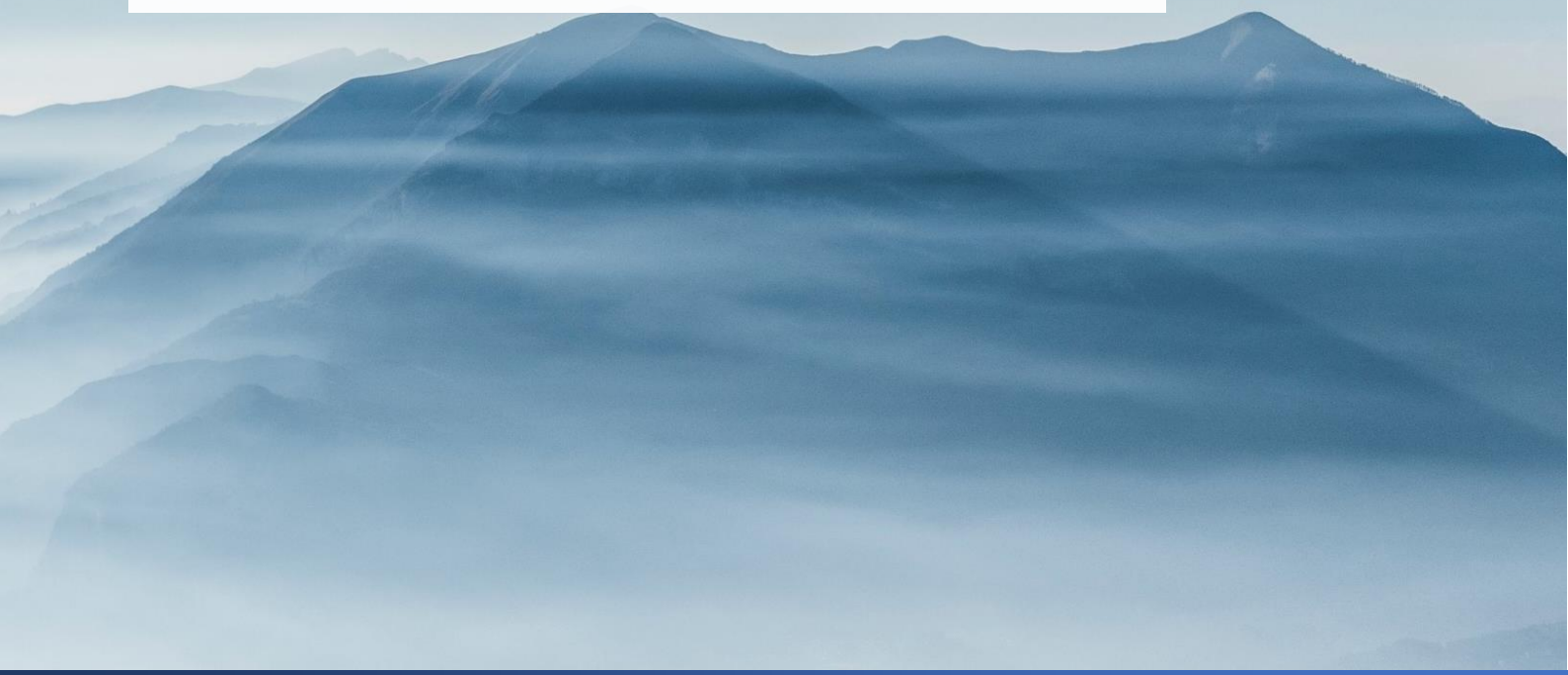
PERFORMANCE OF BRAZILIAN PRIVATE EQUITY AND VENTURE CAPITAL INVESTMENTS

1994-2023

DECEMBER 2023



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HIGHLIGHTS

This report presents an analysis of the performance of private equity (PE) and venture capital (VC) investments in Brazil, concentrating exclusively on deals that have been exited. The scope of this study encompasses deals that were invested in between 1994 and 2022 and divested from 1994 through September 2023. This research was conducted collaboratively by Insper, Spectra, and ABVCAP.

Our main findings are:

- The Brazilian PE and VC industry performed well. The average gross MOIC in BRL was 5.8.
- Although the currency risk offset part of the return achieved by Brazilian fund managers, the industry also performed well in USD. The estimated average gross MOIC in USD for Brazilian PE and VC was 2.9.
- Tech deals, representing 46% of the sample, show a higher risk but also a higher potential for significant returns, with 40% total losses and 13% achieving an MOIC higher than 5x.
- Non-tech deals align with PE expectations, with lower total losses (9%) but also fewer high returns, with 11% achieving an MOIC higher than 5x.
- The performance distribution of the combined sample is almost uniform across IRR ranges. Tech deals, however, show a higher percentage of losses, while non-tech deals are characterized by more modest negative returns.
- Tech deals demonstrated a greater average return than non-tech deals, aligning with their elevated risk profile. The average gross MOIC in USD was 3.9 for tech deals, notably higher than the 2.6 observed for non-tech deals.
- The route that represents the largest percentage of exits was sale to strategics (50% of total exits), and this was the case for tech and non-tech deals.
- IPO was the most successful exit route for non-tech companies (an average gross IRR of 79%, and an average gross MOIC of 4.5). Brazilian Tech companies had their first wave of IPOs with an IRR of 45% and MOIC of 5.2.
- Focusing on the tech sector, Trade sales achieve the highest IRR, 91% and the second highest MOIC, 8x, while Sales to PEVC rank first in MOIC, 10x, and second in IRR, 83%.
- While current challenges may affect exit returns in 2024, the technology sector shows promising signs of resilience and growth, driven by developments in generative AI, ongoing digitalization, and increased activity in Corporate Venture Capital.
- The reduced activity in the non-tech sector hints at untapped markets and potential opportunities, highlighting the diverse investment landscape in Brazil.

METHODOLOGY AND DATA

Our sample contains 1511 Private Equity (PE) and Venture Capital (VC) deals in Brazil, originated between January 1984 and December 2021, and liquidated between January 1984 until September 2023. The data is based on proprietary information of Spectra Investments, which main source is Private Placement Memorandum (PPM). Therefore, our analysis was built under performance measurements reported by fund managers. The information is sanitized by Spectra to protect identities.

In this white paper, we continue the approach established in our 2022 report by segmenting our analysis into two distinct sectors: technology (tech) and non-technology (non-tech). This segmentation marks a shift from our previous methodology, where deals were classified as venture capital if the company was pre-breakeven at the time of investment, and as private equity otherwise. Despite the departure, the current structure still closely aligns with the previous categorization. The non-tech sector predominantly consists of PE investments, while the tech sector mainly encompasses VC deals, covering stages from pre-seed to series A and B. This new categorization reflects the evolving dynamics of investment strategies, notably with traditional PE funds now actively participating in earlier stages. It also successfully avoids the 'gray area' that previously existed between growth capital and VC, especially in series B and C investments. Within this framework, tech companies constitute a significant portion of our sample, accounting for 46% or 697 deals.

There was a shift in investment focus towards tech companies after 2010. **Figure 1** displays the number of deals by year of acquisition, while **Figure 2** does so by year of exit. We observe that investments in the tech sector began to emerge significantly post-2010. The number of tech investments surpassed that of non-tech deals starting in 2011, and the frequency of exits in the tech sector exceeded those in the non-tech sector after 2014.

Figure 1. **Number of Deals by year of investment**

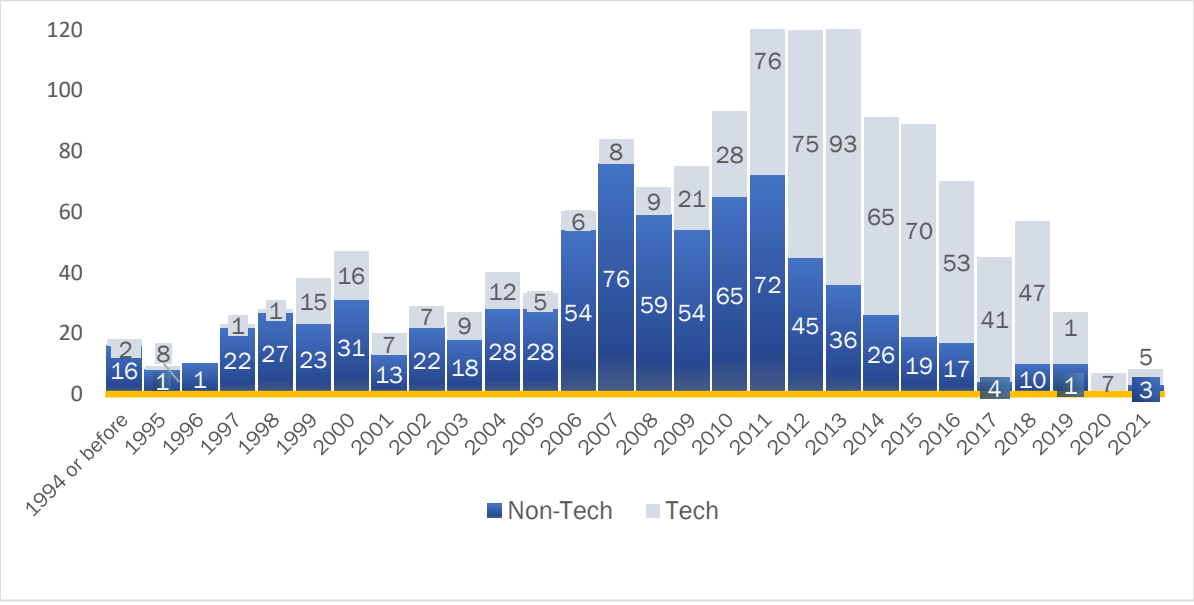
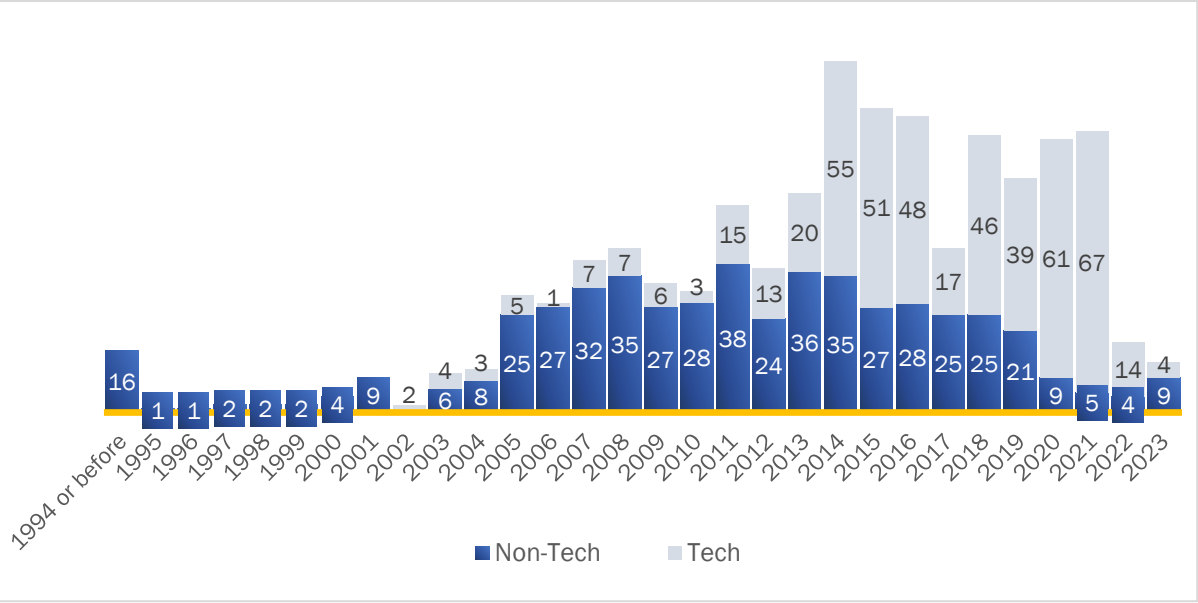


Figure 2. **Number of deals by year of exit**



PERFORMANCE OF BRAZILIAN TECH AND NON-TECH DEALS IN USD

Private Placement Memorandum (PPMs) provide data on the gross Multiple on Invested Capital (MOIC[1]) and gross Internal Rate of Return (IRR) in USD for most deals, while a smaller subset of investments is reported in BRL. We converted the BRL data to USD using the exchange rates applicable on the dates of investment and divestment[2]. For write-offs lacking specific performance data, we assigned a default MOIC of 0 and an IRR of -100%. After eliminating deals that lacked performance information, our sample size was narrowed down to 1,047 deals, divided into 546 in the tech segment and 501 in the non-tech segment.

Tech deals follow a pattern characteristic of venture capital investments, as illustrated in **Figure 3**. This pattern represents a high-risk, high-reward scenario where 40% of deals result in total loss and 18% in partial loss, yet 13% achieve exceptional returns with a MOIC (Multiple on Invested Capital) above 5x. In contrast, non-tech deals exhibit a more balanced risk-return profile typical of private equity investments, with lower risk levels leading to 9% total and 23% partial losses, and 11% of deals achieving outstanding performance (MOIC above 5x).

Despite its higher risk profile, marked by elevated loss rates, the tech sector demonstrates significant upside potential. In this sector, 8% of the deals achieved a MOIC exceeding 10x, with the highest recorded MOIC and IRR reaching 455. This success rate is twice as high as in the non-tech sector, where only 4% of deals attained such elevated returns. Notably, the maximum MOIC in the tech sector is nearly 8 times higher than that of the non-tech sector, a comparison further elaborated in Table 1

The average gross MOIC in the non-tech sector, at 2.6x, is notable for being 66.7% of the tech sector's average, in line with its lower risk profile. However, it's crucial to recognize that this figure for non-tech investments remains robust, especially when compared to global standards. The average gross MOIC for global private equity and venture capital deals exited between 2015 and 2019 was 2.19x, which is only 75% of the average MOIC for non-tech deals in Brazil.

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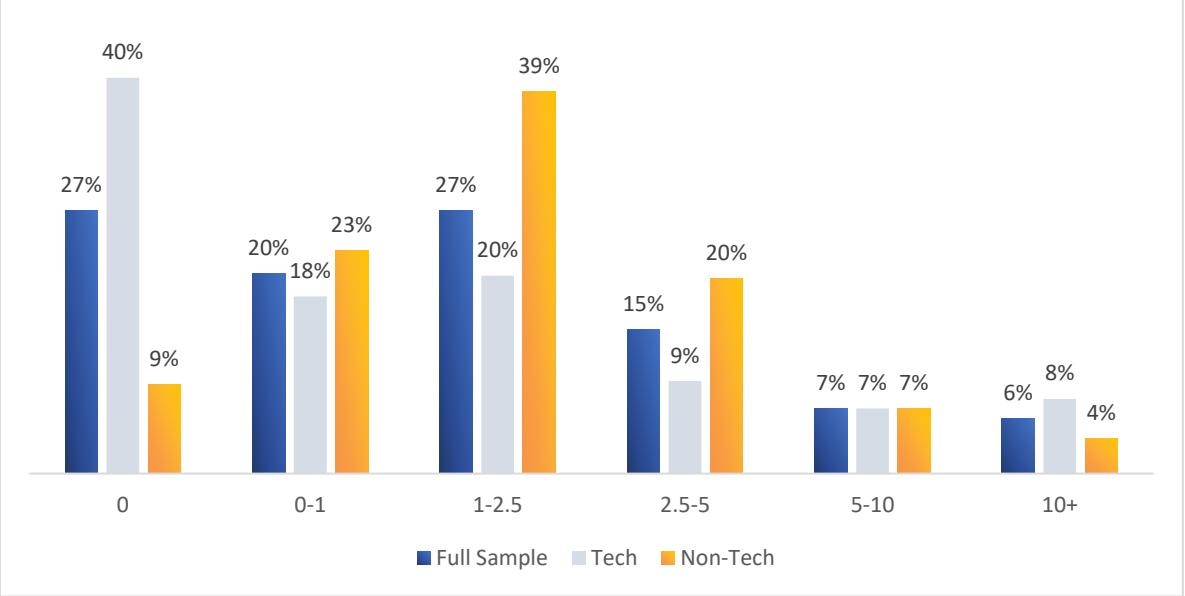
[1] MOIC – multiple of invested capital, also known as cash on cash or multiple of money. Represents the amount of money generated by USD 1.00 of investment. For example, a MOIC of 2.00 means that US$1.00 was transformed in US$2.00, considering all cash flows received

[2] $MOIC_{USD}=MOIC_{BRL}*$(Ptax investment day/ Ptax divestment date) and $IRR_{USD}=MOIC_{BRL}^{(365/\text{holding period days})}-1$, where Ptax is the Central Bank official exchange rate for BRL to USD.

Figure 3. **Performance Distribution According to MOIC (USD)**



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In the tech sector, a small proportion of high-performing deals disproportionately influences the average returns. Specifically, only 15% of deals — those with a MOIC higher than 5x — contribute to 85% of the average return. This concentration of performance in a few outliers is more pronounced in the tech sector than in the non-tech sector. In contrast, in the non-tech sector, outliers, which constitute 11% of the deals, account for 42% of the average return, a comparison detailed in Figure 4. Moreover, the disparity is also evident in the spread of Internal Rate of Return (IRR). The gap between the top 10% (1st decile) and the top 25% (1st quartile) of deals in the tech sector is 65.8%, significantly higher than the 38.6% observed in the non-tech sector.

Figure 4. **Outliers' contribution to average gross MOIC**

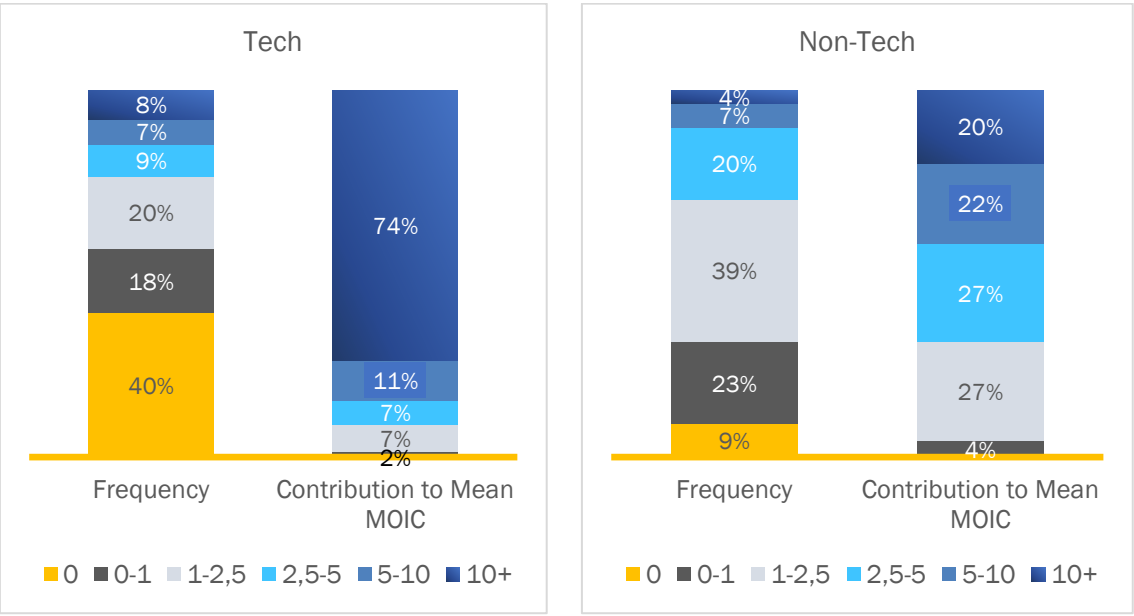


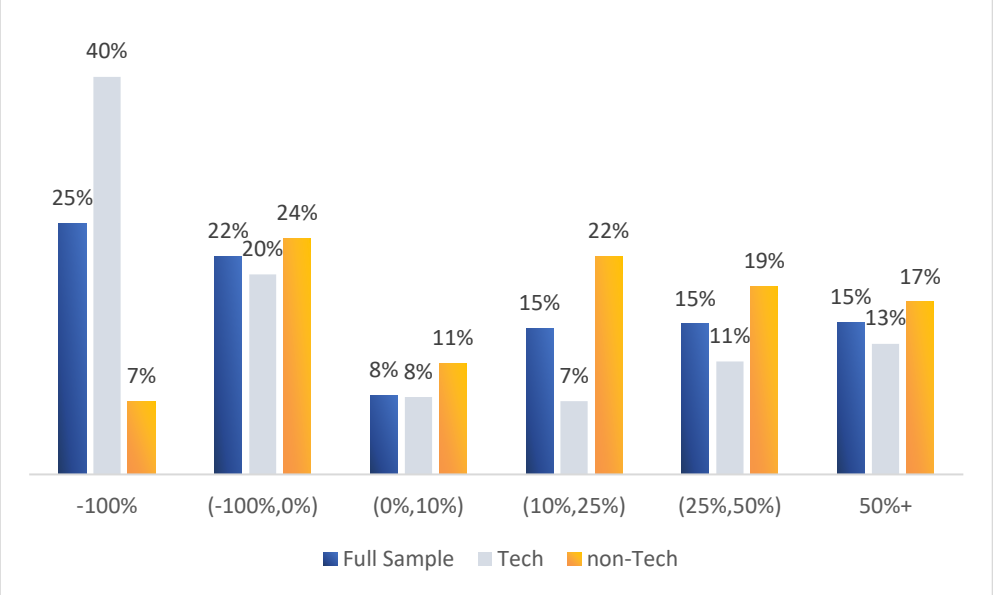
Table 1. **Performance by quartile (USD)**

	Full sample			Tech			Non-Tech		
	IRR	MOIC	Holding Period	IRR	MOIC	Holding Period	IRR	MOIC	Holding Period
Maximum	3202	455	24.4	3202	455	19.9	1140	57.0	24,4
Top Quartile	32.6	2.7	6.2	23.5	2.3	5.0	38	2.8	6.8
Median	3.2	1.1	4.1	-26.9	0.1	3.3	15	1.7	4.7
Bottom Quartile	-100	0.0	2.5	-100	0.0	2.0	-3	0.8	2.5
Minimum	-100	0.0	0.1	-100	0.0	0.2	-100	0.0	0.1
Average	25	2.9	4.7	41	3.9	3.9	22	2.6	4.9

Figure 5 depicts the distribution of performance based on the Internal Rate of Return (IRR) in USD. Upon segregating the deals into tech and non-tech sectors, we find a pattern in the IRR loss distribution that mirrors that of the MOIC distribution. Specifically, the tech sector exhibits a higher percentage of negative returns (53%) compared to the non-tech sector (28%). Notably, the proportion of deals with positive returns is greater in the IRR distribution than in the MOIC distribution. Defining an 'outlier' as a deal with a gross IRR exceeding 25%, we observe a higher prevalence of these outliers in both tech and non-tech sectors, as compared to those with outstanding MOIC (above 5x): 30% versus 13% for tech deals, and 36% versus 12% for non-tech.

This discrepancy - higher rate of outliers for non-tech in comparison to tech deals - is attributed to differences in holding periods. Shorter holding periods tend to yield higher IRRs, and PE funds often expedite exits when market conditions are favorable, thereby reducing holding periods and boosting IRRs.

Figure 5. **Performance Distribution According to IRR (USD)**



The exceptional performance of tech deals in recent years can largely be credited to the robustness of the Brazilian VC industry and the rise of multiple unicorns since 2019. This success has naturally shifted investor focus increasingly towards tech investments. However, it's crucial to recognize that these results have not fully incorporated yet more recent external factors like the conflicts in Ukraine and Israel, as well as the global increase in inflation and interest rates. These conditions could lead to a decline in exit multiples into 2024.

PERFORMANCE OF BRAZILIAN TECH AND NON-TECH DEALS IN BRL

Brazil's well-known currency volatility significantly impacts the returns of investments measured in USD. The unpredictability of the Brazilian real's exchange rate pattern poses a considerable challenge in aligning investment cycles with favorable currency conditions, making it nearly impossible to effectively hedge against currency risks. While general partners may attempt to mitigate some of this risk by diversifying investments over the investment period and planning exits during periods of the BRL appreciation, the cycles of appreciation and depreciation are unpredictable. Performance metrics in BRL outperformed those in USD during the period we analyze in this report. Domestic investors, who make capital calls and receive distributions in BRL, are naturally insulated from the risks associated with the fluctuation of the Brazilian currency.

The influence of currency risk on investment returns is starkly highlighted when contrasting the gross MOIC distribution in Brazilian Reals with that in U.S. Dollars. For tech deals, the proportion of high-performing outliers (with a MOIC greater than 5) jumps from 13% in USD to 19% in BRL, as demonstrated in Figure 6. Similarly, the incidence of losses in tech investments shows a marginal reduction, decreasing from 48% in USD to 47% in BRL. A comparable trend is observed in non-tech deals, where the percentage of deals with a MOIC exceeding 5x rises from 11% in USD to 15% in BRL. Concurrently, the rate of losses in non-tech investments drops from 31% in USD to 24% in BRL, further illustrating the significant impact of currency fluctuations on investment returns.

Figure 6. **Performance Distribution According to MOIC (BRL)**

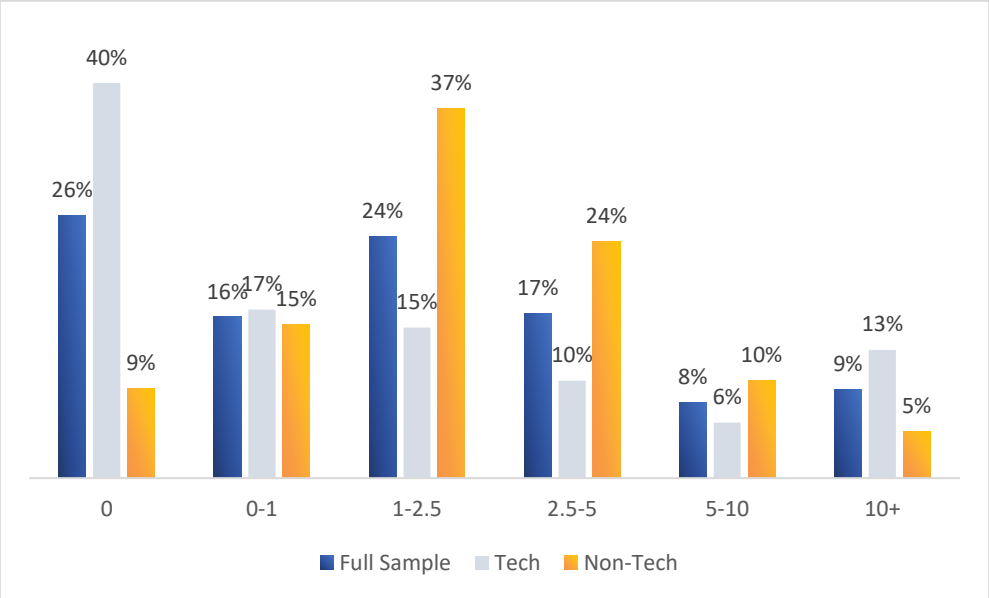


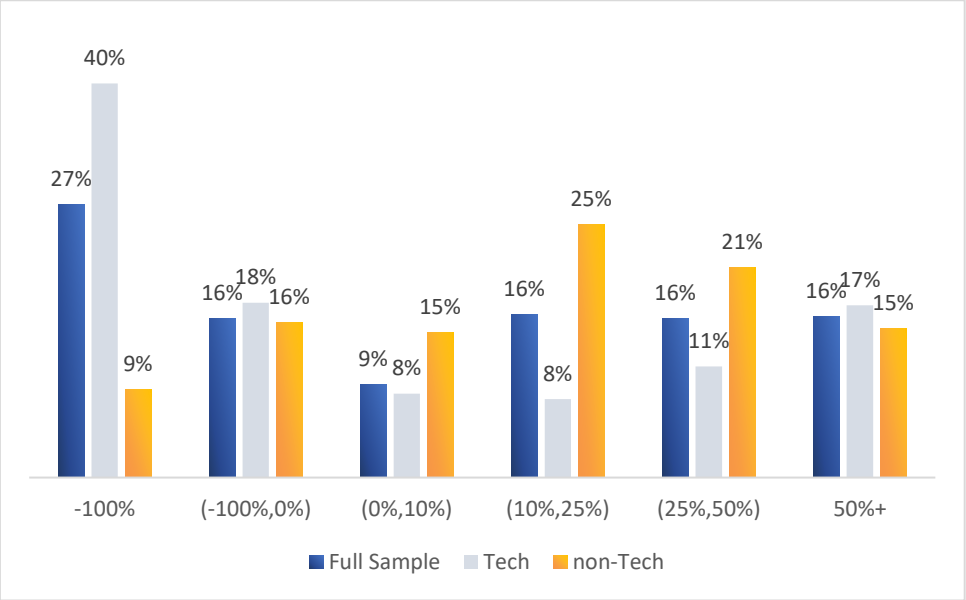
Table 2, which presents the lowest and highest MOIC and IRR for each quartile, vividly illustrates the adverse effects of the Brazilian Real's devaluation on investment returns. For tech deals, the maximum MOIC soars from 455.3 in USD to 734.7 in BRL. Furthermore, the average MOIC in BRL is 7.8, marking a 25% increase over the 6.2 average in USD. In the non-tech sector, the maximum MOIC rises from 57 in USD to 87.7 in BRL, with the mean MOIC climbing from 2.6 to 3.5. This data indicates that, although the average performance of PE and VC investments in USD was favorable, it could have been significantly better if the Brazilian currency had been more stable.

Table 2. Performance by quartile (BRL)

	Full sample			Tech			Non-Tech		
	IRR	MOIC	Holding Period	IRR	MOIC	Holding Period	IRR	MOIC	Holding Period
Maximum	3375	734.7	24.4	3375	734.7	19.9	1238	87.7	24.4
Top Quartile	36	3.4	6.2	37	3.5	5.1	35	3.4	5.1
Median	8	1.4	4.1	-26	0.3	3.1	16	2.0	3.1
Bottom Quartile	-100	0.0	2.5	-100	0.0	2.0	1	1.0	2.0
Minimum	-100	0.0	0.1	-100	0.0	0.2	-100	0.0	0.1
Average	**39**	**4.7**	**4.7**	**48**	**7.8**	**5.2**	**34**	**3.5**	**4.2**

Figure 7 displays the performance distribution based on the Internal Rate of Return (IRR) in Brazilian Reals (BRL). Echoing the MOIC distribution seen in Figure 6, we observe that the performance upside in BRL surpasses that in USD. Specifically, 36% of tech deals achieved an IRR above 25% in BRL, compared to 29% in USD IRR. For non-tech companies, the proportion of outstanding deals was 40% in BRL, higher than the 36% observed in USD IRR. Furthermore, the exchange rate notably influenced the returns of companies with a negative IRR. In BRL, 13% of exits registered a negative IRR, which increases to 17% when measured in USD IRR.

Figure 7. **Performance Distribution According to IRR (BRL)**



RETURN BY EXIT TYPE

In the tech sector, Initial Public Offerings (IPOs) account for 4% of exits, sales to strategic buyers represent 40%, sales to other PEVC funds are at 2%, buybacks constitute 2%, and write-offs are 52%[3]. In the non-tech sector, IPOs make up 11% of exits, sales to strategic buyers are 67%, sales to other PEVC funds stand at 3%, buybacks are at 3%, and write-offs total 16%.

In the overall sample, IPOs lead in performance with an IRR of 67%, followed by Trade sales at 51% and Sales to PEVC at 40%. However, when considering the MOIC, the ranking shifts: Sales to PEVC top the list with an 8.4 MOIC, IPOs are next at 4.7, closely trailed by Trade Sales at 4.5.

[3] In the current analysis: return by exit type, we focus exclusively on deals with available exit route information. Due to missing exit route data in some cases within the broader sample, the number of deals considered here is less than in the original sample that was used to analyse the distribution of MOIC and IRR.

The longer holding period associated with sales to another PEVC might account for this variance in rankings. In both IRR and MOIC, buybacks rank lowest.

Focusing on the tech sector, Trade sales achieve the highest IRR and the second highest MOIC, while Sales to PEVC rank first in MOIC and second in IRR. IPOs place third in both performance metrics, and buybacks exhibit the lowest returns, generally indicating losses. The holding period for IPO exits in tech is notably long at 10.3 years, more than double the average for Trade sales and Sales to PEVC. Given that IPOs for tech deals are relatively new in the Brazilian market and typically reserved for later-stage deals, this aligns with expectations, especially since most tech deals in our sample range from pre-seed to series B.

In the non-tech sector, IPO exits not only have the highest IRR at 79% but also the highest MOIC at 4.5, with a holding period of 5.8 years, slightly longer than that of Sales to PEVC. Exits to strategics (Trade sale) rank second in both IRR (43%) and MOIC (2.8), but with a longer holding period of 6.2 years. Sponsor-to-sponsor transactions are third, still impressive with a 30% IRR and a 3.0 MOIC. This order reflects the general partners' strategy of timing IPO market windows for optimal exits. Unlike in tech, buyback exits in non-tech do not result in average losses, showing an average IRR of 7% and an MOIC of 1.0.

Table 3. **Performance by exit type (USD)**

	Full sample			Tech			Non-Tech		
	IRR	MOIC	Holding Period	IRR	MOIC	Holding Period	IRR	MOIC	Holding Period
IPO	67%	4.7	6.1	45%	5.2	10.3	79%	4.5	5.8
Trade sale	51%	4.5	5.8	91%	8.0	4.7	43%	2.8	6.2
Sale to PEVC	40%	8.4	6.4	83%	10.0	4.7	30%	2.3	5.4
Buyback	2%	0.9	4.5	-17%	0.7	3.7	7%	1.0	5.0

Table 4 repeats the analysis in BRL. For the full sample, IPOs have a strong performance with an IRR of 68% and an MOIC of 4.7 over a 5.9-year holding period. Trade sales follow closely with an IRR of 54% and a higher MOIC of 7.2, maintained over a 4.9-year period. Sale to PEVC appears to be less favourable with an IRR of 43% and an MOIC of 10.3, across a 5.7-year holding period. Buybacks exhibit the lowest performance with a negative IRR of -3% and an MOIC of 1.1, over a 4.6-year period.

Diving into sector-specific data, tech investments through IPOs report an IRR of 54% with a substantial MOIC of 29.5, held for 6.7 years. Trade sales in tech also perform strongly with a 90% IRR and an MOIC of 13.6 over a 4.7-year holding period. Sale to PEVC in tech is solid with an IRR of 71% and an MOIC of 19.0, observed over a longer 9.0-year holding period. However, tech buybacks have a negative IRR of -1% and an MOIC of 1.0, across a 3.7-year holding period.

In the Non-Tech sector, IPOs lead with a high IRR of 78% and an MOIC of 6.3, with a holding period of 5.8 years. Trade sales show an IRR of 32% and an MOIC of 3.3 over 5.0 years. Sale to PEVC has an IRR of 18% and an MOIC of 3.5, spanning a 6.4-year period. Non-Tech buybacks are also negative, with an IRR of -4% and an MOIC of 1.1, over a 5.0-year holding period.

Table 4. **Performance by exit type (BRL)**

	Full sample			Tech			Non-Tech		
	IRR	MOIC	Holding Period	IRR	MOIC	Holding Period	IRR	MOIC	Holding Period
IPO	68%	4.7	5.9	54%	29.5	6.7	78%	6.3	5.8
Trade sale	54%	7.2	4.9	90%	13.6	4.7	32%	3.3	5.0
Sale to PEVC	43%	10.3	5.7	71%	19.0	4.7	18%	3.5	6.4
Buyback	-3%	1.1	4.6	-1%	1.0	3.7	-4%	1.1	5.0

CONCLUSIONS

Brazilian Private Equity and Venture Capital market is demonstrating a clear trajectory of evolution and growth. The analysis of divested deals has revealed that the market is maturing, with increasingly sophisticated strategies leading to diverse investment outcomes.

The industry has seen a significant shift towards a focus on technology, and the performance in this sector has been strong in USD, despite the impact of foreign exchange rates. It would have been even better in BRL. The performance of non-tech exits has been positive in USD, although they experienced more exchange rate impact than tech exits.

The data indicates that, despite the inherent risks, there have been substantial rewards for investors who navigate the market adeptly. With a median gross Multiple on Invested Capital (MOIC) indicating more than half of the tech deals resulted in losses, it's notable that the non-tech sector has exhibited more stable and favorable performance. This suggests a nuanced landscape where sector-specific knowledge and strategic positioning can significantly influence returns.

As the Brazilian PEVC market continues its evolution, mirroring the dynamic nature of the country's economy and the adaptability of its investment sector, it is poised to offer a wider range of opportunities, particularly for discerning investors focused on Brazil's unique economic landscape. While current challenges may affect exit returns in 2024, the technology sector shows promising signs of resilience and growth, driven by developments in generative AI, ongoing digitalization, and increased activity in Corporate Venture Capital. Conversely, the reduced activity in the non-tech sector hints at untapped markets and potential opportunities, highlighting the diverse investment landscape in Brazil.

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