

Private Equity ABC

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INDEX

EXECUTIVE SUMMARY	3
1. RELEVANCE OF PRIVATE EQUITY: INTERNACIONAL EVIDENCES	5
1.1 BUSINESS VOLUME	6
1.2 ECONOMIC AND FINANCIAL PERFORMANCE	7
1.3 EMPLOYMENT CREATION	8
1.4 ECONOMIC GROWTH	10
2. ECONOMIC PRIVATE EQUITY EFFECTS IN PORTUGAL	11
3. PRIVATE EQUITY IN PORTUGAL AND THE REST OF EUROPE: COMPARATIVE ANALYSIS	18
3.1 CANVASSING	19
3.2 INVESTMENT	24
3.3 DISINVESTMENT	26
4. DEVELOPMENT RECOMMENDATIONS TO THE PRIVATE EQUITY IN PORTUGAL	27
4.1 RAISING CAPITAL FROM INVESTORS	27
4.2 INVESTMENT	28
4.3 DISINVESTMENT	32
4.4 NEW PLAYERS AND FINANCIAL SOLUTIONS	33

Executive Summary

The Private Equity ABC study was developed by the PVCI project - Portugal Venture Capital & Innovation, under call for tender 04/SIAC/2017 - SUPPORT SYSTEM FOR COLLECTIVE ACTIONS - INTERNATIONALISATION, inserted in the Competitiveness and Internationalisation Operational Programme (Compete 2020).

This study analyses the potential benefits of the private equity, from the individual perspective of financed companies, and also from the aggregate nacional economy perspective. In this case, this study evaluates the impact of private equity on innovation, employment criation and on the development growth and internacionalization of companies business. Besides this evaluation, assessed from information of a significative companies sample participated by private equity corporations in Portugal, this work does a comparative analyses of the portuguese situation to the rest of Europe and presents a set of recommendations to the industry development.

The empiric evidence in Portugal and in the rest of Europe, supported by the checked sources, suggests that in Portugal:

- There is a notable contribution of private equity for the business volume of the respectives participated corporations, that in this case show a significantly more favorable evolution when compared to the respective national average per company.
- This fact is evident in the evolution of financial autonomy, with an increase in the last decade higher in the case of private equity participations than the national average per company.
- With the entry of private equity, the respective subsidiaries improve their operating efficiency, as reflected in asset turnover and EBITDA margin, above the average per company in Portugal. Given the low levels of these indicators at the time of the entry of private equity, the evolution of efficiency is even more relevant.
- After the equity stake is taken by private equity, the investees create more jobs in percentage points than the national average. The private equity industry in Portugal is estimated to be responsible for investments in companies with total of 60.4 thousand jobs.

- A greater diversification of the funds sources raised by private equity is recommended, with the need to reinforce the weight of investments from pension funds, insurance companies and funds of non-domestic origin. To stimulate investment in private equity, the OECD (2020) even suggests the reassessment of investment regimes and capital requirements, for example through tax incentives to investors.
- The investment in high-tech sectors (e.g., Communications, IT and electronics; Biotechnology and health) has space to be reinforced, according to what was observed on the generality of European countries.
- A solution for the problem of dimension that many private equity corporations face is investment syndication, from which advantages are expected in terms of diversification of specific risk, reduction of information asymmetry, and greater international visibility.
- Regarding the forms of the investments disposal, it's advisable to stimulate the sale to other private equity investors, trade sale and sale through public offering - as highlighted by the OECD (2020) - since these forms of disinvestment in Portugal still have an inferior relative importance than the European average.

1. Relevance of Private Equity: Internacional Evidences

Private equity consists of investment (typically minority) in equity instruments (own and borrowed) of companies, with the aim of participating in their development and obtaining capital gains from the subsequent sale of this investment. The investment, made by specialized entities (directly, through private equity companies, or indirectly through investment vehicles, such as private equity funds), is usually made for a limited period of time, but generally for medium to long term. Among the purposes of such investment in investee companies are the development of new and innovative products and services, strengthening their balance sheet, supporting their working capital needs, and supporting acquisitions of other companies. The nature of the investment may thus assume different typologies and focus on different stages of the life cycle of the enterprises, namely covering both the initial stages (e.g., early stage financing) and the more advanced stages of this cycle (e.g., recovery capital, development capital). On the other hand, there are different disinvestment routes for the private equity companies, such as sale in the market to investors, including other private equity firms, buy-back by the promoters, sale to third parties, besides, in an extreme case, the liquidation of the investee company itself.

Access to private equity consequently provides investee companies with a source of financing for their projects and activities that, due to the nature of the associated risks, many of these companies would have difficulty obtaining otherwise. Especially in the early stages of companies' lives, when their collateralizable assets are minimal and capital is scarce, this is one of the most appropriate financing alternatives. In addition, private equity can be expected to contribute to reduce the dependence on debt, thus reducing the burden of financial charges and relieving companies of the need to provide real or personal guarantees normally associated with traditional bank financing. Nevertheless, private equity should stimulate the development of many enterprises and, consequently, of their national economies.

Although academic studies on Portuguese reality are not abundant, the economic effects generated by the private equity industry have been widely studied internationally. A synopsis of the literature on this subject is presented by Cumming et al. (2007), who conclude that there is a general consensus over

time on a significant improvement in productivity, financial performance and work practices in firms backed by private equity. In general terms, the economic benefits pointed out to private equity arise from the changes that this form of investment introduces in the companies that benefit from it, namely in terms of finance, governance and operational and sectorial experience. For the capital raised by the private equity companies (e.g. from institutional investors, private investors and banks) to finance the investments made, these benefits are subsequently reflected in higher risk-adjusted returns¹.

Guided by the existing literature and international empirical evidence, this section examines four relevant vectors of private equity in terms of their economic effects on investee companies: turnover; economic and financial performance; job creation; and economic growth.

1.1 Business volume

According to the previous literature review about this topic, Gompers e Lerner (2001) show that private equity helps the companies to grow in a fast and well-succeeded way. For example, french companies, referred by Boucly *et al.* (2011), in his study it's concluded that private equity stimulates the growth of the participated companies. Duo to the slowdown on the access restrictions to the credit by this companies, the private equity generates value, because allows them to develop growth opportunities previously unexplored.

The empiric evidence of German companies is mentioned by Engel e Keilbach (2007). The authors analyze 21,541 young German firms, of which 0.66% are financed by private equity, and find significant differences in terms of growth and innovation rates between firms that have benefited from this source of financing in relation to others. Specifically, firms financed by private equity show significantly higher growth rates than comparable firms that are not financed in this way. Regarding innovation, their study shows that the use of private equity leads to higher innovation rates, although this was already happening to some extent in participated companies before the entry of this type of financing. This means that the private equity investors seek to invest in companies that have previously

¹ For example, from a sample of 321 investment disposals in the UK, Nikoskelainen and Wright (2007) indicate that private equity investors achieve a significantly high average return (22.2% above market returns). In addition, a study by the National Bureau of Economic Research (Cochrane, 2001) of 7,765 private equity-owned companies shows that the most frequent return is around 25%.

demonstrated high innovation capacity, helping them mainly in the area of commercialization and to enhance their growth.

Using data from several years to assess the impact of private equity on the performance of firms across industries and countries, Bernstein et al. (2016) find that industries in which private equity has invested grow their total output faster than those that remain. This study confirms that the absorption and diffusion effect of knowledge and innovation within the same industry means that even industries with less private equity activity benefit from this form of investment. Moreover, private equity-owned firms are less exposed to aggregate economic shocks.

Given the fundamental importance of turnover growth, Harrison and Mason (2019) highlight the role of mergers between companies and solutions that enable them to acquire scale. In many companies, the problem of scale encountered stems from their lack of ambition, leadership capacity and workforce with key skills, scarcity of innovation, and difficulty in accessing capital to finance growth. Private equity is thus typically seen as a solution to overcome these limitations and solve such problem.

Strömberg (2009) summarizes the empirical evidence disclosed by a large set of studies on private equity, covering several countries, industries and time periods. According to him, compared to other firms at the same stage of the life cycle, firms that have benefited from private equity investment grow faster and are more agile in creating and marketing new products. This makes the development of the economy itself potentially positively related to private equity intervention.

1.2 Economic and financial performance

According to Moro-Visconti (2021), private equity investors provide business management know-how and financial support to the companies in which they invest in order to create value for them over time. To evaluate the financial effects of private equity at the microeconomic level, Alemany (2006) studied the growth of Spanish companies financed through this source of funding. From the analysis of key indicators such as sales, gross margin, employability, among others, the author confirms that, for most indicators, private equity-financed firms tend to outperform non-private equity-financed firms.

Based on empirical evidence from 16 OECD countries, Romain and van Pottelsberghe (2004) conclude that private equity improves aggregate economic performance by promoting innovation and improving the knowledge absorption capacity of firms, both public and private. On the one hand, it stimulates the introduction of new products, processes and services, which contribute to the increase of firms' productivity. On the other hand, it allows the development of know-how and skills in participated companies to benefit from existing knowledge and improve production systems. To this extent, private equity provides a social return on investment significantly higher than that generated by other firms or by public research and development (R&D). Additionally, it improves the elasticity of production with respect to R&D and facilitates the absorption and diffusion of knowledge and innovation (knowledge spillover) generated by universities and firms.

Private equity investments are thus associated with significant improvements in firms' operations and productivity. Harris et al. (2005) provide evidence of these improvements for the case of the United Kingdom, while Bergström et al. (2007) do so for firms in Sweden.

At last, Strömberg (2009) emphasizes the finding of the contribution of private equity to the increase in operating margins, productivity and capital efficiency. The author also emphasizes that the favorable financial effect, particularly in the first years after the acquisition by private equity, does not restrict long-term investment and growth.

1.3 Employment creation

Academic studies on the influence of private equity on job creation have not shown convergent conclusions in comparison, although there is consistency in the view that investee companies create economic value by increasing their operational efficiency (Strömberg, 2009).

For example, analysing the case of French firms, Boucly et al. (2011) confirm that private equity participations show an increase in employment and wages that is statistically higher than that of other comparable firms. By comparing the evolution in the 4 years before the entry of private equity with the 4 years after the transaction, the authors confirm that employment created in companies that benefited from private equity was 18% higher than in other companies. This study also confirms that

the benefits in terms of jobs created with the intervention of private equity are robust in all time periods analyzed.

Similar confirmation is obtained by Davila et al. (2003), when analyzing Silicon Valley start-ups. The observation in this case was that there is an increase in the number of employees before private equity financing, which is reinforced and accelerated in the months following the financing. Thus, the authors conclude that, in addition to boosting employment, business growth and value creation, private equity also has a signaling and credibility effect that benefits the quality image of firms.

Bernstein et al. (2016) also show that, across the range of countries and industries they analyzed, the accelerated increase in total output of private equity-owned firms contributed positively to subsequent employment growth in these firms, outpacing that of non-owned firms.

Nevertheless, some studies don't confirm that with private equity entry, employment in investee firms grows more than in other firms. For example, Amess and Wright (2007) provide evidence on 5,369 firms in the UK for the period between 1999 and 2004 and conclude that the 1,350 firms acquired by private equity show the same employment growth as the others, although they show a more modest increase in wages.

Kaplan (1989) analyzes US firms and confirms that, after the acquisition by private equity, there is employment growth, but with a lower variation than in other firms in the same industry. Similar confirmation is provided by Davis et al. (2011), although in this case the authors add that prior to their acquisition by private equity the investee companies already had lower employment growth than the others.

The introduction of operational efficiencies and the consequent increase in productivity in participated companies, as well as possible cost reduction pressures to make them more profitable, are among the explanations for the existence of a more modest evolution in employment in these companies. Taking as a reference academic studies supported by information from various countries and time periods, regarding the effects of private equity on employment, Kaplan and Strömberg (2009) admit that employment in participated companies grows at a lower rate than in other companies. However, the

authors note that "the empirical evidence on employment is broadly consistent with the view that private equity firms create value by operating more efficiently" (Kaplan and Strömberg, 2009: 134).

1.4 Economic growth

Due to the potential reverse causality (feedback) between private equity dynamics and economic growth, Strömberg (2009) points out that there is no rigorous academic study that concludes on whether private equity has a significant impact on GDP evolution. However, because of the effect of private equity on individual firm performance, productivity and sustainability, the expectation is that, in macroeconomic terms, private equity contributes to a better overall allocation of capital and a more efficient economy. This potential favorable contribution of private equity is especially relevant during economic downturns, when firms' access to external financing is limited.

In fact, empirical evidence confirms that private equity is a fundamental component in the development of a prosperous business economy (Mason and Harrison, 2002), of the business innovation process (Powell et al., 2002) and of the stimulus to the creation of new companies (Popov and Roosenboom, 2009). Given the high weight and relevance that Small and Medium Enterprises have in the business fabric and national economies, it is essential that they have access to adequate financing to enable their development and future growth. In this aspect, for being a form of financing often oriented to small companies, many of them recent, private equity assumes a relevant role.

In general, the literature suggests the existence of positive economic impacts generated by private equity, both in terms of the economic development of firms, industry and even the country (Belden et al., 2001; Kortum and Lerner, 2001; Wright et al., 2009). It remains to be seen whether, in the Portuguese case, there are similar effects to those observed in other economies. The next sections intend to help better evaluate this question, analyzing the economic effects of private equity in Portugal and comparing the private equity activity in the country with the rest of Europe.

2. Economic Private Equity effects in Portugal

According to the CMVM (2019) - Portuguese Securities Market Commission - Portugal had 52 private equity companies (PE Firms) in 2019, with the value of assets under management in this sector amounting to €5.1 billion, invested in 916 equity investments. 94.7% of this amount corresponded to investment in the acquisition of units in 135 private equity funds, mostly managed by the VC Firms themselves.

In order to assess the effects that the activity of PE Firms in Portugal potentially exerts on the respective subsidiaries in terms of their turnover, economic and financial performance, internationalization of the business and employment created, a survey was sent to the PE Firms identified on the CMVM website. Of the 55 contacts made, 15 responses were received, 10 of which were considered valid and complete for the purposes of the survey. 2 PE Firms provided partial information. Given the lack of response from some PE Firms with a significant market share, the survey information was complemented with data from Bureau Van Dijk's SABI concerning the equity holdings of these PE Firms. Thus, in combining the survey responses with the public data, information from 18 PE Firms was analyzed.

The database obtained in this obtained corresponds to a total of 191 holdings (already purged of some overlapping investments by more than one PE firms). Two of these holdings correspond to Holding Companies (SGPS) which, by their nature, don't have an economic activity and therefore provide limited information content. In turn, the data obtained confirms that the participations are minority in the majority of cases.

For the analyzed companies, existing data in 2019 on employment and some selected financial variables were obtained.² Note that the analysis of data up to 2019 allows avoiding possible constraints of interpretation due to the strong negative impact of the SARS-CoV-2 pandemic on employment and accounts of many companies in 2020. For the analyzed companies, the information existing at the date of acquisition (or in 2010, if the acquisition was prior to that year) was also obtained, allowing an evolutionary analysis of the selected variables. The evolution observed in respect

² The 2018 information was used in cases where the 2019 information wasn't available.

of PE firms' subsidiaries was then contrasted with the evolution recorded in the average per company in the non-financial sector at the national level between 2010 and 2019, whose data were also extracted from SABI. It should be emphasized that, in this comparison, it is predictable and natural to have a relative underestimation of the effects generated by private equity, given that, in the sample of companies analyzed, the vast majority of acquisitions by PE firms occurred much later than 2010 (some acquisitions are even from 2019).

Table 1 contains the indicators for which complete information was obtained (with the exception of total international sales, which wasn't possible to quantify for the national average per company). It can be seen in this way that, in 2019, the sample of affiliates per PE firms corresponded, for example, to a total of 17,887 jobs and a total turnover equal to 2.07 billion euros. Considering the analyzed affiliates, the above figures correspond to an average per company of 96.17 employees and €11.11 million in sales. Given the large size of a small number of affiliates, we also calculated the average per affiliate considering only the data up to the 95th percentile of each of the variables in question, obtaining 65.9 employees and sales of 7.17 million euros, both per affiliate of PE firms. However, it should be noted that the national average per firm incorporates values from close to 1000 large firms that were not excluded.

Table 1 – Financial and employment indicators

Unit: millions of euros (except in employment)

	Participated per VC Firms (total)	Average per company		Média (nacional) per company
		Total	Excluding the highest 5%	
Employment	17,887	96.17	65.90	11.01
Sales and services - total (V)	2,077	11.11	7.17	1.31
Internacional sales and services (VI)	738	4.15	2.49	NA
EBITDA	511	2.75	0.25	0.13
Asset - total (Total Asset)	6,802	36.57	11.83	2.09
Fixed Asset - total (FA)	2,650	14.25	5.57	1.25
Equity - total (EQ)	1,734	9.32	4.08	0.73

Sources: Inquérito do ISCTE-Executive Education; SABI

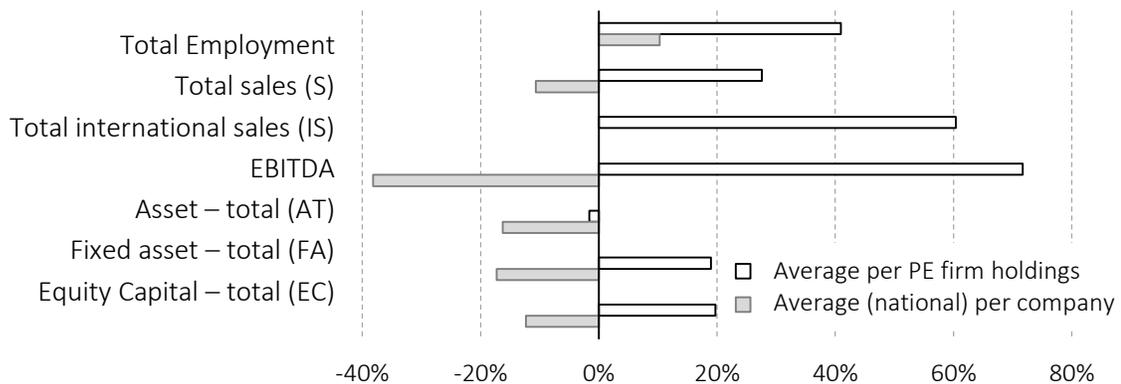
Regarding the total number of companies in Portugal, the previous variables (employment and sales) in average terms per company are 11.01 employees and 1.31 million euros, revealing that, on average, PE firms' holdings are significantly larger than the national average. If the average number of PE firms in Portugal is roughly in line with the values in the sample (excluding the information above the 95th percentile), it is expected that the companies in which the private equity industry holds an interest will be responsible for around 60.4 thousand jobs (65.90×916) and for a total turnover of around 6.57 billion euros. In relation to the total number of non-financial companies in Portugal with published accounts, these figures correspond, respectively, to approximately 1.73% of total employment and 1.27% of total turnover.³

It should also be noted that the EBITDA per participated company is about 2 times the national average. In this regard, based on the information obtained in the survey concerning 67 participated companies, it was possible to confirm that the accumulated corporate income tax paid by these companies during the private equity intervention period amounted to 364 million euros, or 5.4 million euros per participated company.

The evolution in both groups (Graphic 1), that of the average of subsidiaries per PE firms and that of the average per company in Portugal, shows that the first group has a significant increase in turnover (+27.6%), which contrasts with a fall in the second group (-10.7%). This empirical evidence of positive effects on turnover confirms the finding obtained by previous studies based on information from other geographies and distinct time periods (e.g., Bernstein et al., 2016; Boucly et al., 2011; Engel and Keilbach, 2007).

³ The projection for PE firms affiliates in Portugal based on the total average of the sample of affiliates naturally leads to higher figures: 88,089 jobs (2.52% of total non-financial firms) and 10.2 billion euros for total turnover (1.96% of total non-financial firms)

Graphic 1 – Variaton (%) from 2010 (or acquisition date, if later) to 2019



Sources: ISCTE survey - Executive Education; SABI

In our study it should be noted that a considerable part of the increase in the turnover of PE firms subsidiaries is generated by the strong growth in sales and services rendered abroad (+60.4%). Also noteworthy is the strong increase in EBITDA in the first group (+71.7%), in clear divergence with the 38.2% drop in the average per company in Portugal.

Concerning employment, a favorable evolution can be observed in both groups, but much more pronounced in private equity holdings (+40.9%). This means that the potential operational and productivity improvements in the subsidiaries, after their acquisition by PE firms, do not counteract greater job creation in these companies in Portugal. Our results thus corroborate the evidence presented in other analyses (e.g., Bernstein et al., 2016; Boucly et al., 2011) regarding the positive contribution of private equity to job creation.

Based on the data in Table 1, we extract a set of economic and financial ratios (Financial autonomy, EBITDA margin, Asset turnover, Fixed assets / Total assets, Weight of international sales).⁴ The situation observed in 2019 with regard to these ratios is shown in Table 2 and the respective evolutionary analysis is illustrated in Graphic 2. The results of Table 2 allow us to confirm that, compared to the national average per company in Portugal, PE firms subsidiaries in 2019 had lower

⁴ The comparison of the PE firms ratios with those of most companies in Portugal naturally assumes that the sample of subsidiaries has a sectoral distribution which isn't very different from that of all companies in Portugal (an assumption which may not be the case). However, the significant amplitude of the differences between the ratios of both groups helps to substantiate the conclusions presented.

financial autonomy, were slightly less efficient in the use of assets (lower asset turnover) and had a lower weight of long-term investments (lower fixed assets over total assets); however, they were much more profitable (higher EBITDA margin).

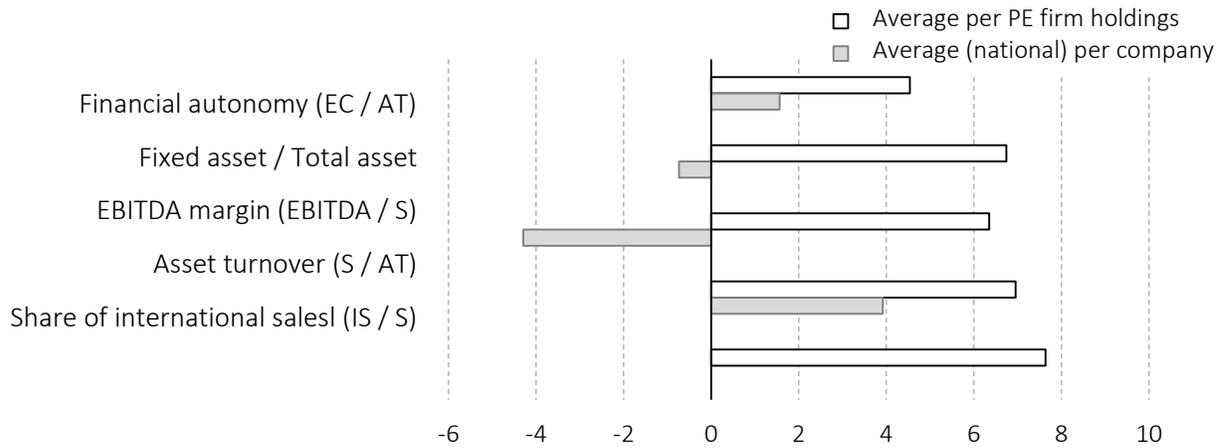
Table 2 – Economic and financial ratios (2019)

	Average per participated VC firms	Average (nacional) per company
Financial Autonomy (EC / AT)	25.5%	34.8%
Fixed Asset / total asset	39.0%	59.7%
EBITDA Margin (EBITDA / V)	24.7%	9.6%
Asset turnover (V/AT)	30.4%	62.6%
International sales weight (IS / V)	37.3%	NA

Sources: ISCTE survey - Executive Education; SABI

When we analyze the evolution over time of these ratios (Graphic 2), the differences between PE firms subsidiaries and the average of national companies become clearer. In effect, it's confirmed that private equity intervention stimulates the respective participated companies to reinforce their financial autonomy (+4.54 percentage points) and asset turnover (+6.95 percentage points), far above the national average per company. This shows that, prior to the acquisition by private equity, subsidiaries had relatively low levels of capitalization, long term investment and efficiency, which, after acquisition by private equity, are closer to the national average. In addition, the significant increases in profitability and in the weight of long-term investments in the case of the ventures are in visible contrast with the negative change in these ratios observed in the national average per company. The evidence on the superior financial performance of Portuguese investees is thus in line with previous studies (e.g., Bergstrom et al, 2007; Harris et al., 2005).

Graphic 2 – Variation (p.p.) from 2010 (or acquisition date, if later) since 2019

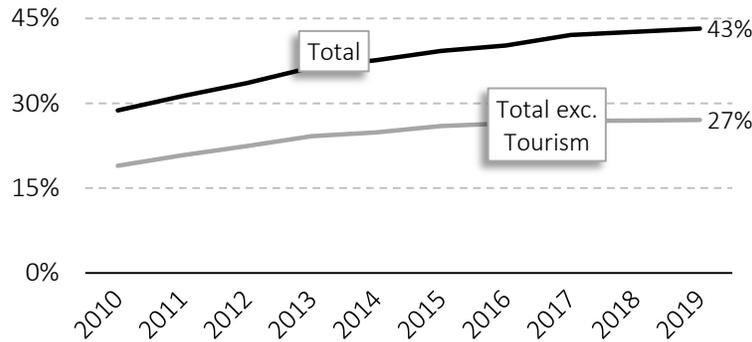


Sources: ISCTE survey - Executive Education; SABI

According to data from the Bank of Portugal, between 2010 and 2019, the real variation in national GDP was 6.7%, an evolution strongly conditioned by the financial crisis of the Portuguese economy in the first years of that period. In this context of modest GDP evolution, it is noted that, in relative terms, the subsidiaries of PE firms are reinforcing more long-term investments and are able to benefit from the foreseeable operational improvements introduced, as revealed by the efficiency of their assets and profitability.

Regarding the weight of international sales in relation to the sales of PE firms subsidiaries, in the absence of year-on-year data for all companies in Portugal, a comparison was made with the evolution of the weight of exports in GDP (Graphic 3), which reflects the strong investment that, during the decade under review, the Portuguese governments made in promoting exports. This shows that the internationalisation of the business of SCR affiliates closely followed the variation in the weight of exports in GDP.

Graphic 3 – National exports as a % of GDP



Sources: Bank of Portugal

To conclude, it is important to add the following note on the significance of the data analyzed. Despite predominantly corresponding to direct investments and being far from the total number of private equity participations, the sample analysed in this study aggregates close to 21% of the total number of participated companies in 2019, and is therefore considered representative and statistically relevant to be assessed in the evaluation of the economic effects associated with private equity intervention. It should also be noted that, despite the prevalence of indirect investment via PE funds, given the existence of common operating principles and objectives in relation to direct investments by PE firms, it seems reasonable to admit that the conclusions regarding the effects associated with direct investments by PE firms may also be extended to PE funds.

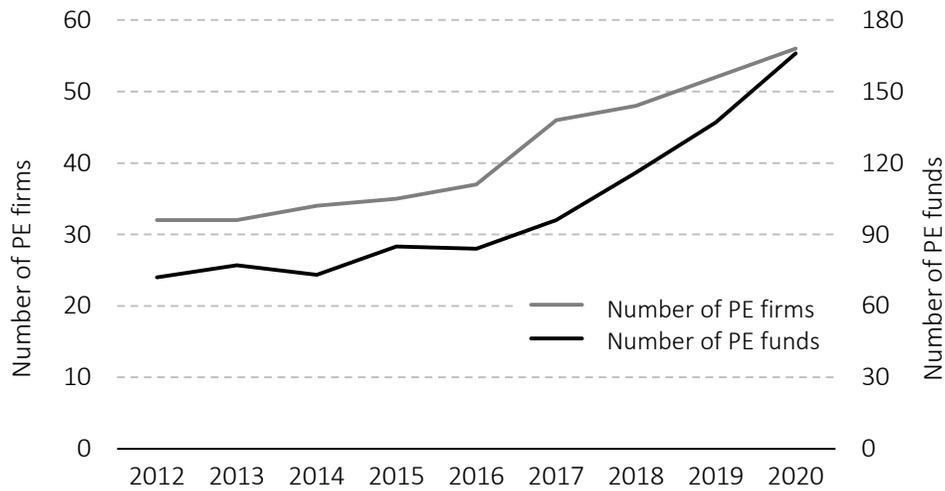
3. Private Equity in Portugal and the rest of Europe: Comparative analysis

“Private equity activity in Portugal compared to European levels remains weak.”

OCDE (2020: 132)

According to CMVM data, the growing representativeness of the private equity industry is reflected in an upward trend in the number of PE firms and PE funds (Graphic 4). All the same, in the assessment of the OECD (2020: 131), "in Portugal the use of private equity as a source of corporate financing is still relatively under-developed".

Graphic 4 – Number of PE firms and PE funds



Source: CMVM

In this section we analyze the current state and evolution of this industry in Portugal, in terms of raising capital from investors as well as investment and divestment in subsidiaries, using as a comparative reference the situation observed in Europe. For this purpose, the following sources of information were mainly considered: Invest Europe and CMVM.

3.1 Canvassing

The Invest Europe database in 2020 was fed by information from 672 PE funds in 31 countries, 6 of which were from Portugal. Aggregating the annual information recorded in this database in the period between 2007 and 2020, we see that the capital raised from investors in Europe was 950.5 billion euros (total of 7,768 funds), of which 4 billion euros were raised by PE funds listed in Portugal in the period (a total of 88 funds), or 0.43% of the total in Europe. While Europe raised 119.1 million euros per fund during the mentioned years, in Portugal the fundraising was only 40.3 million euros per fund, a value 66.21% lower than the European average.⁵

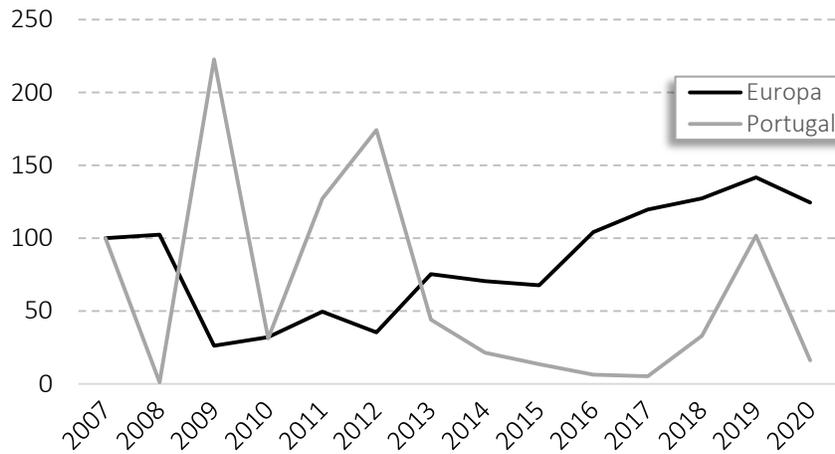
Private equity activity and dynamics tend to reflect the overall activity of the economy. Graphic 5 confirms that funds raised by the private equity industry, in general, reacted negatively to the subprime and sovereign debt crises, the later of which had quite pronounced effects in Portugal. It is noted, however, that the evolution of capital raised in Portugal is more volatile and erratic than what is observed in Europe in general, potentially due to the low number of funds in Portugal reporting information to Invest Europe. The OECD (2020) even underlines that, in comparison to the dynamics observed in Europe, recent fundraising in Portugal has been slow, with Portugal representing in the last five years only 0.09% of the funds raised in Europe, compared to almost 3% reached in 2012. The creation of the Revitalize Funds in 2012, aimed at promoting projects for expansion, innovation and/or modernization of Small and Medium Enterprises, may have contributed to the increase in fundraising observed at the time.

According to CMVM information, the number of participations and especially of participants has shown an upward trend over the last nine years (Graphic 6). In the same period, the total amount raised (Graphic 7) also shows a growing trend, although relatively volatile and not as pronounced as the number of participants. Consequently, the average amount invested per participant has been much lower in recent years than at the beginning of the decade (1.4 million in 2020 versus 6.69 million in

⁵ The results of the survey on PE firms in Portugal suggest a higher value for the raising of funds by VC firms: 99.5 million euros. This value continues beneath the European average.

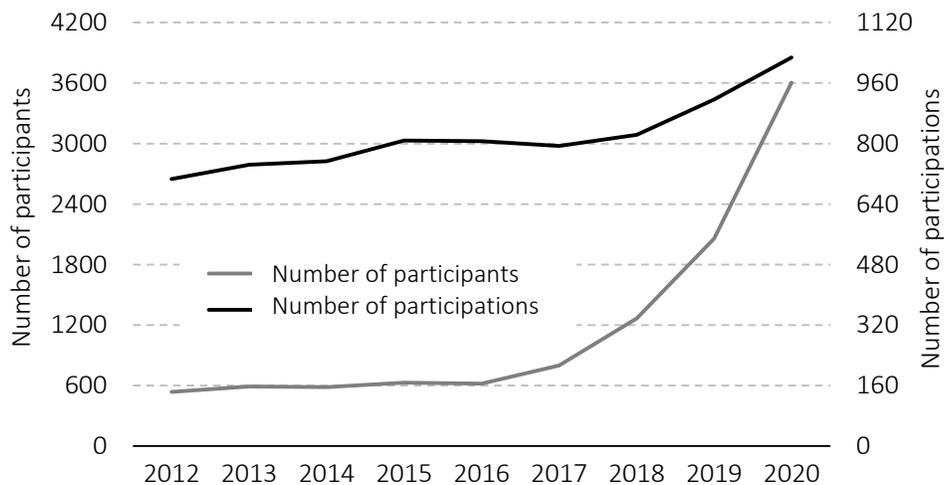
2012), with the reduction largely reflecting the effect of the Golden Visa program (minimum investment of 350,000€ to acquire units in investment funds or private equity funds).

Graphic 5 – Index of values raised (2007 = 100)



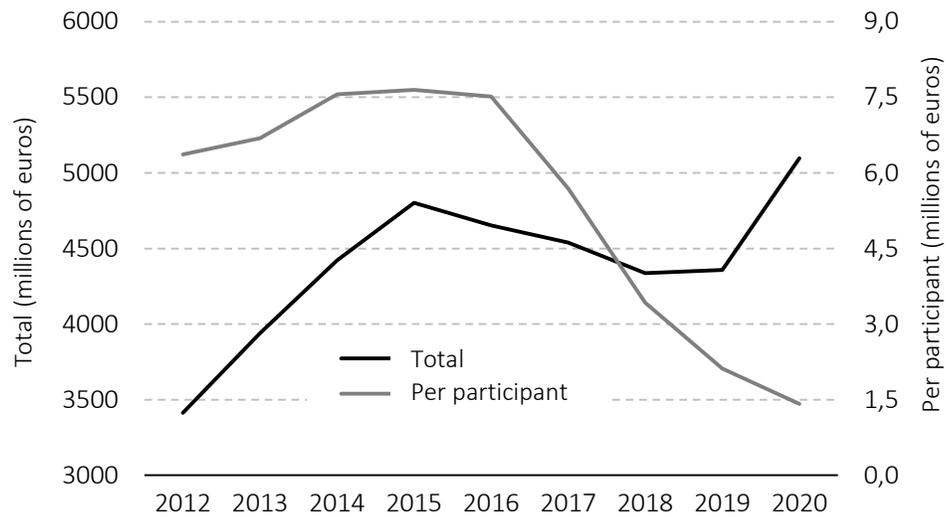
Source: Invest Europe

Graphic 6 – Number of private equity participants and participations in Portugal



Source: CMVM

Graphic 7 – Amount raised (paid-in capital) by private equity



Source: CMVM

With regard to the distribution of new funds raised by geographical area (Table 3), it can be observed that Europe obtains most of the funds within Europe itself (50.46%), and 55.41% of the amount raised within this area (i.e. 28% of the total raised) is of domestic origin. In contrast, in Portugal, the vast majority of funds raised are from domestic origin (62.16% of the total) and only 0.3% are raised outside Europe. According to the CMVM (2019), there were 2,033 participants in PE funds in 2019, the majority of which were resident in Portugal (77%).

Table 3 – Distribution of fundraising by geographical area (2007 a 2020)

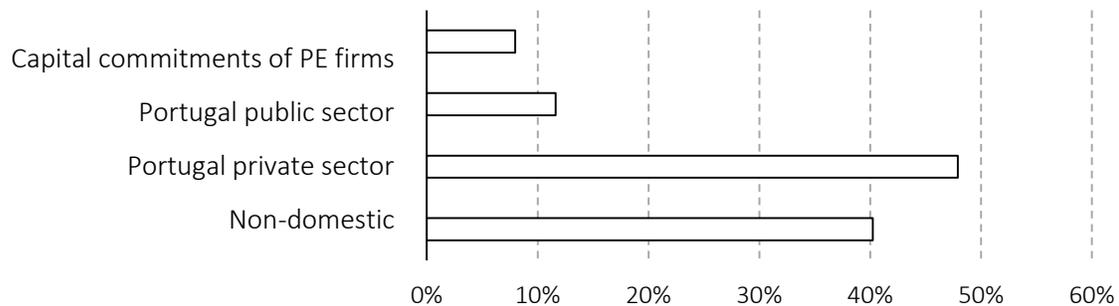
New funds origin	Weight in Europe	Weight in Portugal
Inside Europe:	50.46%	74.96%
<i>Domestic</i>	55.41%	82.92%
<i>Non domestic</i>	44.59%	17.08%
Outside Europe	33.92%	0.30%
Unclassified	15.62%	24.74%

Source: Invest Europe

The information on fundraising was complemented with the information obtained from the responses to the survey sent to the PE firms, the results are summarized in Graphic 8. For a total of €1.19 billion raised by 12 PE firms from investors, it appears that most of the investment comes from the private

sector. In turn, non-domestic origin raising is referred to as the second source of investment, with a representativity much higher than that disclosed by Invest Europe, but still lower than the weight in Europe. The Portuguese public sector and the capital commitments of the PE firms themselves appear with much lower weights in the funds raised by PE firms in Portugal.

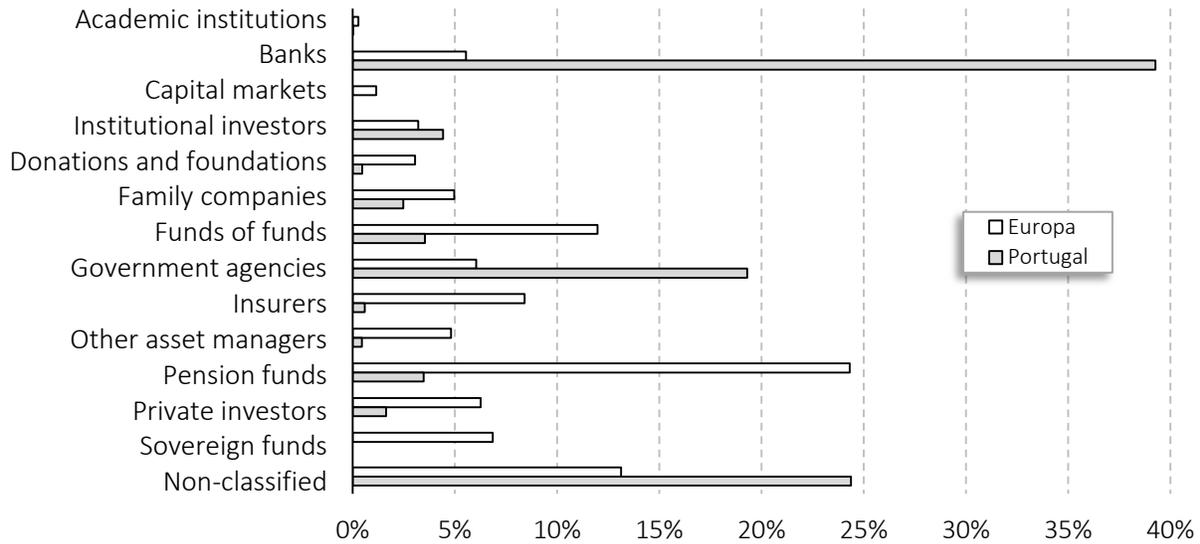
Graphic 8 – Origin of capital raised in Portugal



Sources: ISCTE survey - Executive Education; SABI

Concerning to the different types of investors, there is a great discrepancy between the European distribution and the one in Portugal (Graphic 9a). In Europe, excluding investments from non-classified sources, the main sources of investment are pension funds, representing 24.31% of the investment made between 2007 and 2020, funds of funds, with 11.98%, and insurance companies, with 8.41%. In Portugal, much of the investment in the period came from banks (39.28%) and government agencies (19.30%), an aspect highlighted by the OECD (2020). In contrast, only 0.59% of the amount raised in Portugal comes from insurers, and in addition there is no investment raised through capital markets. We also observe a great disparity in the sum of the three largest sources of investment, which in Europe represents 49.42% while in Portugal it totals 82.96%, which implies less dispersion in the sources of investment in Portugal compared to what exists in Europe.

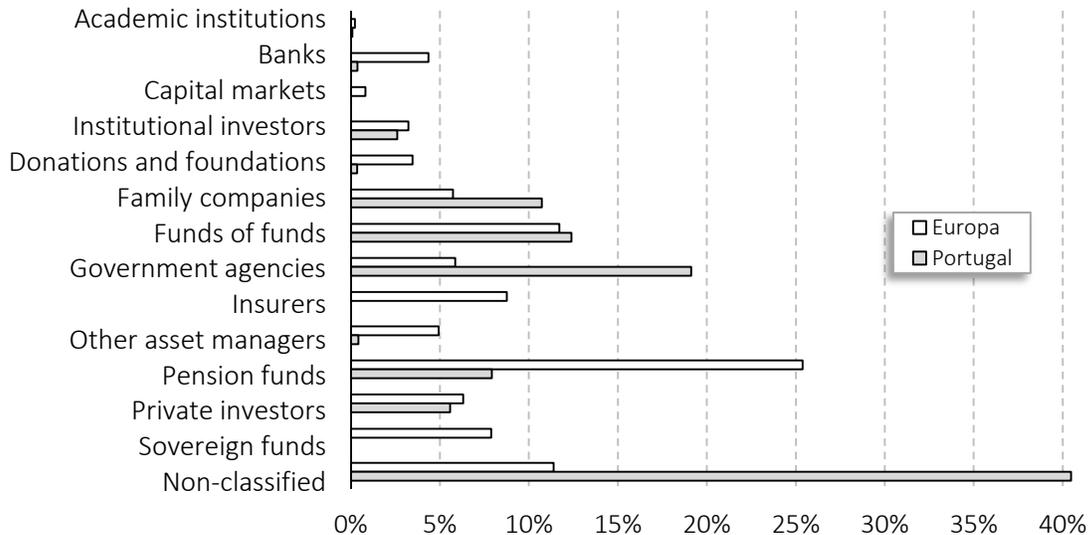
Graphic 9a – Distribution of fundraising by type of investor (2007 to 2020)



Source: Invest Europe

Focusing the analysis on a more recent period (Graphic 9b), it's confirmed that the weight of bank fund raising in Portugal falls significantly, possibly due to a lower weight of restructuring funds used to remove real estate assets from banks' assets, but there is still a clear under-representation of pension funds and insurance companies compared to Europe.

Graphic 9b – Distribution of fundraising by type of investor (2017 to 2020)



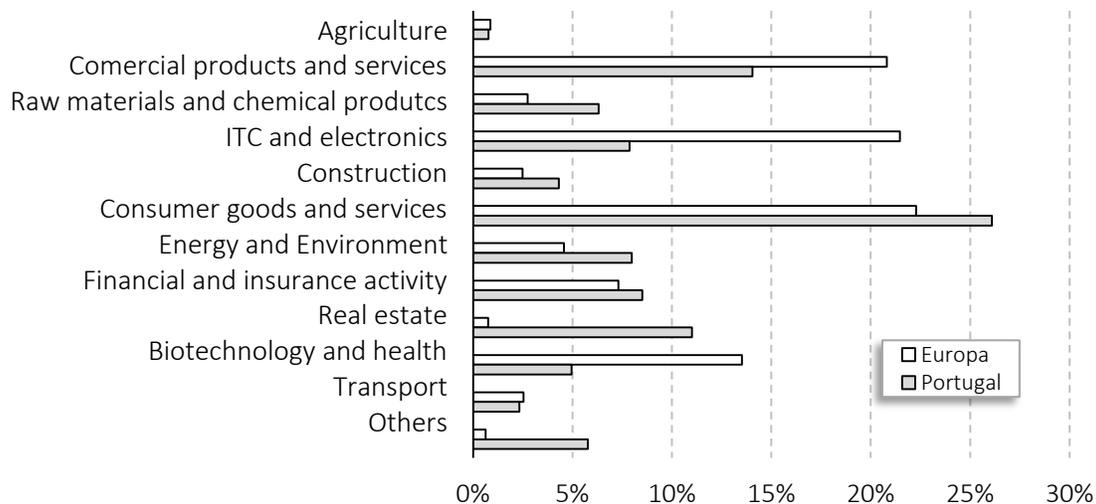
Source: Invest Europe

3.2 Investment

According to Invest Europe data, the incremental amount of investments made between 2007 and 2020 by PE funds in Europe was EUR 866.5 billion, with part of this investment being directed to 23,978 companies representing new participations. In Portugal, correspondingly, in this period, there was an incremental amount of investment of 3.3 billion euros, part of which was applied in 425 new participations.

We note that the funds target a large part of the investment to the Commercial Products and Services and Consumer Goods and Services sectors (Graph 10) which, together, represent more than 40% of the total investment, both in Europe and in Portugal. The most striking differences between the two geographic zones are that in Europe a significant part of the investment (21.5%) is allocated to the Communications, Informatics and Electronics sectors, whereas in Portugal more is invested in the Real Estate sector (11%). One of the explanations for the high representativity of investments in this sector in Portugal lies in the weight of restructuring funds that absorbed real estate assets from banks (and others) used as collateral for mortgage loans that became uncollectible. However, in Europe, real estate attracts only 0.8% of all venture capital investment.

Graphic 10 – Distribution of investments by sector (2007 to 2020)



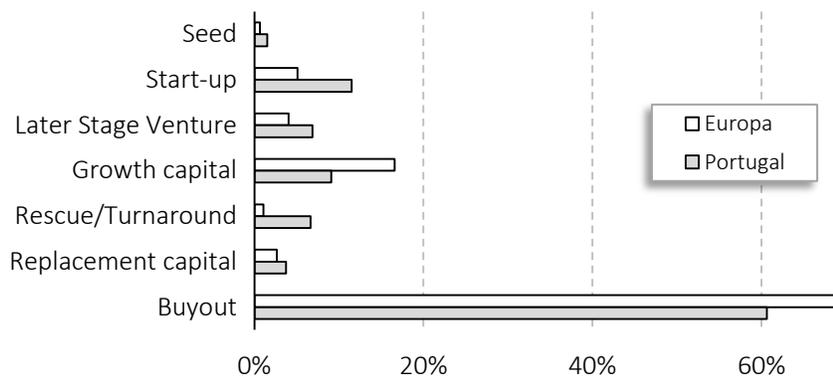
Source: Invest Europe

In the last years of the period in question, in Portugal there was a growing weight of investment in the Communications, Information Technology and Electronics, Biotechnology and Health sectors, but even so, in comparison with Europe, there continues to be a lower weight of investment in these sectors. On the other hand, the weight of investment in real estate remains comparatively excessive.

In terms of the nature of the investment made (Graphic 11), there is a considerably greater focus in Portugal on the early stages of the life cycle of enterprises (venture capital, subdivided into seed capital, start-up and later stage venture) than in Europe. On the other hand, the opposite is observed in relation to development capital (Growth capital), which is much more expressive in Europe than in Portugal. In both Portugal and Europe, most of the investment is directed to support acquisitions of other companies (Buyout), in line with the international trends reported by Nepelski et al. (2016).

According to CMVM information (2019), a significant part (65%) of the sum under management in the private equity industry in Portugal corresponded to investment in equity investments (shares and quotas of investees) and in other investments (including supplementary payments, shareholder loans and loans). The distribution of this investment, with the indication that it is mostly for resident companies and to support the reorientation of strategy, expansion and acquisition of company capital by the respective management, is also confirmed by the CMVM.

Graphic 11 – Distribution of investment by type/phase (2007 to 2020)

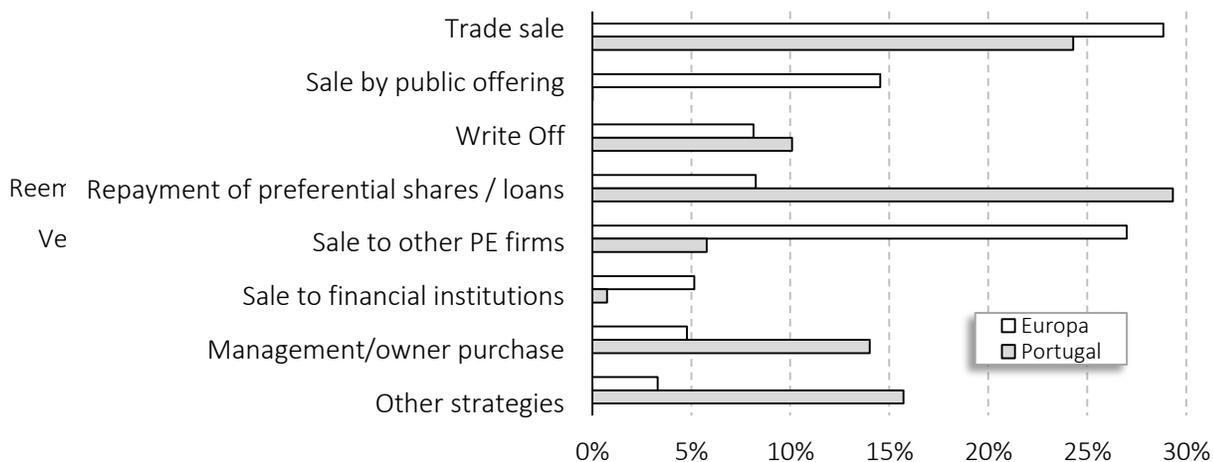


Source: Invest Europe

3.3 Disinvestment

Between 2007 and 2020, total divestitures of investments by private equity funds in Europe amounted to 467.4 billion euros, made in 50,289 companies, while in Portugal, in the same period, divestitures amounted to 1.9 billion euros corresponding to 739 companies. In both Europe and Portugal, among the most relevant exit strategies is trade sale to strategic buyers for the existing business (trade sale) (Graphic 12). Disinvestment through the repayment of shares and loans is, however, the main path used in Portugal, far above that observed in Europe. In contrast, the sale to other private equity investors has much more weight in Europe than in Portugal. We can also see that in Europe disinvestment through public offerings is very relevant (14.54%), while in Portugal this exit strategy is only 0.01% of the total.

Graphic 12 – Distribution of divestitures (2007 to 2020)



Source: Invest Europe

According to the CMVM (2019), 72.1% of the investment with the equity stakes was held for more than 4 years. In turn, 33.9% of the divestment made in 2019, primarily through sale to third parties, generated capital gains compared to the value in the portfolio, but 6.3% of the divestment corresponded to write-off of the stake.

4. Development recommendations to the Private Equity in Portugal

The level of development of the private equity industry can be classified according to the levels of fundraising, investment, disinvestment and returns achieved. Although the information available on the last criterion at a global level is not sufficient to support solid conclusions, the analysis carried out in the third section of this document allows us to affirm that, with regard to the remaining criteria, private equity in Portugal is far from the stage of maturity of other countries. Therefore, there seems to be ample room for evolution compared to the situation observed in the rest of Europe. This section discusses potential ways to stimulate the growth of this industry in Portugal.

4.1 Raising capital from investors

In most countries, banks, pension funds, private investors, insurance companies, government and public bodies represent the main investors in private equity. In this regard, OECD (2020) recalls that pension funds and insurance companies are a potential and relevant source of financial resources, in line with the finding of Jeng and Wells (2000) that the level of investment of pension funds in private equity is determinant for the evolution of this industry.

Due to the reduced weight (compared to the rest of Europe) of pension funds and insurance companies in private equity financing in Portugal, the OECD (2020) includes in its recommendations for the evolution of this industry in Portugal the reassessment by the government of investment regimes and capital requirements, in order to stimulate its investment in this market. Given the disparity with the situation in Europe, it is also recommended to encourage greater dispersion in the sources of investment in Portugal. For example, according to the OECD, some countries have introduced tax incentive schemes for small investors that stimulate them to invest in venture capital. Regarding the European funding programs aimed at Portugal, namely the Recovery and Resilience Plan, it is advisable that they contain the necessary ingredients to stimulate the capitalization of the private equity industry in Portugal. In general, the use of these stimuli is of particular relevance in light of the favorable effects on subsidiaries in terms of turnover, profitability, deleveraging, job creation and, consequently, for the stimulus to economic growth that private equity seems to generate in Portugal.

On the matter of the geographical origin of fund raising, the fact that private equity in Portugal attracts a lower proportion of funds from abroad (from Europe and outside Europe) than Europe as a whole is an aspect that also deserves to be highlighted (as does the OECD itself). To bring Portugal closer to the European average it is therefore important to improve the attractiveness of private equity investments to non-domestic investors. In some cases, the limitations that, due to their small size on a global scale, private equity companies in Portugal face in giving international visibility to their investments may be overcome by resorting to a consortium solution, or investment syndication, analysed below.

4.2 Investment

The OECD (2020) indicates that, although the Portuguese economy corresponds to 1.2% of the European Union GDP, the investment made by the private equity industry in Portugal in the last five years was only 0.5% of the values registered in Europe. The National Innovation Agency (2021) also highlights the approximation of private equity investment levels to the European average as one of the challenges for this decade. Therefore, there is in Portugal a large margin for expansion regarding private equity industry investments. Some of the main aspects related to these investments are discussed below.

Investment profitability

As an investment with expected returns only materializing after a few years, private equity is characterized by low liquidity, in contrast to most securities traded on stock markets. For this reason, PE firms are compelled to find investment opportunities that provide their investors with a higher risk premium than they would find in equity markets. There is thus a minimum liquidity premium that should correspond to the additional return that private equity investors expect to achieve compared to what they would achieve by investing in the equity market.

The return on private equity is therefore expected to exceed that of the stock market, with studies showing that the minimum liquidity premium desired by PE investors is close to 3% (Harris et al., 2016; Hooke and Yook, 2016; Jegadeesh et al., 2015; Phalippou, 2014; Robinson and Sensoy, 2016). International empirical evidence (e.g., Acharya et al., 2013; Bargerion et al., 2008; Guo et al., 2011) is

consistent with private equity's ability to identify undervalued business opportunities. There is also evidence that lower performers reside in smaller funds managed by less experienced PE firms (Gottschalg et al., 2004; Kaplan and Schoar, 2005).

Failure to achieve returns in excess of those on equity markets may even be a severe limitation on raising funds from PE investors. The efficient selection and monitoring of investments in the private equity industry is therefore critical to maximize the risk-adjusted returns obtained.

Investments selection

For the benefit of its future evolution and to ensure sustainable returns, the private equity industry should promote the necessary internal adjustments to properly allocate investments and identify the opportune timings for entry (Klonowski, 2018). Additional adjustments should focus on attracting quality human resources and practical business experience, improving the decision-making process of PE investors, and conducting more thorough due diligence.

Regarding the decision-making of PE investors, there is some evidence about possible overconfidence in investment selection (Klonowski, 2018; Zacharakis and Shepherd, 2001). This is a characteristic of PE investors, which leads them to firmly believe whether or not a company represents a good investment. Such overconfidence can lead to all relevant information not being considered in the decision-making process, and consequently increases the risk of wrong decisions being made. By encouraging the sharing of opinion among PE investors about investment opportunities - and thus enhancing rigor and fairness in investment selection - investment syndication limits the adverse selection risks associated with investing in bad businesses (Birkshaw and Hill, 2003; Gompers and Lerner, 2001).

To achieve superior risk-adjusted returns, it is important to ensure that in the selection of investments by private equity all potential future scenarios and variants associated with the investment are considered. From the perspective of the optimal combination of the risk-return binomial, it is fundamental to diversify the investment portfolio in order to avoid excessive specific risk associated with a high concentration of investments, not only in terms of portfolio companies, but also at the sector level and even in terms of the phases/types of investment selected.

To this extent, it is advisable to avoid the "herd mentality" associated to investment choice decisions by PE firms, with attention often concentrated on a limited group of companies and sectors. In this respect, the OECD (2020) observation that investments made by private equity are focused on the recovery of companies that are in difficulty, in contrast to the lower focus on the development of new emerging industries and the expansion of productive capacity, stands out in the case of Portugal. In terms of access to public funds in Portugal invested in private equity programs, whose attainment may condition the nature of the investments to which they are destined, it is therefore recommended that the respective conditions be designed to stimulate investment in development capital and in cutting edge sectors (e.g., Communications, IT and Electronics; Biotechnology and Health) as well as the diversification of investments by companies and sectors.

Control Mechanisms

It is expected that private equity remunerates investment mostly through capital gains obtained by increasing the value of the invested company, instead of allowing the achievement of regular gains, such as those generated by interest, dividends, among others. This form of remuneration and the respective risk require a close monitoring of the management carried out by the invested companies, particularly in the financial component. This requirement is relevant especially in view of the asymmetry of information between the PE investor and the companies in which he invests, often materialized in agency problems in the contracts between them. The very success of private equity positively depends on the active involvement of venture capital managers in the business practices and strategies of the companies in which they invest (Strömberg, 2009).

To reduce the potential asymmetry of information, an in-depth investigation of the investee company is advisable before and after the equity investment (Gompers and Lerner, 2001), along with the adoption of other control mechanisms. There is empirical evidence that PE firms in Europe focus more on the negotiation phase and less on the active monitoring phase, which reduces their ability to select projects and add value to innovative companies (Hege et al., 2003). One of the most popular active monitoring mechanisms is to make capital contributions to subsidiaries in several steps over time (via milestone financing or via round financing), as an alternative to a single disbursement. These staged

capital injections over time may represent the most effective solution that the PE investors can use, as it keeps the promoter more committed and thus allows limiting the losses associated with bad decisions (Gompers and Lerner, 2001). When the investment is not made in a single disbursement tranche, it is important, however, to demystify the idea among entrepreneurs of investee companies that venture capital guarantees a rapid increase in permanent capital.

As additional control measures, PE investors may serve on the boards of subsidiaries, adopt performance-based executive compensation schemes, or syndicate their investment with other private equity firms. In general, evidence shows that, compared to other firms, private equity participations show more robust governance practices, tend to recruit professional management, replace underperforming managers, and use long-term performance-based forms of manager compensation (Strömberg, 2009).

Syndication

Often, as an alternative to investing individually, PE investors tend to do so in syndication with other PE investors (Hochberg et al., 2007). Despite the possible issues that competition among PE firms may raise regarding this option, the fact is that investment syndication has several advantages, one of which is the promotion of the sharing of information and resources among PE investors. The syndication of investments in private equity is therefore pointed out as an effective strategy to reduce the problems of information asymmetry faced by PE firms (Engel, 2004). Another advantage of syndication lies in the increased likelihood of raising funds from PE investors, as well as in broadening the network of contacts of each PE firms, including prestigious investment banks (Harrison and Mason, 2019). From the perspective of incumbent PE firms, syndication and the associated professional network of contacts even create a barrier to entry for new PE investors.

PE investors with better networks at the time of raising capital from investors are able to achieve significantly more successful divestments within ten years (Hochberg et al., 2007). Empirical evidence also shows that private equity returns persist strongly in funds raised through consortia PE firms (Kaplan and Schoar, 2005). Explaining the higher returns in investment syndication should be the potential to invest in more projects and significantly diversify the specific risk, as well as the reduction

of the adverse selection problem allowed by information sharing among PE investors (Birkshaw and Hill, 2003; Gompers and Lerner, 2001).

Given the scale problem of most PE firms in Portugal, the syndication of investments in this industry thus seems to be a path that justifies being explored, given the expected benefits in terms of greater international visibility and consequent stimulus to raise funds from abroad, reduction of information asymmetry and risk diversification.

4.3 Disinvestment

The way private equity is remunerated, as it is focused on the expected gains from divestment in the investee company, makes the existence of divestment options critical to the success of the investment. Indeed, the existence of successful divestitures is critical to guarantee attractive returns for investors and thus facilitate the raising of additional capital (Nahata, 2004). In general, the preferred mode of divestment by private equity is the sale of the company in the market to investors (trade sale), or its placement in the stock market through an IPO (Klonowski, 2018), a solution that allows obtaining higher levels of liquidity and profitability compared to alternatives. According to data from Invest Europe (2020), more than 30% of divestment in Europe occurs by these means. The existence of an active capital market is considered important to obtain a strong private equity industry, due to the exit potential it offers (Gilson and Black, 1999). Given the small size of the Portuguese capital market, disinvestment through trade sale gains relevance. In fact, an analysis of global trends over the last twenty years reveals a growing weight of mergers and trade sales, as opposed to the loss of global importance of IPO disinvestment (Harrison and Mason, 2019).

Nonetheless, because IPOs continue to provide one of the main disinvestment routes, the OECD (2020) notes that the small scale of mergers and acquisitions and primary public equity market activity constrains private equity divestment alternatives in Portugal. This organization therefore recommends reform efforts in the overall functioning of capital markets that consider "the potential impact on the development of private markets" and "private capital market players" (OECD, 2020: 19).

4.4 New players and financial solutions

Regarding the prospects for the future evolution of the private equity industry and potential sources of funding for entrepreneurship at a global level, it's relevant to draw attention to the emergence of new players and solutions in the market (Harrison and Mason, 2019). Firstly, there is a growing trend of availability of public sector funds in co-investment with private investors, with the aim of stimulating economic growth based on innovative projects and facilitating risk diversification in investments. This solution highlights the relevance of state support in this regard.

Secondly, the resources raised through the Internet (crowdfunding) have been progressively gaining prominence among the financing strategies of companies. Despite the substantial differences in relation to the financing solutions presented by private equity, crowdfunding and its expansion should not be ignored, otherwise it may be a threat to the industry's evolution.

At last, we highlight the financing of companies based on cryptocurrencies, namely through Initial Coin Offering. Although still in an initial stage and operating in the cryptocurrency transaction space, some start-ups have been progressively using this solution due to the reduced financing costs, because it does not require the use of intermediaries. For this reason, its existence should not be underestimated.

Considering the future perspectives on new players and financing solutions for entrepreneurship at a global level, it is important that both PE investors and the state find appropriate ways to adapt to and benefit from the new market circumstances and to promote the sustainable growth of the private equity industry. In this field, the establishment of partnerships between PE investors and new market players is one of the open possibilities.

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