nearly BRL 1 billion in the region's technology sector through 25 managers, who in turn invested in 445 companies. We are proud to have played a significant role in the evolution of this industry in the region.

During this period, the industry has evolved from a few generalist players in 2013 to over 100 fund managers now specializing in various subsectors. This specialization encompasses everything from the financing stage in which each player invests to the geographical region and the company's sector of activity, among others.

Naturally, with the aggressive growth of recent years, the segment has experienced some “growing pains”.

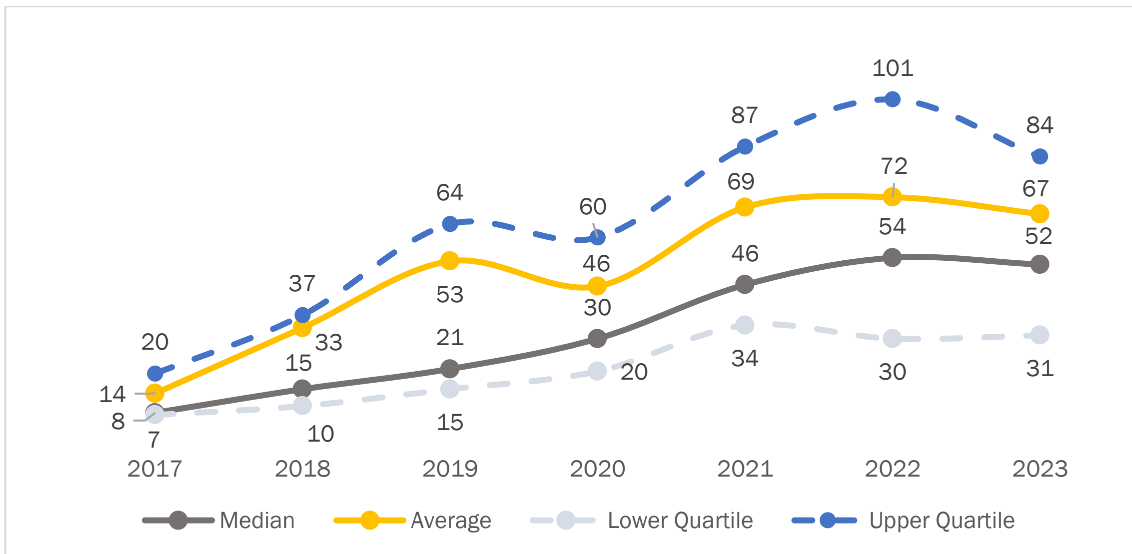
In this article, we address the significant increase in valuations since 2017, reflecting the recent industry expansion. First, we discuss the relative discount compared to other asset classes such as private equity (PE) and public equities. Then, we examine a real case of an investment in a company with a disproportionally high valuation and its implications. We argue that since VC valuation is based on the potential that a company can reach, the higher the payout, the higher the valuation should be. Finally, we discuss the paradigm of tech-enabled companies both in Brazil and internationally, arguing that returns from this approach have been decreasing, which should cause multiples to fall rather than rise. We conclude with our view on how to improve the local VC ecosystem.

VC GRADE INFLATION

VC valuations have been increasingly elevated. To illustrate this, we examined seed round pricing using data collected since 2017. We chose seed rounds because they are more comparable across companies. Since startup revenue at this stage is negligible, it’s simpler to compare absolute values without considering relative metrics like revenue multiples.

In 2017, the average pre-money valuation in Brazil was BRL 14 million (or USD 4.4 million). This figure rose to BRL 67 million in 2023 (or USD 13.4 million), representing a 4.7x increase in BRL.

Figure 1 – Seed Pre-money Valuation in Brazil (BRL million)



Source: Spectra Investments

The extraordinary returns of VC funds during this period are correlated with the price inflation experienced in recent years. Hypothetically, a manager who bought a diversified seed portfolio in 2023 would have paid 4.7x more for the same companies compared to 2017. This 4.7x return in the period is equivalent to an IRR of 29% per year. Interestingly, this hypothetical IRR is not very different from the average IRR observed in the sector for managers operating in this space. In our report on fund performance, the average IRR for funds with vintages between 2014-2017 was 25%, and the top quartile was 33%.

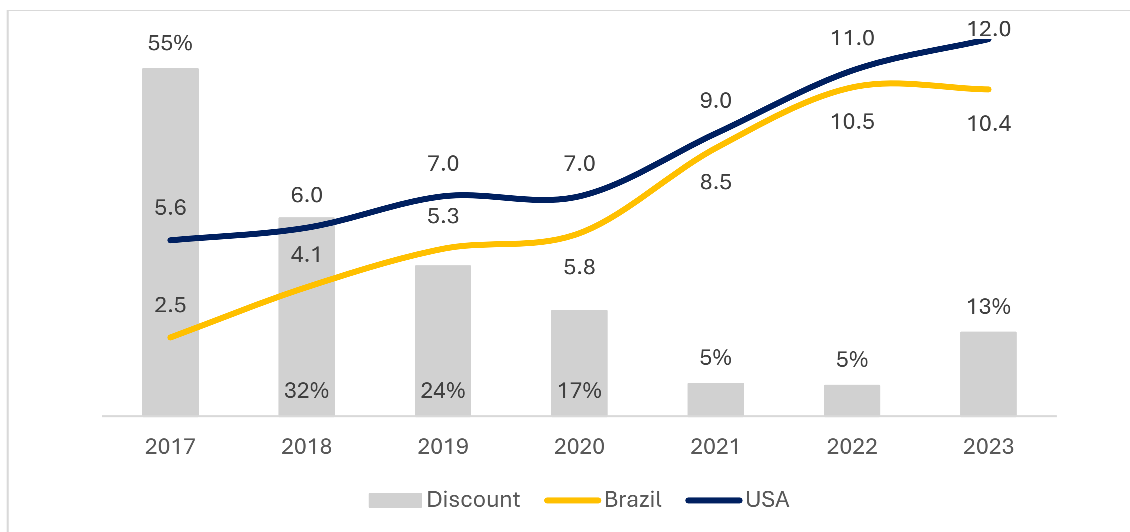
Generalized high returns attract capital to the sector. With more resources available for investments, competition for assets increases. This competition results in price inflation, which in turn leads to high returns for those already invested.

However, for investors entering the market in 2023, prospective future returns tend to be lower, all else being equal. As a hypothetical example of the impact of rising prices: if a local VC manager had achieved a 10x return on their fund raised between 2013-2017, and if that same manager had invested in the same companies with the same outcomes but paid 2023 prices instead of 2017 prices, their fund would have returned only 2.1x.

There is a mantra in the industry that, since returns come from outliers, a price increase is less relevant. This is because paying BRL 10 million or BRL 20 million makes little difference in a company that ends up becoming a decacorn. However, when aggregating all investments made by a fund, paying higher prices has a significant impact on the total expected return.

In addition to valuation inflation, the local VC market has also started aligning its prices with those of American startups. Figure 2 shows the median seed valuation for investees in Brazil and the US. In 2017, Brazilian companies had a 55% discount compared to their American counterparts at the same development stage. The discount dropped to just 5% in 2021 and 2022, rising slightly after the corrections in 2023.

Figure 2 – Median Seed Pre-money Valuation in Brazil and USA (USD mi)



Source: Spectra Investments; Pitchbook

COMPARISON WITH OTHER MARKETS

One way to assess whether the reduction in the discount for Brazilian startups compared to their American counterparts makes sense is by examining the price evolution of related assets, specifically in private and public equity.

PRIVATE EQUITY MARKET

In the second half of 2022, Spectra published an Investment Letter addressing the differences and temporal evolution of the EBITDA multiple for PE investees in Brazil and the United States (Figure 3). In this analysis, we used data from 239 companies invested by PE in Brazil between 2008 and 2017. This cohort is representative of the industry, and the data covers investments from almost all active managers in Brazil during this period, without biases, as we believe.

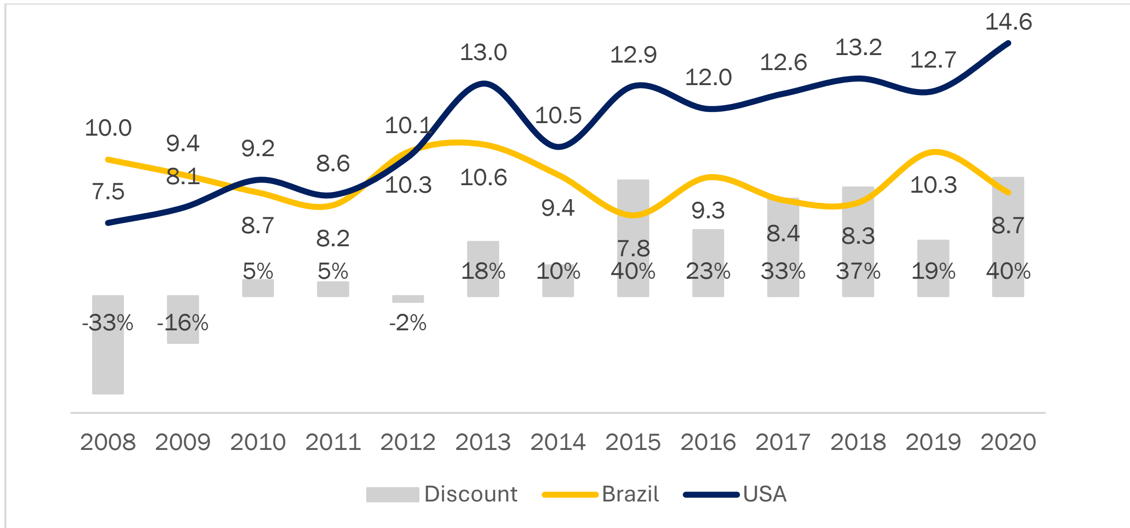
In this letter, we presented some relevant facts. First, PE investees in Brazil showed higher growth, with revenue and EBITDA CAGR of 17.8% and 18.9%, respectively, compared to PE investees in the United States, which had revenue and EBITDA CAGR of 6.6% and 6.7%, according to Cambridge Associates (2019). Second, despite this higher growth, the transaction multiples continued to show a significant discount between Brazil and the United States, averaging 32% between 2015 and 2020, and increasing to 40% in 2020.[1]

The expansion of multiples in the United States is partly explained by the American policy of Quantitative Easing, which artificially reduced interest rates and led to a higher appetite for risk assets. The increase in multiples led to positive returns in the American industry, which in turn led to a significant increase in the resources invested in the sector. In 2012, the total

[1] It would be expected to see an even larger discount if growth rates were similar

AUM of American PE managers was USD 1 trillion, and by 2023 it had increased to USD 3.1 trillion.

Figure 3 – Average EBITDA Multiple in Private Equity Acquisitions

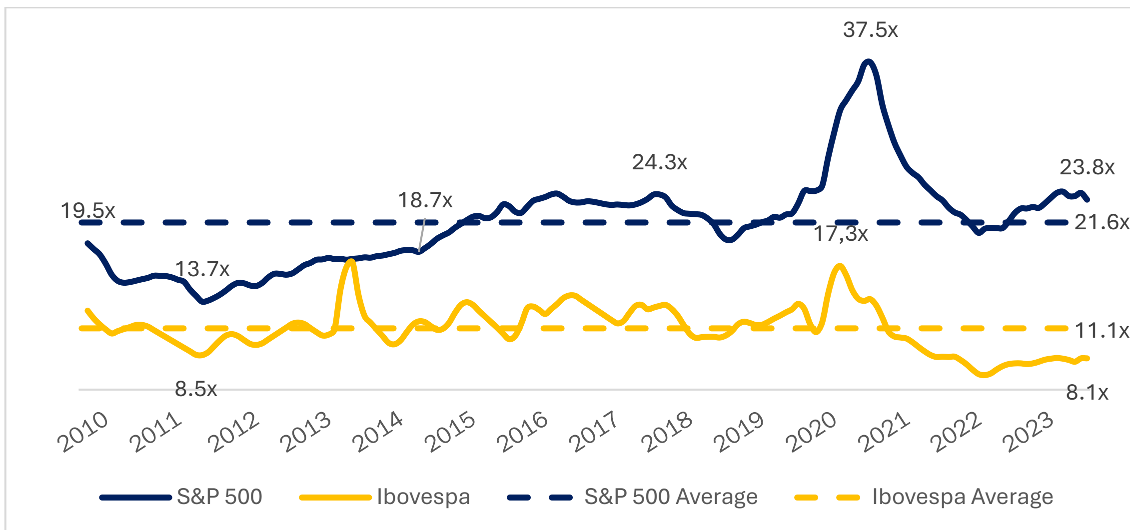


Source: Pitchbook; PEBay

PUBLIC MARKET

One way to compare company valuations in the public market is through the Price to Earnings (P/E) ratio. The average P/E ratio for the S&P 500 since 2010 is 21.6x, while it is currently around 23x (Figure 4). In Brazil, companies in the Ibovespa have had an average P/E ratio of 11.1x over the same period, and it is currently around 8x. The discount is, on average, 50%, with the current discount being 65%.

Figure 4 – P/E Ratio of the Ibovespa and S&P 500 (3-month moving average)



Source: Genial Investimentos and Nasdaq Data Link

When analyzing VC compared to private and public equities, it was observed that the discount relative to the US decreased in VC, while it increased in private and public equities. This dichotomy does not seem logical to us.

The reasons for the discounts for more mature companies relative to their American peers' stem from (i) higher economic risk, (ii) higher political risk, both resulting in (iii) a higher cost of capital in Brazil compared to the US. Despite Brazilian startups being subject to the same economic and political risks, and therefore higher cost of capital, there is a pricing disconnect in VC relative to other asset classes.

In our view, this phenomenon is explained by the flow of money into VC. As we explained in the previous section, high returns generated positive flows into VC in Brazil. Conversely, low returns have led to negative flows into PE in Brazil. These financial flows in opposite directions for VC and PE result in a pricing and discount disconnect between asset classes.

PRACTICAL CASE

As mentioned earlier, many market players justify high valuations based on the potential that companies can achieve and cite their high growth rates to support this rationale. To test this hypothesis, we conducted a simple mathematical exercise based on a real case of a company that is highlighted in the portfolio of a traditional VC fund.

The fintech software company was recently invested in at a post-money valuation of BRL 200 million, which is equivalent to 40x its revenue of BRL 5 million in a seed round. The company is very promising, with a good product, a large market, excellent founders, and great traction. We have no reservations of the company itself.

However, for this company to generate a 10x return, the minimum to be considered a good investment, and assuming three more fundraising rounds with an average dilution of 20% each, (a total dilution of 49%), the investor would need to sell their stake at a valuation of BRL 4 billion. Considering a revenue multiple of 4x (like Brazilian publicly traded TOTVS, for example), the company would need to grow from the seed stage, pre-operational, and without proven product-market fit, to generating almost BRL 1 billion in revenue. Achieving this would result in a 10x MOIC and an IRR of 47% over six years. The chance of a company going from minimal revenue to BRL 1 billion in revenue is very low,[2] requiring a CAGR of 140% growth over the period. While possible, the chance of success seems low.

To achieve a 3x return, which is modest for the sector, the CAGR would still need to be 97% per year, which is also not obvious. If it had a CAGR of 65%, the return would break even. At the other extreme, to be a solid 100x, a classic fund maker, this company would need a CAGR of 255% over the period!

IT'S ALL ABOUT TAM

Investing in VC is similar to investing in an out-of-the-money option. There are two key metrics in a startup's valuation: the probability of success and the potential TAM. Let's dive into these elements.

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[2] 1.2% of SaaS companies reach USD 100 million in Annual Recurring Revenue (ARR) within ten years, and only 0.24% achieve this milestone in six years. (From $1 to $100 revenue - Notion Capital)

Success rate: Investors understand that in most scenarios, given the entry price, the expected return of a venture capital asset will be low or even negative. However, if everything goes right, there is a chance that the business will generate an exceptional return. The greater the chance of success and the higher the potential return, the more valuable the asset becomes.

Calculating the chance of success is challenging, but in this study, we are only interested in the relative chance between Brazilian and American companies. Despite the difficulties in doing business in Brazil, it is understood that the chance of success is higher here due to less competition. In the US, new business ideas quickly lead to a proliferation of competitors. In Brazil, the level of competition is lower, resulting in lower competitive costs. Therefore, this factor favors local companies.

Measuring how less competitive the Brazilian market is compared to the American market can be done by observing the number of startups in the same segment created in a short period. Unfortunately, we did not conduct this study, so we are left with speculation.

TAM: The final value of an asset is highly correlated with its final revenue, which is, in turn, highly correlated with the market size it operates in. The market size is correlated with the size of the economy, so the GDP size of the market in which a company operates is well correlated with the final value an asset can achieve.

Brazilian companies rarely manage to compete globally, so their reference GDP should be that of Brazil (or, at most, LATAM). Successful American companies, on the other hand, generally expand globally, so their reference GDP can be either American or global. Brazil's GDP is equivalent to 1/14 of the American GDP, and LATAM's GDP is 1/15 of the world's. All else being equal, this size proportion should directly affect the proportion of the price of assets.

For the discount between American and Brazilian valuations to be 13%, this would mean that the success rate of local companies would have to be 12x higher than that of American ones. We understand that the probability of success in Brazil is higher, however, it does not seem to us to be 12 times higher than in the USA.

Note: it is believed that certain characteristics can mitigate such a significant TAM difference. First, the Brazilian (and Latin American) market faces a scarcity of access to certain products and services, allowing startups to address large markets and unlock unmet demand. Second, there are still many analog services that can be digitized by startups in the region. These two trends have already occurred in the US, where new startups now challenge established tech companies in smaller market opportunities. To test this hypothesis, we examined data. In Brazil, we estimate that between 2010 and 2013, about 18% of invested startups fit into one of the above categories. Between 2020 and 2023, only 9% of startups were exploring access scarcity or digitization of processes. Thus, the premise that the lagging Brazilian economy would generate larger opportunities does not seem sufficient to narrow the gap between American and Brazilian valuations.

DECLINING RETURNS FROM TECH-ENABLED COMPANIES

Silicon Valley is named after silicon, the material that formed the foundation of the computer processing revolution in the region during the 1960s and 70s. The VC industry specialized in

funding engineers and scientists developing innovative products who needed assistance with management techniques. These companies were technological at their core, possessing intangible assets, often patented, that provided product differentiation from the competition. It was only with the advent of the internet and, notably, Benchmark's investment in eBay, that VC funds began to invest in tech-enabled companies. These companies did not have a patentable product or significant intellectual property but resulted from applying existing technologies to new business models. Generally, these business models were based on challenging incumbents with outdated management practices and "analog" processes. These modern, "digital" companies gained market share not through technological discovery but through the better use of existing technologies.

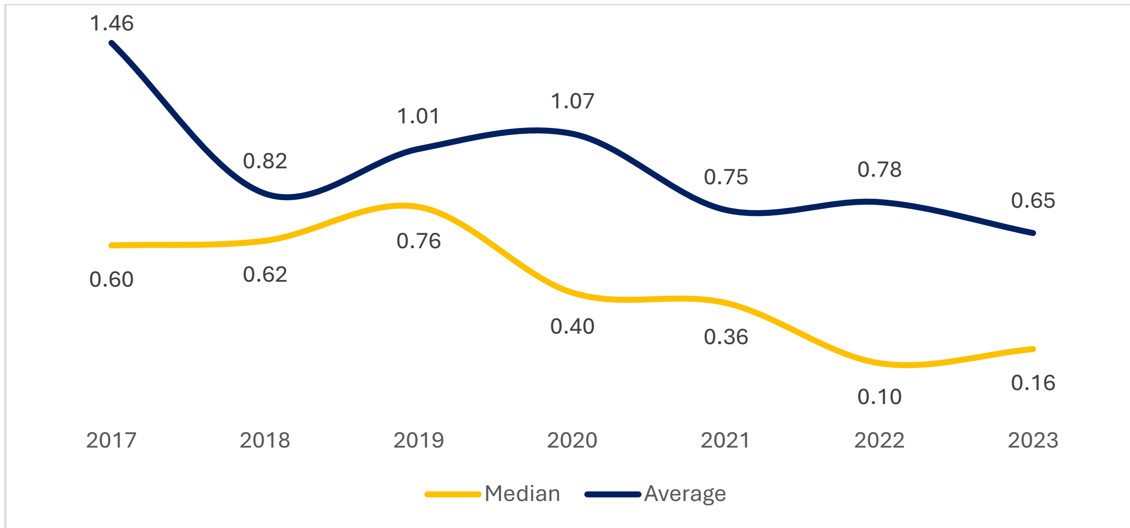
In recent years, there has been a mix of tech companies and tech-enabled ventures in the US, while in Brazil, startups were almost exclusively tech-enabled or replicating models of American companies. There are several pros and cons regarding investments in tech-enabled companies, however, perhaps the greatest downside is that the returns from these businesses tend to marginally decrease over time.

As an illustrative example, a hypothetical entrepreneur wanting to start a business in Brazil 15 years ago and strategically considering the largest profit pool in the country might have gone through the following thought process: What is the largest profit pool in the country? Answer: banks. Therefore, the entrepreneur could establish a tech-enabled bank to challenge the incumbents. The second hypothetical entrepreneur would now face a slightly tougher path: they could pursue the country's second-largest profit pool, target a niche in the banking sector, or try to directly compete with the first entrepreneur's company. Gradually, new startups begin to target smaller pains or more segmented niches of the economy. There is absolutely no problem in pursuing niches, but clearly, the TAM of these niches diminishes over time, and valuations should adjust accordingly.

As a proxy for decreasing returns on investment in tech-enabled companies, we use the capital efficiency index. We define efficiency as the revenue delta that a company achieves between two investment rounds divided by the capital raised. For example, a company that raised R$ 10 million and increased revenue by R$ 15 million before the next round would demonstrate an efficiency of 1.5. For companies that did not raise a subsequent round (due to recent fundraising), we assume that the raised capital will be consumed linearly over ten quarters.

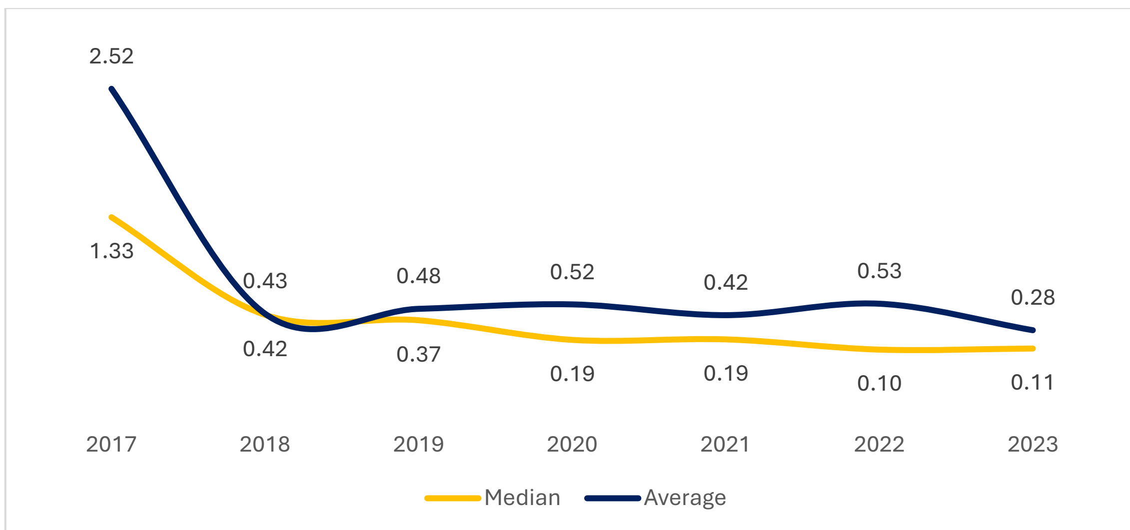
Figure 5 presents the average/median capital efficiency per year (cohort) in which the company raised its seed round. Figure 6 presents the same data for Series A. The median investment efficiency at Seed began to decline from 2019 onwards, while for Series A, it declined from 2017.

Figure 5 – Capital Efficiency for Seed Investments



Source: Spectra Investments

Figure 6 – Capital Efficiency for Series A Investments



Source: Spectra Investments

Our view is that capital efficiency has been declining due to several factors:

(1) **Less Impactful Businesses on Average**: With smaller pain points, there are fewer consumers demanding the product, making product-led growth less evident. As a result, companies have to spend more to acquire customers.

(2) **Increased Competition.** Convincing the market that your product is not only good but better than those of many other competitors requires higher marketing expenditures.

(3) **Talent Supply:** The shortage of developers has inflated their prices, directly affecting the burn rate of companies.

(4) **Mindset of Very Low Capital Cost:** This was especially prevalent in 2021, though it is noted as a specific point within a broader trend of declining efficiency.

The result of declining capital efficiency is that it becomes less obvious that the market will achieve the same future success as it did in the past. It is important to remember that these are averages, and outliers always exist. Good managers are always capable of finding these outliers.

More than 10 years ago, the consensus among investors was that only the most remarkable VC managers on the planet (known as the Golden Circle) were capable of making money. These managers had spectacular returns while everyone else had poor or even negative returns. In recent years of prosperity, this outlook changed, and even the median manager presented excellent returns. Based on the more challenging environment described above, we believe that we should return to the previous dynamics, where only a few will do well, but the average will perform worse.

WHAT TO DO?

In Spectra's view, we see three alternatives for continuing to invest in the segment with quality:

1. **Leading Managers:** Managers with an excellent reputation and access to the best entrepreneurs are likely to remain unaffected by changes in the landscape. These outliers should attract top talent, which compensates for lower capital efficiency and high valuations. While their returns may not be as high as in the past, they still justify allocation.
2. **True Tech**: Brazil and Latin America have some technological development, though not at the level of the US and Europe. However, it is not negligible. A recent study estimated that there are 101 deep tech companies in Brazil that have received funding from institutional VCs.[3] The feasibility analysis and entrepreneurial journey of these companies differ significantly from tech-enabled companies, requiring a distinct skill set from managers. The fact that few people focus on this segment creates a very rich opportunity in our view.
3. **Niches**: There are several underexplored investment niches where we believe great opportunities exist. These niches require specialization, and managers targeting them may not be able to have a large AUM due to the size limits of their niche but can secure excellent investment opportunities for themselves.

When we started investing in VC just over 10 years ago, the industry in Brazil was rarely discussed. We are delighted to witness the region's vibrant growth. Today, many companies are emerging to address the needs of millions. A thriving VC industry brings enormous benefits to society. We hope the industry continues with this momentum and vigor, and we look forward to remaining a part of this remarkable ecosystem.

Please feel free to contact us at:

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[3] Deep Tech. The new Wave (2023). Inter-American Development Bank