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Pension funds and the secondary private equity market in Brazil: a study of Petros and Previ transactions

Fondos de pensiones y el mercado secundario de private equity en Brasil: estudio de las transacciones de Petros y Previ

Fundos de pensão e o mercado secundário de private equity no Brasil: estudo das transações da Petros e Previ

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Abstract

Purpose: This study analyzes the sale of shares in the secondary market of a portfolio of Private Equity Funds (FIPs) held by two Closed-Entity Pension Funds (EFPC) or pension funds, Petros and Previ, in 2019 and 2021, respectively, to highlight the main challenges, structural limitations, and opportunities of the secondary private equity market in Brazil.

Methodology: This research employs a descriptive approach through a documentary analysis. The study focuses on the transactions of the Brazilian pension funds Petros and Previ between 2019 and 2021. We collected data from several sources, including reports from the Brazilian Securities and Exchange Commission (CVM), EFPC's financial statements, and official institutional publications.

Results: Based on public data and the perspective of current regulation applicable to FIPs and pension funds, the results identified a discount on the price compared to the mark-to-market value of the assets as reported in the funds' financial statements and the EFPCs' annual reports as of the negotiation date.

Contributions of the Study: The observed discount reflects a developing market, where the primary challenges center on consolidating specialized players and favorable market conditions. However, these EFPC transactions represent a milestone for Brazil's private equity and venture capital sector. They can serve as a reference for other pension funds to explore the secondary market in search of liquidity for their FIP holdings, thereby encouraging new investors and assisting fund managers.

Keywords: Private Equity; Venture Capital, PE&VC Funds; Secondary Market; Pension Funds.

Resumen

Objetivo: Este estudio analiza la venta de cuotas en el mercado secundario de un paquete de Fondos de Inversión en Participaciones (FIPs) detentados por planes de dos Entidades Cerradas de Previsión Complementaria (EFPC) o fondos de pensiones, Petros y Previ, en 2019 y 2021, respectivamente, con el propósito de destacar los principales desafíos, limitaciones estructurales y oportunidades del mercado secundario de capital privado en Brasil.

Metodología: La investigación adopta un enfoque descriptivo basado en análisis documental. Las transacciones fueron examinadas a partir de datos recopilados de diversas fuentes, incluidos informes de la Comisión de Valores Mobiliarios (CVM), estados financieros de las EFPC y publicaciones institucionales.

Resultados: El análisis reveló la existencia de descuentos significativos entre los valores negociados y la valoración de los activos en los estados financieros de las EFPC. Este fenómeno refleja la baja liquidez y la asimetría de información en el mercado secundario de private equity en Brasil, además de la necesidad de actores especializados y un entorno regulatorio más sólido.

Contribuciones del Estudio: El análisis de las transacciones secundarias realizadas por las EFPC contribuye a la comprensión de los desafíos que enfrentan los inversores institucionales al buscar liquidez en *private equity* en Brasil. El fortalecimiento del mercado secundario es un mecanismo clave para la renovación de carteras institucionales y para ofrecer mayor flexibilidad a los inversores. Además, la investigación proporciona información relevante para futuras discusiones sobre la mejora de la transparencia y la eficiencia de estas transacciones, factores esenciales para atraer nuevos inversores y consolidar el mercado secundario de FIPs en el país.

Palabras clave: Private Equity; Venture Capital; Fondo de Inversión en Participaciones; Mercado Secundario; Entidades Cerradas de Previsión Complementaria.

Resumo

Objetivo: Este estudo analisa a venda de cotas no mercado secundário de um pacote de Fundos de Investimentos em Participações (FIPs) detidos por planos de duas Entidades Fechadas de Previdência Complementar (EFPC) ou fundos de pensão, Petros e Previ, em 2019 e 2021, respectivamente; a fim de destacar os principais desafios, limitações estruturais e oportunidades do mercado secundário de *private equity* no Brasil.

Metodologia: A pesquisa adota uma abordagem descritiva, baseada em análise documental. As transações foram examinadas a partir de dados coletados de diversas fontes, incluindo relatórios da Comissão de Valores Mobiliários (CVM), demonstrações financeiras das EFPC e publicações institucionais.

Resultados: A análise revelou a existência de deságios significativos entre os valores negociados e a marcação dos ativos nas demonstrações financeiras das EFPC. Esse fenômeno reflete a baixa liquidez e a elevada assimetria informacional do mercado secundário de *private equity* no Brasil, além da necessidade de agentes especializados e de um ambiente regulatório mais robusto.

Contribuições do Estudo: A análise das transações secundárias realizadas por fundos de pensão contribui para a compreensão dos desafios enfrentados por investidores institucionais ao buscar liquidez em *private equity* no Brasil. O fortalecimento do mercado secundário é um mecanismo relevante para a reciclagem de portfólios institucionais e para oferecer maior flexibilidade a investidores. Além disso, a pesquisa fornece subsídios para futuras discussões sobre o aprimoramento da transparência e da eficiência dessas transações, fatores essenciais para atrair novos investidores e consolidar o mercado secundário de FIPs no país.

Palavras-chave: *Private Equity*. *Venture Capital*. Fundo de Investimento em Participações. Mercado Secundário. Entidades Fechadas de Previdência Complementar.

1 Introduction

Alternative investments play a fundamental role in portfolio diversification and in financing private companies. Among these investments, private equity (PE) and venture capital (VC) stand out as two modalities that share the objective of fostering corporate growth, yet differ

significantly in terms of investment stage, risk profile, time horizon, and ownership structure (Ribeiro, Carvalho, & Furtado, 2006).

Venture capital focuses on financing startups and innovative companies in the early stages of development. These investments typically involve high levels of risk, as they target firms that do not yet generate consistent profits and depend on the success of their innovations to scale and access new markets. Investor returns usually materialize through initial public offerings (IPOs) or acquisitions by larger corporations (Minardi, Kanitz, Wiesel, & Bassani, 2019; Coelho, Contani, & Madkur, 2021).

In turn, private equity refers to investments in more mature companies seeking expansion, restructuring, or operational improvements. Private equity funds invest in medium- and large-sized firms, often acquiring significant or controlling ownership stakes and implementing strategic changes to enhance value before exit. Exit strategies typically include IPOs, mergers and acquisitions (M&A), or sales to other investors (Coelho, Contani, & Madkur, 2021).

Although both segments are relevant to business development and economic growth, this study focuses specifically on private equity. This focus is justified by three main factors: (i) in Brazil, the primary vehicles for alternative investments are Private Equity Investment Funds (*Fundos de Investimento em Participações* – FIPs), which are predominantly associated with private equity; (ii) the need for divestment strategies is more pronounced in this segment due to the long investment horizons and low liquidity of such assets; and (iii) the secondary private equity market – which allows the trading of fund units among institutional investors – has grown as an alternative mechanism to enhance liquidity in this asset class (Silva, 2022).

In Brazil, FIPs constitute the main investment vehicles used in the private equity segment. Regulated by the Brazilian Securities and Exchange Commission (CVM) Instruction No. 578/2016, these funds are structured as closed-end vehicles and are accessible exclusively to qualified investors (CVM, 2016). As of December 2022, there were 1,501 FIPs registered with the CVM, with total net assets amounting to BRL 614 billion, highlighting their relevance in the Brazilian capital market (ANBIMA, 2022).

Among FIP investors, Closed Supplementary Pension Entities (*Entidades Fechadas de Previdência Complementar* – EFPC), commonly referred to as pension funds, play a strategic role due to their long-term investment horizon and the need for asset diversification (Castro & Lazzari, 2021). Although Article 203 of the 1988 Federal Constitution and Supplementary Law No. 109/2001 established the foundations of the modern closed supplementary pension system in Brazil, several EFPC had already been created prior to 1975, with Law No. 6,435/1977 representing one of the earliest relevant legal milestones. EFPC manage pension benefit plans for employees of private companies, state-owned enterprises, mixed-capital corporations, and public entities. According to data from the National Superintendence of Supplementary Pension (Previc), total assets held by Brazilian pension funds reached BRL 1.17 trillion in the third quarter of 2022, with private equity investments accounting for approximately 14% of the total allocation of this segment in 2021 (Giambiagi & Nese, 2022).

Given the low liquidity of private equity investments, institutional investors that allocate resources through FIPs often face challenges when attempting to divest their positions prior to fund maturity, reinforcing the need for alternatives such as the secondary market. The secondary private equity market enables the trading of fund units among investors without requiring the issuance of new units by the fund itself (Silva, 2022). Unlike the primary market – where capital contributions are directed toward investments in portfolio companies – the secondary market

involves the transfer of ownership stakes between investors, providing liquidity to those wishing to exit their positions.

The volume of transactions in the global secondary private equity market has increased substantially, reaching a record USD 134 billion in 2021, with projections indicating that this figure may exceed USD 200 billion by 2025 (Chene, Marks, & Pfister, 2022). In Brazil, however, this market remains at an early stage of development, particularly with respect to the trading of FIP units held by EFPC. The main obstacles include a limited pool of qualified buyers and the absence of a consolidated platform for secondary trading. Despite low liquidity, recent activity by specialized agents – such as Spectra Investments, which has acquired FIP stakes through secondary transactions – signals gradual market development (Corazza, 2022).

Within this context, this study seeks to answer the following research question: **What challenges do Brazilian pension funds face when selling FIP units in the secondary market, and what do these transactions reveal about the stage of development of this market in Brazil?** Accordingly, the objective of this study is to analyze secondary market transactions involving the sale of FIP units carried out by the pension entities *Fundação Petrobras de Seguridade Social* (Petros) and *Caixa de Previdência dos Funcionários do Banco do Brasil* (Previ), to identify the main challenges, structural limitations, and development opportunities of the secondary FIP market in Brazil.

Although the secondary private equity market is well established in developed economies, it remains underexplored in Brazil. The market faces constraints such as low liquidity, information asymmetry, and a scarcity of specialized participants. Based on the analysis of transactions conducted by Petros and Previ, this study offers an original empirical contribution to understanding the functioning of Brazil's secondary FIP market. It provides insights for institutional investors seeking divestment strategies, as well as for policymakers interested in fostering a more efficient and transparent environment for such transactions.

2 Literature Review

2.1 Market failures in illiquid investments

The efficient functioning of markets presupposes conditions such as symmetric information among agents, broad competition, the absence of barriers to entry, and institutional structures capable of mitigating risk (Stiglitz & Weiss, 1981). However, in the context of illiquid alternative investments – such as FIPs traded in the secondary market – these assumptions are frequently violated, resulting in market failures that compromise the efficient allocation of resources and hinder fair price formation, particularly in Brazil (Giambiagi & Nese, 2022; Guimarães, 2023).

Information asymmetry is one of the primary failures observed in this environment. Due to the closed-end nature of FIPs and the difficulty in measuring the value of underlying assets, buyers have limited access to reliable information regarding the true quality and performance of portfolio companies. This generates uncertainty, increases the perceived risk for secondary investors, and consequently leads to demands for significant discounts relative to the net asset value of the units being traded (Giambiagi & Nese, 2022). Moreover, the absence of publicly available valuation reports and the low level of standardization in disclosed information further exacerbate this issue.

Another critical aspect concerns market concentration. In Brazil, the number of specialized agents capable of acting as buyers in the secondary FIP market remains limited. This concentration reduces competition and weakens the bargaining power of institutional sellers, particularly pension funds that seek liquidity under time constraints (Guimarães, 2023). Limited competition grants greater pricing power to a small group of buyers, thereby intensifying the discounts applied in secondary transactions.

In addition, negative externalities related to investment structuring and fund governance are evident. The selection of inexperienced managers, excessive sectoral concentration, and the absence of efficient exit mechanisms may negatively affect not only the performance of individual funds but also the credibility of the entire market (Minardi et al., 2016). Such practices undermine investor confidence and reinforce the cycle of low liquidity.

Consequently, the Brazilian secondary private equity market is characterized by structural failures that hinder institutional divestment and reduce the overall attractiveness of this segment. Understanding these failures is essential for analyzing the transactions examined in this study and for supporting proposals aimed at regulatory and market improvements.

2.2 The private equity segment in Brazil

Private equity and venture capital investments are part of the alternative investment industry and are aimed at fostering the growth of private companies. Although they share this objective, they differ in terms of investment stage, risk profile, and liquidity (Ribeiro, Carvalho, & Furtado, 2006).

Private equity refers to investments made in established companies seeking to expand operations, improve corporate governance, or undergo financial restructuring. Private equity funds typically invest in medium- to large-sized companies, often acquiring significant or controlling ownership stakes. These investments focus on firms with positive cash flows and structured growth prospects, have longer horizons (usually between five and ten years), and aim to improve operational efficiency before exit. Exit strategies generally occur through IPOs, sales to other investors, or mergers and acquisitions (Coelho, Contani, & Madkur, 2021).

While venture capital targets startups and early-stage innovative companies, private equity focuses on more mature firms. Although venture capital has gained prominence in Brazil, private equity remains the dominant segment within FIPs, which are the primary investment vehicle for this asset class in the country (Minardi et al., 2019; Coelho, Contani, & Madkur, 2021). For this reason, the present study concentrates on the structure and challenges of the private equity market in Brazil.

The evolution of the private equity market in Brazil can be traced back to the late 1990s and early 2000s, when economic stabilization and regulatory improvements created a more favorable environment for long-term investments. Sustained economic growth, coupled with the development of local capital markets, facilitated the inflow of foreign capital and strengthened the private equity industry (Ribeiro, Carvalho, & Furtado, 2006; Minardi et al., 2019; Silva, 2022).

Brazilian private equity funds generally follow structures similar to those observed in more mature markets, such as the United States and Europe. They are typically structured as closed-end funds with investment periods ranging from 10 to 12 years. Many Brazilian private equity funds adopt sector-specific strategies, investing in areas such as technology, healthcare, infrastructure, and consumer markets (Minardi et al., 2019; Coelho, Contani, & Madkur, 2021). More recently, there has been growing interest in impact investing and sustainability-oriented initiatives (Silva,

2022). These impact investments seek not only financial returns but also the intentional generation of measurable social and environmental benefits, aligning economic performance with broader societal and environmental objectives.

Private equity investments are characterized by higher risk and return potential, as they involve low liquidity, long-term horizons, and significant information asymmetry (Botrel, 2017; Giambiagi & Nese, 2022). Compared to traditional fixed-income investments or publicly traded equities, private equity requires longer periods for returns to materialize and is subject to higher volatility and operational risks. Nevertheless, empirical evidence suggests that, historically, risk-adjusted private equity returns have exceeded those of traditional equity markets, justifying the increasing allocation of institutional investors to this asset class (Harris, Jenkinson, & Kaplan, 2014; Coelho, Contani, & Madkur, 2021).

The performance of private equity funds in Brazil has been mixed, reflecting the country's economic and political fluctuations (Coelho, Contani, & Madkur, 2021). While well-managed funds have achieved superior returns, challenges such as macroeconomic volatility, regulatory complexity, and liquidity constraints persist. Economic instability can significantly affect the valuation of portfolio companies, and studies such as Coelho, Contani, and Madkur (2021) identify a positive relationship between GDP growth and private equity returns.

Regulation also plays a central role in shaping fund dynamics. The Brazilian Securities and Exchange Commission (CVM) establishes the regulatory framework governing private equity investment vehicles through instruments such as CVM Instructions No. 209/1994, No. 391/2003, and No. 578/2016.

Despite existing opportunities, liquidity in the secondary private equity market remains a major challenge, limiting investors' ability to exit their positions before fund maturity (Guimarães, 2023).

2.3 Private Equity Investment Funds (FIPs), Pension Funds (EFPC), and the Role of the Secondary Market

FIPs are the primary vehicles used for private equity investments in Brazil and are regulated by CVM Instruction No. 578/2016. These funds raise capital from institutional investors to invest in private companies, fostering growth and value creation prior to divestment. According to the Brazilian stock exchange (B3, 2023), FIPs play a strategic role in capitalizing emerging companies and modernizing economic sectors by enabling long-term capital inflows and strengthening corporate governance practices.

Within the private equity context, FIPs are used to acquire significant stakes in established companies with the objective of restructuring, growth, and operational improvement. This investment model has become increasingly relevant in Brazil, as it reduces dependence on traditional capital markets and facilitates the financing of innovative firms (Minardi et al., 2019).

Pension funds, in turn, play a strategic role in financing FIPs due to their long-term investment horizons and need for asset diversification. These entities are primarily regulated by the National Monetary Council (CMN) Resolution No. 4,661/2018, which establishes guidelines for the allocation of resources backing pension benefit plans. Pension funds are permitted to allocate a substantial portion of their assets to private equity funds through FIPs. Additionally, CMN Resolution No. 4,994/2022 introduced significant updates by expanding investment possibilities in alternative assets and reinforcing the requirement that investment policies be aligned with the nature, duration, and liquidity of pension plan liabilities.

Nevertheless, both FIPs and pension funds face a common challenge: the low liquidity of private equity investments, which hinders investors' ability to exit prior to fund maturity. As a response, the secondary private equity market emerges as a mechanism that allows the trading of FIP units among institutional investors without requiring the issuance of new units by the fund (Silva, 2022). Unlike the primary market, where capital is directed toward portfolio company investments, the secondary market involves the transfer of ownership stakes, offering greater flexibility to investors seeking liquidity without disrupting fund operations.

Although the secondary private equity market is well established in developed economies, it continues to face structural challenges in Brazil. The lack of a regulated environment and specialized trading platforms limits the liquidity of FIP units and complicates the divestment process.

For pension funds, this lack of liquidity represents an additional obstacle. Despite their long-term investment horizon, EFPC must periodically rebalance portfolios and ensure sufficient cash flow to meet pension benefit obligations. However, the absence of a consolidated secondary market infrastructure often results in substantial discounts on FIP units, reducing expected returns and diminishing the attractiveness of private equity investments for institutional investors (Botrel, 2017; Giambiagi & Nese, 2022).

In this context, the development of an efficient secondary market could benefit both private equity managers by expanding strategic exit alternatives and institutional investors by enhancing liquidity without compromising fund performance. Regulatory advancements and the creation of specialized platforms for trading FIP units are essential to consolidating this market in Brazil (Guimarães, 2023).

3 Methodological Procedures

This study is classified as descriptive, adopting a documentary analysis approach. This methodology enables the examination of existing secondary data obtained from institutional sources and financial reports. Unlike bibliographic research, which is grounded in academic literature, documentary analysis relies primarily on official documents, financial statements, and regulatory norms as its main sources of information (Gil, 2022).

3.1 Selection of FIPs and Transactions Analyzed

The FIPs analyzed in this study were selected based on transactions carried out by the pension funds Previ and Petros in 2021 and 2019, respectively. These transactions were disclosed on the institutions' official websites and involved the sale of fund units to Spectra Investments. The selection is justified by their sector relevance, asset volume, pioneering nature as secondary market transactions, and strategic market impact, making them emblematic cases for understanding the dynamics of Brazil's secondary private equity market.

Table 1 presents the list of FIPs traded by Previ, while Table 2 presents the list of FIPs traded by Petros.

Table 1

FIPs Traded by Previ in the Secondary Market in 2021

FIPs	National Registry of Legal Entities (CNPJ)
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FIP Brasil Agribusiness	11.160.957/0001-11
FIP Brasil Sustainability	09.482.532/0001-87
FIP Brasil Equity Properties	08.999.182/0001-68
FIP Brasil Petróleo 1	14.240.738/0001-30
FIP Brasil Ports and Logistics Assets	14.737.553/0001-36
FIP Institutional Investors III	09.064.476/0001-60
FIP Terra Viva	08.988.307/0001-54

Source: *Brazilian Securities and Exchange Commission (CVM) (2022).*

Table 2

FIPs Traded by Petros in the Secondary Market in 2019

FIPs	National Registry of Legal Entities (CNPJ)
FIP Oil and Gas	11.083.096/0001-15
FIP Brasil Petróleo 1	14.240.738/0001-30
FIP Infrabrasil	07.452.281/0001-62
FIP Angra Infra	07.715.713/0001-80
FIP Institutional Investors II	06.962.594/0001-06
FIP Institutional Investors III	09.064.476/0001-60
FIP Caixa Ambiental	08.576.668/0001-93

Source: *Brazilian Securities and Exchange Commission (CVM) (2022).*

The final transaction values were obtained from official publications on the funds' websites. The total amount received by Previ was BRL 157.0 million, while Petros received BRL 180.0 million.

3.2 Data Collection and Analysis

Based on the selection criteria for the FIPs, we collected data from multiple sources: (1) the National Registry of Legal Entities (CNPJ) of the FIPs, accessed through the CVM website; (2) annual reports and financial statements of the FIPs, available on the CVM platform; (3) quarterly statistical reports of pension funds, obtained from the Previc website; and (4) annual reports and investment statements of the pension funds, available on their institutional websites.

Information regarding the ownership stakes held in the FIPs is not publicly available through the CVM. Therefore, for this study, ownership positions were estimated based on the net asset values of the FIPs, marked to market, as disclosed in the annual reports and investment statements of the EFPC. It is important to note that EFPC do not directly acquire FIP units; rather, the benefit plans they manage invest in these funds using resources allocated to their investment portfolios. Ownership estimates followed the guidelines established by CMN Resolution No.

4,994/2022, which allows benefit plans managed by EFPC to allocate up to 15% of their assets to FIP units, subject to an additional limit of up to 25% of the net assets of each FIP invested.

Accordingly, CMN Resolution No. 4,994/2022 provides that, in the event of compulsory liquidation, such as the early liquidation of a FIP that still holds assets in its portfolio, followed by the direct distribution of assets to fund unit holders, pension funds are prohibited from investing in shares or other financial assets issued by privately held corporations.

After data collection, the analysis proceeded along two dimensions: (1) based on the net asset values of the FIPs' portfolios as reported in their financial statements, in accordance with CVM Instructions No. 578 and No. 579, or based on the net asset value of the benefit plans' ownership interests in the FIPs as disclosed in annual information reports (RAI) or other available investment statements, from which the unit value was derived and the participation of each plan in each FIP was calculated; and (2) by aggregating the ownership values of benefit plans across each FIP and comparing the sale price of the FIP package with the net asset values recorded in the pension funds' annual reports, identifying the premium or discount applied in each transaction.

To estimate Previ's ownership in each FIP, the 2019 annual report available on its official website was used. This report provides the number of units held by Previ in each FIP listed in Table 1, as well as their respective net asset values. Using this information, the CNPJ of each FIP was consulted on the CVM website to obtain the total number of subscribed units as of December 2019. Previ's ownership share in each FIP was calculated by dividing the number of units held by Previ by the total number of units subscribed in the fund.

For Petros, data from the 2018 annual report and investment statement were used to identify the net asset value of each fund listed in Table 2. The number of subscribed units and the unit value as of December 2018 were obtained through CVM records. In this case, the estimation involved two steps: (1) dividing the net asset value of each FIP held by Petros by the unit price to estimate the number of units held; and (2) dividing the estimated number of units held by Petros by the total number of subscribed units in each fund.

A relevant methodological limitation of this study should be noted. The net asset values used to estimate EFPC ownership stakes were extracted from the most recent annual reports available prior to the transactions. For Petros, the reference date was December 2018, while for Previ it was December 2019. However, the transactions occurred during 2019 and 2021, respectively, implying a significant time lag. This limitation is particularly relevant in the case of Previ, whose transaction took place amid the effects of the COVID-19 pandemic, an event that had a substantial impact on the valuation of illiquid assets. Consequently, the estimated premiums or discounts reported in this study should be interpreted with caution, as they represent approximations based on publicly available data rather than precise market values at the time of the transactions.

For the final results, variables related to the carrying costs of each FIP in pension fund portfolios were not considered, including: (1) projected management fees; (2) asset and fund maintenance costs that could result in the need for additional capital contributions; (3) the subscription of committed capital in FIPs where not all committed capital had been fully contributed; and (4) potential future credit receipts (earn-outs) from divestments, as well as situations in which the fund or its portfolio companies are defendants in legal or arbitration proceedings.

It is important to emphasize that this research seeks to approximate the values effectively negotiated by pension funds based on publicly available information. Nonetheless, variations may occur in the carrying values of funds and in ownership estimates. Moreover, because these are

private transactions, confidential documents were not used. Considering the illiquidity of the assets, the requirement for independent valuation reports, and the possible use of different time windows across data sources, discrepancies in the reported valuation of FIP portfolios may arise.

To highlight the need for pension funds to recycle their private equity portfolios, this study draws on research conducted by Spectra Investments in partnership with Insper regarding pension fund allocations to private equity in Brazil (Minardi et al., 2016), as well as studies by Minardi et al. (2019) on the impact of market conditions on private equity exits and by Siqueira, Carvalho, and Netto (2011) on the determinants of success in private equity and venture capital investments in Brazil.

The Spectra–Insper study identifies key points of divergence in EFPC allocations to private equity and venture capital funds, including: (1) the selection of managers with significantly less experienced teams; (2) a high proportion of investments in single-asset funds, resulting in low portfolio diversification and risk concentration in a small number of companies; and (3) excessive concentration in the infrastructure and oil and gas sectors, at the expense of broader allocation across more traditional private equity strategies (Minardi et al., 2016).

To understand the early stage of secondary private equity transactions in Brazil, particularly those involving limited partners (LPs), this study also compiled data from multiple institutional sources. These include the third-quarter 2022 statistical report published by Previc, consolidated statistical reports from the Brazilian Association of Closed Pension Funds (ABRAPP) from December 2020 to September 2022, and third-quarter 2022 data on the Brazilian private equity and venture capital industry published by the Brazilian Private Equity and Venture Capital Association (ABVCAP). At the global level, reports by Capital Dynamics (Chene, Marks, & Pfister, 2022) and McKinsey & Company (2022) were also used.

4 Results and Analysis

4.1 Contextualization of Investments and the Secondary Market

According to the statistical report for the third quarter of 2022 published by the National Superintendence of Supplementary Pension (Previc, 2023), the total assets held by Closed Supplementary Pension Entities (EFPC) amounted to approximately BRL 1.0 trillion. Of this total, BRL 14.1 billion (1.3%) was allocated to structured investments, a category that includes emerging companies, equity participations, and real estate funds. In the same period, data from the consolidated statistical report of the Brazilian Association of Closed Pension Funds (ABRAPP, 2022) indicate that allocations to participations representing private equity and venture capital investments accounted for approximately 1.0% of total EFPC investments, equivalent to around BRL 9.8 billion.

In Brazil, total investments in private equity and venture capital amount to BRL 59.5 billion, with BRL 37.2 billion allocated to private equity and BRL 22.3 billion to venture capital, according to consolidated industry data for the third quarter of 2022 (ABVCAP). EFPC participation thus represents approximately 16.4% of total capital invested in private equity and venture capital in Brazil.

At the global level, according to the annual report by McKinsey & Company (2022), the private equity segment, including venture capital, reached a historical record of USD 6.3 trillion in assets under management (AUM) in 2021. Transaction volumes in the global secondary market also peaked in 2021, exceeding USD 100 billion and involving both limited partner (LP)-led and

general partner (GP)-led transactions. Projections indicate that these volumes may surpass USD 200 billion by 2025 (Chene, Marks, & Pfister, 2022).

Figure 1 illustrates transaction volumes in the global secondary market, distinguishing between GP-led transactions, where the fund manager is the seller, and LP-led transactions, where the seller is the investor. Values are expressed in billions of U.S. dollars and represent total transaction volumes.

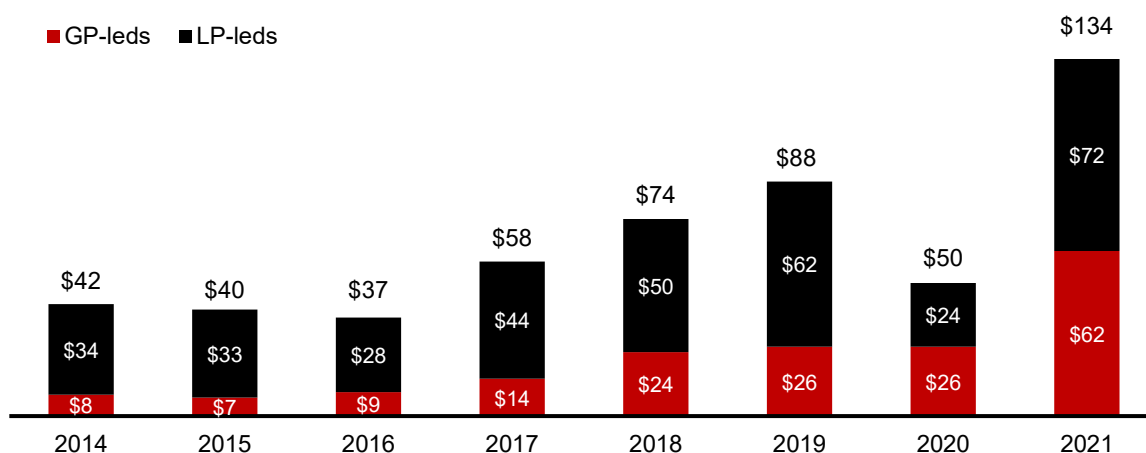


Figure 1 *Global Secondary Market Transaction Volumes (USD billions)*

Source: Capital Dynamics (Chene, Marks, & Pfister, 2022).

Having presented the global and domestic context of the private equity secondary market, the following sections analyze the stages and outcomes of secondary market transactions conducted by the EFPC examined in this study.

4.2 Analysis of Previ and Petros Transactions

The phases and procedural steps involved in secondary market transactions of FIP units are partially analogous to those observed in mergers and acquisitions (M&A) transactions. These typically include: (1) the Letter of Intent (LOI), in which the parties establish a preliminary, generally non-binding commitment to advance negotiations; and (2) the Non-Disclosure Agreement (NDA), which is executed to ensure confidentiality and protect sensitive information disclosed during the negotiation process (Silva, 2022; Giambiagi & Nese, 2022).

Following the execution of the NDA and the provision of fund-related information by the selling unit holder to the potential buyer, the buyer is granted an agreed-upon analysis period. Subsequently, the buyer is expected to submit a non-binding offer (NBO), initiating negotiations regarding pricing and transaction structure (Minardi et al., 2019).

The pricing phase is typically conducted with the support of financial advisors engaged by each party. Independent valuation reports are commonly employed, using methodologies such as discounted cash flow (DCF) analysis of the fund's portfolio companies or EBITDA multiples (Coelho, Contani, & Madkur, 2021; Giambiagi & Nese, 2022). According to Giambiagi and Nese (2022), the high level of information asymmetry associated with privately held companies,

combined with their greater inefficiency relative to publicly traded firms, creates room for pricing discrepancies, resulting in transactions occurring below or above fair value.

Once the main terms are negotiated and agreed upon, a definitive agreement is drafted. Provided that no outstanding conditions precedent remain, the agreement is executed, culminating in the *closing* of the transaction. As explained by Botrel (2017), a secondary acquisition occurs when units held by individuals or legal entities that already form part of the target's ownership structure, in this case the FIPs, are acquired by third parties who were not previously fund unit holders. This differs from primary acquisitions, which occur through the subscription of newly issued units.

Botrel (2017) further clarifies that the transfer of fund units between unit holders is generally permitted, subject to restrictions set forth in the fund's bylaws, such as preemptive rights granted to existing investors and, in some cases, the requirement of approval by a General Meeting of Unit Holders. This is because the fund's bylaws function as a contractual or statutory equivalent, defining internal governance structures and limits (Silva, 2022).

Based on Previ's 2019 annual report and information obtained from the CVM, Table 3 presents the market-value-based net asset position and estimated ownership share of Previ in each FIP traded in the secondary market in 2021.

Table 3

Ownership and Net Asset Value of FIPs Traded by Previ in the Secondary Market in 2021

FIPs	% Ownership Share FIP	Net Asset Value (BRL)
FIP Brasil Agribusiness	20.0%	94,824,426.58
FIP Brasil Sustainability	19.0%	50,399,581.75
FIP Brasil Equity Properties	19.0%	0.00
FIP Brasil Petróleo 1	12.8%	6,148,986.15
FIP Brasil Ports and Logistics Assets	12.4%	20,705,942.02
FIP Institutional Investors III	9.0%	7,058,889.31
FIP Terra Viva	11.8%	11,150,926.33
Total		190,288,752.14

Note: Ownership and net asset values refer to December 2019, based on Previ's annual report.

Source: *Research data.*

Table 4 presents Petros's net asset position and estimated ownership share in each FIP traded in the secondary market in 2019, based on the 2018 annual report and investment statement.

Table 4

Ownership and Net Asset Value of FIPs Traded by Petros in the Secondary Market in 2019

FIPs	% Ownership Share FIP	Net Asset Value (BRL)
FIP Oil and Gas	21.7%	-2,081,999.53
FIP Brasil Petróleo 1	4.7%	2,684,717.40
FIP InfraBrasil	18.4%	65,601,271.32

FIP Angra Infra	25.0%	145,945,931.25
FIP Institutional Investors II	8.0%	-90,204.90
FIP Institutional Investors III	17.9%	18,792,069.71
FIP Caixa Ambiental	25.0%	6,656,095.16
Total		237,507,880.41

Note: Ownership and net asset values refer to December 2018, based on Petros's annual report.

Source: *Research data*.

Some figures reported in Tables 3 and 4 deviate from expected patterns and warrant clarification. In Previ's case, FIP Brasil Equity Properties recorded a net asset value of zero as of December 2019. This may indicate that the fund was in the process of winding down, had no remaining relevant assets, or that residual assets had been fully written down in accordance with CVM Instruction No. 579/2016 for the valuation of illiquid assets.

In the case of Petros, two funds—FIP Oil and Gas and FIP Institutional Investors II—reported negative net asset values as of December 2018. Although uncommon, this situation may arise when liabilities exceed assets, due to factors such as legal contingencies, permanent impairment of underlying assets, or negative accounting adjustments to portfolio valuations. These cases highlight the risks inherent in illiquid investments and the complexity involved in managing and valuing FIPs.

Based on the aggregate net asset values reported in Tables 3 and 4, an analysis was conducted comparing transaction prices with the carrying values of the FIPs in pension fund portfolios, as shown in Table 5.

Table 5
Premium/Discount Analysis of Transactions

Consolidated	Petros	Previ
Net Asset Position (BRL)	237,507,880.41	190,288,752.14
Spectra Investments Offer (BRL)	180,000,000.00	157,000,000.00
Premium/Discount (%)	-24.2%	-17.5%
Difference (BRL)	57,507,880.41	33,288,752.14

Note: Net asset values refer to December 2018 (Petros) and December 2019 (Previ). Time lags may affect the precision of the estimated discounts.

Source: *Research data*.

Table 5 shows that both transactions were executed at discounts relative to the carrying values of the FIPs in the pension funds' portfolios. These discounts can be attributed to several factors, including information asymmetry, low liquidity in the secondary private equity market, and structural characteristics of the funds, as discussed in the literature review.

Information asymmetry is a determining factor in the pricing of secondary transactions. As noted by Giambiagi and Nese (2022), privately held companies exhibit substantially higher uncertainty regarding financial performance and prospects, creating scope for price arbitration. Harris, Jenkinson, and Kaplan (2014) support this view, demonstrating that return dispersion among private equity funds is significantly greater than in public equity markets. As a result,

secondary investors apply substantial discounts to compensate for uncertainty regarding the quality of underlying assets.

Another critical factor is limited liquidity. As highlighted by Botrel (2017), private equity investments are long-term and inherently difficult to exit, making secondary market transactions one of the few viable options for institutional investors seeking portfolio reallocation. However, the lack of a robust secondary market in Brazil complicates price discovery and increases discounts, as few buyers are willing to acquire these assets on short notice. Guimarães (2023) emphasizes that despite recent growth, the Brazilian secondary private equity market still faces structural challenges, including limited transparency and the absence of structured trading platforms, which contribute to higher discounts.

In response to these challenges, specialized market participants have adopted practices to mitigate risks associated with information asymmetry, illiquidity, and pricing uncertainty. These include the increasing use of earn-out clauses linking part of the payment to future asset performance, escrow accounts, and indemnification clauses to protect buyers against hidden liabilities or adverse events. The growing use of independent due diligence, standardized virtual data rooms, and specialized financial and legal advisors also reflects efforts to align Brazilian practices with international standards, signaling gradual market maturation.

Fund structure and managerial challenges also influence the magnitude of discounts. The Spectra–Insper study (Minardi et al., 2016) found that Brazilian pension funds often allocated capital to funds with excessive sector concentration, limited managerial experience, and insufficient diversification. These factors may have adversely affected fund performance and pricing in the secondary market. Deficiencies in manager selection and investment structuring can complicate divestment processes and increase the need for discounted sales.

Exit dynamics further contribute to observed discounts. Minardi et al. (2019) demonstrate that excessively long holding periods negatively affect internal rates of return (IRR), prompting investors to pursue early exits even at the cost of realized losses. This dynamic may have pressured EFPC to accept larger discounts to liquidate positions and rebalance portfolios.

Additionally, the cyclical nature of private equity returns in Brazil may influence the attractiveness of secondary transactions. Coelho, Contani, and Madkur (2021) show that private equity performance is closely linked to macroeconomic conditions, increasing uncertainty during periods of economic volatility, which can lead investors to demand higher discounts as risk compensation.

Finally, Carvalho, Ribeiro, and Furtado (2006) argue that regulatory and structural barriers continue to constrain the development of a mature private equity sector in Brazil. The absence of a solid institutional framework and appropriate incentives for secondary trading limits liquidity and often results in transactions being concluded at substantial discounts.

In summary, the discounts observed in the analyzed transactions reflect not only the intrinsic characteristics of the secondary private equity market but also broader structural challenges in Brazil, including low liquidity, information asymmetry, fund structure issues, and institutional constraints. Strengthening the secondary market through improved regulation and enhanced transparency may contribute to reducing discounts and increasing asset valuation over the long term.

5 Final Considerations

This study aimed to analyze the transactions involving the sale of pension fund units in the secondary market of Private Equity Investment Funds (FIPs) carried out by Petros and Previ in 2019 and 2021, respectively, to highlight the main challenges, structural limitations, and development opportunities of the secondary FIP market in Brazil. Based on our documentary analysis of publicly available data, we observed that although still incipient in the Brazilian context, these transactions mark an important milestone for the industry, signaling a strategic divestment movement led by pension funds.

The results indicate the occurrence of significant discounts in the analyzed transactions, reflecting a series of structural challenges in the Brazilian market, such as low liquidity, high information asymmetry, and the lack of consolidated platforms for transaction intermediation. These difficulties impair efficient price formation and restrict institutional investors' access to portfolio reallocation mechanisms, particularly in periods of heightened macroeconomic instability.

The implications of these discounts for the pension plans of Closed Supplementary Pension Entities (EFPC) are substantial. By selling units at prices below their net asset value, pension funds potentially compromise a portion of the assets intended to finance future benefit payments, directly affecting participants and beneficiaries. In addition, sponsoring entities, often without full awareness of such transactions, may be impacted by increases in future contributions or by the need for actuarial funding adjustments. In light of this, we recommend that the National Superintendence of Supplementary Pension (Previc) establish mandatory disclosure mechanisms for the purchase and sale of FIP units, ensuring greater transparency and accountability to different stakeholders, including deliberative councils, sponsors, participants, and beneficiaries.

For the secondary market of FIP units to consolidate as a viable source of liquidity in Brazil, progress is required on several structural fronts. From a regulatory perspective, it would be desirable for legislation to encourage the creation of specialized trading platforms, as well as mechanisms that promote information standardization, transaction disclosure, and access to historical transaction data. From a macroeconomic standpoint, the adoption of a responsible fiscal policy that contributes to the reduction of long-term interest rates may have direct effects on asset valuation and on the expansion of investment opportunities.

In the academic field, this study contributes to filling a gap in the national literature on the secondary private equity market by providing an unprecedented empirical analysis of concrete cases and systematizing the factors that affect price formation and transaction dynamics. From a market-practice perspective, the study offers valuable insights for institutional investors, regulators, and FIP managers by indicating pathways toward greater efficiency, transparency, and governance in this strategic segment.

Thus, in response to the research question, we conclude that Brazilian pension funds face significant obstacles when selling FIP units in the secondary market, evidencing that this segment remains at an early stage of institutional development in Brazil. Overcoming these challenges requires not only innovative contractual solutions, such as the use of earn-out clauses and specialized due diligence, but also regulatory and macroeconomic advances that enhance liquidity and transparency in transactions.

Finally, it should be noted that this research has methodological limitations, particularly regarding the use of outdated net asset values as proxies for fair value at the time of the transactions. The time lag is more pronounced in the case of Previ, whose transaction occurred in

2021, based on data from December 2019, which imposes constraints on the accuracy of the estimated discounts. Therefore, the results should be interpreted with caution, serving as indicative rather than absolute values.

Future research should incorporate primary data, interviews with fund managers, and a detailed review of transaction contracts. Advancing Brazil's secondary FIP market will require coordinated efforts from private stakeholders, regulators, and researchers focused on strengthening the sector's institutional foundations.

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